Michal Křížek

LIST OF CITATIONS UNTIL August 10, 2023

without self-citations and self-citations of coauthors

Hirsch index $h = 27$**,** i.e., each of the following publications [A1], [A3], [A4], [A5], [B1], [B3], [B5], [B6], [B11], [B18], [B19], [B21], [B35], [B37], [B42], [B49], [B55], [B58], [B63], [C1], [C7], [C8], [C9], [C12], [C27], [D17], [I1] has at least 27 citations, see the list below.

Notation:

[A*] Books and proceedings,
[B*] Research papers published in foreign journals,
[C*] Research papers published in Czech journals,
[D*] Papers in reviewed proceedings published abroad,
[E*] Papers in reviewed proceedings published in the Czech Republic,
[F*] Lecture notes,
[G*] Proceedings papers published in the Czech Republic,
[H*] Research reports,
[I*] Surveys,
[J*] Dissertations,
[K*] Papers popularizing mathematics,
[Q*] Citations.

[**A1**] **M. Křížek and P. Neittaanmäki**, *Finite element approximation of variational problems and applications*, Pitman Monographs and Surveys in Pure and Applied Mathematics vol. 50, Longman Scientific & Technical, Harlow; copublished in the United States with John Wiley & Sons, New York, 1990, 239 pp.

Cited in:

[Q1] Y. Alnashri and J. Droniou: A gradient discretization method to analyze numerical schemes for nonlinear variational inequalities, application to the seepage problem, SIAM J. Numer. Anal. 56 (2018), 2375–2405.

[Q2] L. Beilina, A. M. Ghaderi, E. M. Karchevskii: An adaptive finite element method for solving 3D electromagnetic volume integral equation with applications in microwave thermometry. J. Comput. Phys. 459 (2022), Paper No. 111122, 21 pp.

[Q3] L. Beilina and S. Hosseinzadegan: An adaptive finite element method in reconstruction of coefficients in Maxwell's equations from limited observations, Appl. Math. 61 (2016), 253–286.

[Q4] L. Beilina and V. Ruas: On the Maxwell-wave equation coupling problem and its explicit finite-element solution, Appl. Math. 68 (2023), 75–98.

[Q5] M. Bejček: Numerical methods for solution of compressible flow problems, Ph.D. Thesis, Charles University, Prague, 2005.

[Q6] M. Brandner and S. Míka: Metoda sdružených gradientů na přípustné konvexní množině, Programy a algoritmy numerické matematiky 7, Bratříkov, MU AV ČR, Praha, 1994, 13–25.

[Q7] C. Brezinski and M. R. Zaglia: Extrapolation methods, Theory and practice, Studies in Comput. Math. 2, North-Holland, Amsterdam, 1991, (see p. 250).

[Q8] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q9] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[Q10] J. Dalík: A local interpolation by a quadratic Lagrange finite elements in 1D, Arch. Math. 42 (2006), 103–114.

[Q11] J. Dalík: A quadratic isoparametric finite elements in the plane, preprint, VUT Brno, 2006, 1–19.

[Q12] J. Dalík: The invertibility of the isoparametric maps for triangular quadratic Lagrange finite elements, Appl. Math. 57 (2012), 445–462.

[Q13] J. Daněk: Řešení jednostranného kontaktu malého rozsahu pružných těles ve 2D na paralelních počítačích, Ph.D. Thesis, FAV ZČU, Plzeň, 2001, 1–109.

[Q14] J. Daněk: Aplikace kontaktního problému v úlohách biomechaniky a geomechaniky, Habilitation Thesis, FAV ZČU, Plzeň, 2008.

[Q15] S. Dass, G. Johri, and L. Pandey: A stochastic model for solidification. 1. The basic equations, their analysis and solution, Pramana J. Phys. 47 (1996), 447–470.

[Q16] O. Davydov: Discrete maximum principles in finite element analysis, Master Thesis, Dept. of Math. Inform. Technology, Uviv. of Jyväskylä, 2003.

[Q17] L. T. Dechevsky: Near-degenerate finite element and lacunary multiresolution methods of approximation, Saint-Malo Proceedings (ed. by L. L. Schumaker), Vanderbit Univ. Press, 2000, 1–19.

[Q18] L. T. Dechevsky and W. L. Wendland: On lacunary multiresolution methods of approximation in Hilbert spaces, Proc. Curve and Surface Fitting: Saint Malo (ed. by A. Cohen, C. Rabut and L. L. Schumaker), Vanderbit Univ. Press, 2000, 1–10.

[Q19] L. T. Dechevski and W. L. Wendland: On the Bramble-Hilbert lemma, II: Model applications to quasi-interpolation and linear problems. Internat. J. Pure Appl. Math. 33 (2006), 465–501.

[Q20] L. T. Dechevski and W. L. Wendland: On the Bramble-Hilbert lemma, II: A model application to non-linear operator equations. Internat. J. Pure Appl. Math. 33 (2006), 503–528.

[Q21] L. T. Dechevsky and W. L. Wendland: On the Bramble-Hilbert lemma, II. Preprint 2007/002, Univ. Stuttgart, Berichte aus dem Inst. für Angewandte Anal. und Numer. Simulation, 2007, 1–67.

[Q22] V. Dolejší: Discontinuous Galerkin method for convection-diffusion problems with applications in fluid dynamics, Doctoral Thesis (DSc.), Faculty of Math. and Phys., Charles Univ., Prague, 2008, 1–351.

[Q23] V. Dolejší, M. Feistauer, J. Felcman, and A. Kliková: Error estimates for barycentric finite volumes combined with nonconforming finite elements applied to nonlinear convection-diffusion problems, Appl. Math. 47 (2002), 301–340.

[Q24] V. Dolejší, P. Knobloch, V. Kučera, and M. Vlasák: Finite element methods: Theory, applications and implementations, Matfyzpress, Prague, 2013.

[Q25] A. Eljendy: Numerical approach to the exact controllability of hyperbolic systems, LN Contr. Inf. 178, 1992, 202–214.

[Q26] M. E. Everett: Existence of an optimal conductivity and Frechet differentiability in 2-D electromagnetic inversion, Geophys. J. Int. 117 (1994), 111–119.

[Q27] I. Faragó, S. Korotov, and T. Szabó: On continuous and discrete maximum principles for elliptic problems with the third boundary condition, Appl. Math. Comput. 219 (2013), 7215–7224.

[Q28] M. Feistauer: Mathematical Methods in Fluid Dynamics, Pitman Monographs and Surveys in Pure and Applied Mathematics, vol. 67, Longman Scientific & Technical, Harlow, 1993 (see p. 175).

[Q29] M. Feistauer, J. Felcman, and I. Straškraba: Mathematical and Computational Methods for Compressible Flow, Oxford Univ. Press, Oxford, 2003.

[Q30] H. Fujita, N. Saito, and T. Suzuki: Operator theory and numerical methods, Studies in Mathematics and Its Applications, vol. 30, North-Holland, Amsterdam, 2001.

[Q31] D. Y. Gao, J. Machalová, and H. Netuka: Mixed finite element solutions to contact problems of nonlinear Gao beam on elastic foundation, Nonlinear Anal. Real World Appl. 22 (2015), 537–550.

[Q32] C. Grossmann: Penalties and mixed finite element analysis for variational inequalities, Proc. Conf. Numer. Methods for Free Boundary Problems (ed. P. Neittaanmäki), Jyväskylä, 1990, Internat. Series of Numer. Math., vol. 99, Birkhäuser, Basel, 1991, 137–146.

[Q33] C. Grossmann and H.-G. Roos: Numerik partiellen Differentialgleichungen, Teubner Studienbücher, Mathematik, Stuttgart, 1994.

[Q34] J. Hämäläinen: Numerical modelling and simulation of fluid flow in headboxes of paper machines, Reports on Appl. Math. and Computing, No. 5, Univ. of Jyväskylä, 1991, 1–72.

[Q35] J. Hämäläinen: Mathematical modelling and simulation of fluid flows in the headbox of paper machines, Reports 57, Univ. of Jyväskylä, 1993, 1–101.

[Q36] J. Hämäläinen and J. Järvinen: Elementtimenetelmä virtauslaslaskennassa, Yliopistopaino, Univ. of Jyväskylä, 1994, 1–212.

[Q37] A. Hannukainen and S. Korotov: Two-sided a posteriori estimates of global and local errors for linear elliptic type boundary value problems, Proc. PANM 13 dedicated to the 80th birthday of Professor Ivo Babuška, Math. Inst. Prague (eds. J. Chleboun, K. Segeth, T. Vejchodský), 2006, 92–103.

[Q38] A. Hannukainen and S. Korotov: Computational technologies for reliable control of global and local errors for linear elliptic type boundary value problems, J. Numer. Anal., Industrial Appl. Math. 2 (2007), 157–176.

[Q39] P. Harasim: On the worst scenario method: a modified convergence theorem and its application to an uncertain differential equation. Appl. Math. 53 (2008), 583–598.

[Q40] P. Harasim: On the worst scenario method: Application to a quasilinear elliptic 2D-problem with uncertain coefficients, Appl. Math. 56 (2011), 459–480.

[Q41] P. Harasim: On the worst scenario method and its application to uncertain differential equations. Ph.D. Thesis, Inst. of Math., Silesian University, Opava, 2009.

[Q42] R. Haurová: The finite element method for solving three-dimensional problems (in Czech), Mgr. Thesis, MFF UK, Prague, 1992, 1–43.

[Q43] E. Heikkola, S. Mönkölä, A. Pennanen, and T. Rossi: Controllability method for the Helmholtz equation with higher-order discretizations, J. Comput. Phys. 225 (2007), 1553–1576.

[Q44] H. Y. Hu and Z. C. Li: Verification of reduced convergence rates, Computing 74 (2005), 67–73.

[Q45] J. Järvinen: Mathematical modelling and numerical simulation of Czochralski silicon crystal growth (Ph.D. Thesis), Center for Sci. Computing, Univ. of Jyväskylä, 1996, 1-134.

[Q46] S. Jia, H. Xie, X. Yin, and S. Gao: Approximation and eigenvalue extrapolation of Stokes eigenvalue problem by nonconforming finite element methods, Appl. Math. 54 (2009), 1–15.

[Q47] B. N. Jiang, J. Wu, and L. A. Povinelli: The origin of spurious solutions in computational electromagnetics, J. Comput. Phys. 125 (1996), 104–123.

[Q48] X. L. Jiang: A streamline-upwinding Petrov-Galerkin method for the hydrodynamic semiconductor-device model, Math. Models Methods Appl. Sci. 5 (1995), 659–681.

[Q49] Z. Jiang and S. H. Zhang: Non-standard Galerkin methods of high accuracy for parabolic problems, submitted to J. Syst. Sci. Math. Sci.

[Q50] T. Kärkkäinen: Error estimates for distributed parameter identification problems (Ph.D. Thesis), Univ. of Jyväskylä, 1995, 1–51.

[Q51] T. Kärkkäinen and T. Räisänen: A numerical method for general optimal control problems, Report 16/1996, Univ. of Jyväskylä, 1996, 1–15.

[Q52] T. Kärkkäinen and T. Räisänen: Abstract estimates of the rate of convergence for optimal control problems, Appl. Math. Optim. 36 (1997), 109-123.

[Q53] A. Kliková: Finite volume–finite element solution of compressible flow, Ph.D. Thesis, Charles Univ., Prague, 2000, 1–188.

[Q54] P. Knobloch: Numerical modelling of heat phemonena induced by heat radiation, PhD. Thesis, Tech. Univ. Liberec, 2019.

[Q55] S. Korotov: On equilibrium finite elements in three-dimensional case, Appl. Math. 42 (1997), 233–242.

[Q56] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q57] S. Korotov: A posteriori error estimation for linear elliptic problems with mixed boundary conditions, Preprint A495, Helsinki Univ. of Technology, Espoo 2006, 1–14.

[Q58] S. Korotov: Global a posteriori error estimates for convection-reaction-diffusion problems, Appl. Math. Model. 32 (2008), 1579–1586.

[Q59] M. Kukačka and C. Matyska: Influence of the zone of weakness on dip angle and shear heating of subducted slabs, Physics of Earth and Planetary Interiors 141 (2004), 243–252.

[Q60] H. Kutáková: Mortar finite element method for linear elliptic problems in 2D, Master thesis, Univ. of West Bohemia, Pilsen, 2008, 1–78.

[Q61] D. Kuzmin: Numerical simulation of reactive bubbly flows, Jyväskylä Studies in Computing 2 (1999), 1–109.

[Q62] J. F. Lin and Q. Lin: Extrapolation of the Hood-Taylor elements for Stokes problem, Adv. Comput. Math. 22 (2005), 115–123.

[Q63] Q. Lin: Full convergence order for hyperbolic finite elements, Proc. Conf. Discrete Galerkin Methods (ed. B. Cockburn), Newport, 1999, 167–177.

[Q64] Q. Lin: Tetrahedral or cubic mesh? Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 160–182.

[Q65] Q. Lin: High performance FEMs, Proc. Internat. Sympos. on Computational and Applied PDEs, Zhanjiajie, China, 2001, 1–17.

[Q66] Q. Lin: Free calculus. A liberation from concepts and proofs, World Scientific, Singapore, 2008.

[Q67] Q. Lin: Go to educational mathematics (in Chinese), Science Press, Beijing, 2013.

[Q68] Q. Lin, H. Xie, F. Luo, and Y. Yang: Stokes eigenvalue approximation from below with nonconforming mixed finite element methods, Math. Pract. Theory 40 (2010), 157–169.

[Q69] Q. Lin and J. Lin: Finite elements methods: Accuracy and improvement, Science Press, Beijing, 2006.

[Q70] Q. Lin and N. N. Yan: The construction and analysis for efficient finite elements (Chinese), Hebei Univ. Publ. House, 1996.

[Q71] Q. Lin and S. H. Zhang: An immediate analysis for global superconvergence for integrodifferential equations, Appl. Math. 42 (1997), 1–21.

[Q72] R. Lin and Z. Zhang: Numerical study of natural superconvergence in least-squares finite element methods for elliptic problems, Appl. Math. 54 (2009), 251–266.

[Q73] T. Lin, Y. P. Lin, M. Rao, and S. H. Zhang: Petrov-Galerkin methods for linear Volterra integro-differential equations, SIAM J. Numer. Anal. 38 (2000), 937–963.

[Q74] T. Lin, Y. P. Lin, P. Luo, M. Rao, and S. H. Zhang: Petrov-Galerkin methods for nonlinear Volterra integro-differential equations, Dyn. Contin. Discrete Impuls. Syst., Ser. B, Appl. Algorithms 8 (2001), 405–426.

[Q75] T. Lin and D. L. Russell: A superconvergent method for approximating the bending moment of elastic beam with hysteresis damping, Appl. Numer. Math. 38 (2001), 145–165.

[Q76] J. Liu: Pointwise supercloseness of the displacement for tensor-product quadratic pentahedral finite elements, Appl. Math. Lett. 25 (2012), 1458–1463.

[Q77] J. Liu and Q. D. Zhu: Superconvergence of the function value for pentahedral finite elements for an elliptic equation with varying coefficients, Bound. Value Probl. 2020, Paper No. 7, 15 pp.

[Q78] L. Liu: The second order conditions for $C^{1,1}$ nonlinear mathematical programming, Proc. of Prague Math. Conf., ICARIS, Prague, 1996, 153–158.

[Q79] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[Q80] S. Louhenkilpi, E. Laitinen, and R. Nieminen: Real-time simulation of heat-transfer in continuous casting, Metallurgical Transactions B-Process Metallurgy 24 (1993), 685–693.

[Q81] J. Lovíšek: Modelling and control in pseudoplate problem with discontinuous thickness, Appl. Math. 54 (2009), 491–525.

[Q82] K. Majava, R. Glowinski, and T. Kärkäinen: Solving a non-smooth eigenvalue problem using operator-splitting method, Internat. J. Comput. Math. 84 (2007), 825–846.

[Q83] Z. Martinec: Spectral-finite-element approach to two-dimensional electromagnetic induction in a spherical Earth, Geophys. J. Int. 130 (1997), 583–594.

[Q84] Z. Martinec: Spectral-finite-element approach to three-dimensional electromagnetic induction in a spherical Earth, Geophys. J. Int. 136 (1999), 229–250.

[Q85] Z. Martinec: Spectral-finite element approach to three-dimensional viscoelastic relaxation in a spherical earth, Geophys. J. Internat. 142 (2000), 117–141.

[Q86] Z. Martinec and H. McCreadie: Electromagnetic induction modelling based on satellite magnetic vector data, Geophys. J. Internat. 157 (2004), 1045–160.

[Q87] Z. Milka: Řešení stacionární úlohy vedení tepla s nelineární Newtonovou okrajovou podmínkou metodou konečných prvků, (kandidátská disertační práce), MÚ ČSAV, Praha, 1992, 1–49.

[Q88] Z. Milka: Numerické řešení stacionární úlohy vedení tepla s nelineární podmínkou sálání, sborník kurzu: Programy a algoritmy numerické matematiky 6, Bratříkov, MÚ ČSAV, Praha, 1992, 111–120.

[Q89] Z. Milka: Finite element solution of a stationary heat conduction equation with the radiation boundary condition, Appl. Math. 38 (1993), 67–79.

[Q90] J. Mlýnek: Metoda bikonjugovaných gradientů a její modifikace pro řešení soustav s komplexními koeficienty (kandidátská disertační práce), MÚ ČSAV, Praha, 1992, 1–75.

[Q91] J. Mlýnek: The application of the thermal balance method for computation of warming in electrical machines, Proc. PANM 13 dedicated to the 80th birthday of Professor Ivo Babuška, Math. Inst. Prague (eds. J. Chleboun, K. Segeth, T. Vejchodský), 2006, 196–201.

[Q92] J. Mlýnek: Matematické modely vedení tepla v elektrických strojích. Habilitační práce, Tech. Univ. Liberec, 2007.

[Q93] J. Mlýnek: Variational formulation of the heat conduction problem, Proc. Internat. Conf. Presentation of Mathematics'08 (ed. J. Příhonská, K. Segeth, D. Andrejsová), Tech. Univ. Liberec, 2008, 45–50.

[Q94] K. Nagatou: Numerical method to verify the elliptic eigenvalue problems including a uniqueness property, Computing 63 (1999), 109–130.

[Q95] K. Nagatou: Numerical verification method for infinite dimensional eigenvalue problems, Japan J. Indust. Appl. Math. 26 (2009), 477–491.

[Q96] K. Nagatou and M. T. Nakao: An enclosure method of eigenvalues for the elliptic operator linearized at an exact solution of nonlinear problems, Linear Algebra Appl. 324 (2001), 81–106.

[Q97] K. Nagatou, N. Yamamoto, and M. T. Nakao: An approach to the numerical verification of solutions for nonlinear elliptic problems with local uniqueness, Numer. Funct. Anal. Optim. 20 (1999), 543–565.

[Q98] M. T. Nakao, N. Yamamoto, and K. Nagatou: Numerical verification for eigenvalues of second-order elliptic operators, Japan J. Indust. Appl. Math. 16 (1999), 307–320.

[Q99] J. Nedoma: Numerical modelling in applied geodynamics. John Wiley & Sons, Chichester, New York, 1998.

[Q100] T. M. Ng, B. Farhang-Boroujeny, and H. K. Garg: An accelerated Gauss-Seidel method for inverse modeling, Signal Processing 83 (2003), 517–529.

[Q101] B. Nkemzi: Error estimates for the Fourier-finite-element approximation of the Lamé system in nonsmooth axisymmetric domains, Comput. Mech. 35 (2005), 30–40.

[Q102] B. Nkemzi: The Fourier finite-element approximation of the Lamé equations in axisymmetric domains with edges, Computing 76 (2006), 11–39.

[Q103] A. K. Noor: Bibliography of books and monographs on finite element technology, Appl. Mech. Rev. 44 (1991), 307–317.

[Q104] P. Oswald: Multilevel finite element approximation: Theory & Applications, Teubner-Skripte zur Numerik (eds.

Rannacher, Bock, Hackbusch), Teubner, Stuttgart, 1994, (see Chap. 1 and 4).

[Q105] J. Papež: Estimation of the algebraic error and stopping criteria in numerical solution of partial differential equations, Master Thesis, Faculty of Mathematics and Physics, Charles Univ., Prague, 2011, 1–121.

[Q106] D. A. Philips, L. R. Dupre, J. A. A. Melkebeek: Magneto-dynamic field computation using a rate-dependent Preisach model, IEEE Trans. Magnet. 30 (1994), 4377–4379.

[Q107] M. Práger: Eigenvalues and eigenfunctions of the Laplace operator on an equilateral triangle, Appl. Math. 43 (1998), 311–320.

[Q108] K. Rektorys and E. Vitásek (eds.): Survey of applicable mathematics II, Kluwer, Amsterdam, 1994.

[Q109] K. Rektorys a kol.: Přehled užité matematiky II, Prometheus, Praha, 1995.

[Q110] S. I. Repin: Error bounds for approximate solutions of variational problems with linear growth functionals. Proc. Conf. Analysis and Approximation of Boundary Value Problems, Univ. of Jyväskylä, Series A, Collections, No. A 2/2000, 165–188.

[Q111] S. Repin: A posteriori estimates for partial differential equations, Radon Ser. Comput. Appl. Math., vol. 4, Walter de Gruyter, Berlin, New York, 2008.

[Q112] K. Salmenjoki: On numerical methods for shape design problems (Thesis), Dep. of Math., Univ. of Jyväskylä, Report 52, 1991, 1–35.

[Q113] K. Segeth: Je bilanční metoda lepší než metoda konečných prvků? Sborník semináře: Programy a algoritmy numerické matematiky 8, Janov, 1996, MÚ AV ČR Praha, 1996, 184–193.

[Q114] S. Shaw, M. K. Warby, and J. R. Whiteman: An introduction to the theory and numerical analysis of viscoelasticity problems, Proc. Industrial Math. and Math. Modelling, Cheb, 1997, Univ. of West Bohemia, Pilsen, 1998, 1–51.

[Q115] P. Šolín, K. Segeth, and I. Doležel: Higher-order finite element methods, CRC Press, London, New York, 2003.

[Q116] J. Stańdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[Q117] J. Stebel: Optimal shape design in a fibre orientation model, WDS'05 Proc., Part I, Matfyzpress, Prague, 2005, 167–172.

[Q118] J. Stebel, R. A. E. Mäkinen, and J. I. Toivanen: Optimal shape design in a fibre orientation model Appl. Math. 52 (2007), 391–405.

[Q119] J. Steinbach: Comparison of finite element and finite volume schemes for variational inequalities, East-West J. Numer. Math. 4 (1996), 207-235.

[Q120] J. Steinbach: On box schemes for elliptic variational inequalities, Numer. Funct. Anal. Optim. 18 (1997), 1041–1066.

[Q121] B. Szabó and I. Babuška: Finite element analysis, John Wiley & Sons, Inc., New York, 1991, (see p. 362).

[Q122] X. C. Tai: Application of the finite element method to the parameter identification of one- and two-dimensional parabolic equations, Math. Numer. Sinica 12 (1990), 1–8.

[Q123] X. C. Tai: Parallel computing with splitting - up methods and the distributed parameter identification problems (Thesis), Dept. of Math., Univ. of Jyväskylä, Report 50, 1991, 1–94.

[Q124] X. C. Tai: Parallel function and space decomposition methods with application to optimization, splitting and domain decomposition methods, Technical Report No. 231, Tech. Univ. Graz, 1992, 1–93.

[Q125] J. Tervo: A FEM scheme of a PDE system from bioreactor theory with stability results, SIAM J. Numer. Anal. 35 (1998), 1230–1248.

[Q126] P. S. Theocaris and G. E. Stavroulakis: Optimal material design in composites: An iterative approach based on homogenized cells, Comput. Methods Appl. Mech. Engrg. 169 (1999), 31–42.

[Q127] D. Tiba: Lectures on the optimal control of elliptic equations, Lecture Notes 32, Univ. of Jyväskylä, 1996, 1–147.

[Q128] J. Toivanen: Fictitious domain method applied to shape optimization, Univ. of Jyväskylä, Dept. of Math., Report 77, 1997, 1–108.

[Q129] I. Tsukerman, J. D. Lavers, and A. Konrad: Using complementary formulations for accurate computations of magnetostatic fields and forces in a synchronous motor, IEEE Trans. Magnet. 30 (1994), 3479–3482.

[Q130] M. Vanmaele: Contribution to the theory of finite element methods for second-order elliptic eigenvalue problems, Paleis der Academiën, Brussel, 2001, 1–48.

[Q131] J. Velímský and Z. Martinec: Time-domain, spherical harmonic-finite element approach to transient three-dimensional geomagnetic induction in a spherical heterogeneous earth, Geophys. J. Internat. 161 (2005), 81–101.

[Q132] E. Vitásek: Základy teorie numerických metod pro řešení diferenciálních rovnic, Academia, Praha, 1994, (see p. 327).

[Q133] E. Vitásek: Variační metody (učební text), FAV ZČU, Plzeň, 1999.

[Q134] E. Vitásek: Vybrané kapitoly z teorie numerických metod pro řešení diferenciálních rovnic, ZČU, Plzeň, 2002, 1–145.

[Q135] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q136] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q137] S. W. Walker and M. J. Shelley: Shape optimization of peristaltic pumping, J. Copmut. Phys. 229 (2010), 1260–1291.

[Q138] S. Zhang: On the nested refinement of quadrilateral and hexahedral finite elements and the affine approximation, Numer. Math. 98 (2004), 559–579.

[Q139] S. Zhang, Y. Lin, and M. Rao: Numerical solutions for second-kind Volterra integral equations by Galerkin methods, Appl. Math. 45 (2000), 19–39.

[Q140] S. Zhang. Y. Lin, and M. Rao: Defect correction and a posteriori error estimation of Petrov-Galerkin methods for nonlinear Volterra integro-differential equations, Appl. Math. 45 (2000), 241–263.

[Q141] S. Zhang, T. Tang, Y. Lin, and M. Rao: Extrapolation and a-posteriori error estimators of Petrov-Galerkin methods for non-linear Volterra integro-differential equations, J. Comput. Math. 14 (2001), 407–422.

[Q142] H. Zheng, L. G. Tham, and D. F. Liu: Direct solution of near-symmetric matrices and its applications, Rock and Soil Mech. 27 (2006), 1880–1884.

[Q143] H. Zheng, H. C. Dai, and D. F. Liu: A variational inequality formulation for unconfined seepage problems in porous media, Appl. Math. Model. 33 (2009), 437–450.

[**A2**] **M. Křížek, P. Neittaanmäki, and R. Stenberg (eds.)**, *Finite Element Methods: Fifty Years of the Courant Element*, Proc. Conf., Jyväskylä, 1993, LN in Pure and Appl. Math. vol. 164, Marcel Dekker, New York, 1994, 504 pp.

Cited in:

[Q144] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q145] E. G. D'yakonov: Effective numerical methods for solving elliptic problems in strengthened Sobolev spaces, Seventh Copper Mountain Conf. on Multigrid Methods, NASA Conf. Publ. 3339, Part I, Hampton, 1996, 199–212.

[Q146] E. G. D'yakonov: Optimization in solving elliptic problems, CRC Press, New York, 1996.

[Q147] Q. Lin: Tetrahedral or cubic mesh? Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 160–182.

[Q148] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[Q149] N. N. Yan and A. Zhou: Gradient recovery type a posteriori error estimate for finite element approximations on irregular meshes, Comput. Methods Appl. Mech. Engrg. 190 (2001), 4289–4299.

[Q150] T. Zhang, Y. P. Lin, and R. J. Tait: The derivative path interpolating recovery technique for finite element approximations, J. Comput. Math. 22 (2004), 113–122.

[Q151] Z. Zhang and N. N. Yan: Recovery type a posteriori error estimates in finite element methods, Korean J. Comput. Appl. Math. 8 (2001), 235–251.

[**A3**] **M. Křížek and P. Neittaanmäki**, *Mathematical and numerical modelling in electrical engineering: theory and applications*, Kluwer Academic Publishers, Dordrecht, 1996, 300 pp.

Cited in:

[Q152] W. Allegretto, Y. Lin, and A. Zhou: Numerical analysis for systems with memory arising from semiconductor simulations, Appl. Math. Comput. 105 (1999), 101–119.

[Q153] I. Antal and J. Karátson: A mesh independent superlinear algorithm for some nonlinear nonsymmetric elliptic systems, Comput. Math. Appl. 55 (2008), 2185–2196.

[Q154] O. Axelsson, I. Faragó, and J. Karátson: Sobolev space preconditioning for Newton's method using domain decomposition, Numer. Linear Algebra Appl. 9 (2002), 585–598.

[Q155] L. Bonifacius and I. Neitzel: Second order optimality conditions for optimal control of quasilinear parabolic equations, Math. Control Relat. Fields 8 (2018), 1–34.

[Q156] B. Borsos: An inexact Newton method with inner preconditioned CG for non-uniformly monotone elliptic problems, Math. Model. Anal. 26 (2021), no. 3, 383–394.

[Q157] B. Borsos and J. Karátson: Variable preconditioning for strongly nonlinear elliptic problems, J. Comput. Appl. Math. 350 (2019), 155–164.

[Q158] B. Borsos and J. Karátson: J. Quasi-Newton variable preconditioning for nonlinear nonuniformly monotone elliptic problems posed in Banach spaces, IMA J. Numer. Anal. 42 (2022), no. 2, 1806–1830.

[Q159] A. Bossavit: On the Lorenz gauge, COMPEL 18 (1999), 323–336.

[Q160] O. Davydov: Discrete maximum principles in finite element analysis, Master Thesis, Dept. of Math. Inform. Technology, Uviv. of Jyväskylä, 2003.

[Q161] L. T. Dechevsky: Near-degenerate finite element and lacunary multiresolution methods of approximation, Saint-Malo Proceedings (ed. by L. L. Schumaker), Vanderbit Univ. Press, 2000, 1–19.

[Q162] L. T. Dechevsky, W. L. Wendland: On lacunary multiresolution methods of approximation in Hilbert spaces, Proc. Curve and Surface Fitting: Saint Malo (ed. by A. Cohen, C. Rabut and L. L. Schumaker), Vanderbit Univ. Press, 2000, 1–10.

[Q163] L. T. Dechevski and W. L. Wendland: On the Bramble-Hilbert lemma, II: Model applications to quasi-interpolation and linear problems. Internat. J. Pure Appl. Math. 33 (2006), 465–501.

[Q164] L. T. Dechevsky and W. L. Wendland: On the Bramble-Hilbert lemma, II. Preprint 2007/002, Univ. Stuttgart, Berichte aus dem Inst. für Angewandte Anal. und Numer. Simulation, 2007, 1–67.

[Q165] V. Dolejší, P. Knobloch, V. Kučera, and M. Vlasák: Finite element methods: Theory, applications and implementations, Matfyzpress, Prague, 2013.

[Q166] I. Faragó: Numerical treatment of linear parabolic problems. MTA Doctor Thesis for the Hungarian Academy of Sciences, Eötvös Loránd University, Budapest, 2008.

[Q167] I. Faragó and J. Karátson: Gradient–finite element method for nonlinear Neumann problems, J. Appl. Anal. 7 (2001), 257–269.

[Q168] I. Faragó and J. Karátson: Infinite-dimensional preconditioning and Sobolev gradients for nonlinear elliptic problems, (submitted to Numer. Math.).

[Q169] I. Faragó and J. Karátson: Variable preconditioning via quasi-Newton methods for nonlinear problems in Hilbert space, SIAM J. Numer. Anal. 41 (2003), 1242–1262.

[Q170] I. Faragó and J. Karátson: Numerical solution of nonlinear elliptic problems via preconditioning operators: Theory and applications. Nova Science Publisher, New York, 2002.

[Q171] I. Faragó, S. Korotov, and T. Szabó: On modification of continuous and discrete maximum principles for reaction-diffusion problems, Adv. Appl. Math. Mech. 3 (2011), 109–120.

[Q172] I. Faragó, S. Korotov, and T. Szabó: On continuous and discrete maximum principles for elliptic problems with the third boundary condition, Appl. Math. Comput. 219 (2013), 7215–7224.

[Q173] I. Faragó, S. Korotov, and T. Szabó: On continuous and discrete maximum/minimum principles for reaction-diffusion problems with the Neumann boundary condition, Proc. Conf. Applications of Mathematics 2015 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 34–44.

[Q174] E. M. Garau, P. Monrin, and C. Zuppa: Quasi-optimal convergence rate of an AFEM for quasi-linear problems of monotone type, Numer. Math. Theory Methods Appl. 5 (2012), 131–156.

[Q175] C. Grossmann and H.-G. Roos: Numerische Behandlung partieller Differentialgleichungen, Teubner-Verlag, Wiesbaden, 2005.

[Q176] C. Grossmann, H.-G. Roos, and M. Stynes: Numerical treatment of partial differential equations, Springer-Verlag, Berlin, Heidelberg, 2007.

[Q177] W. Han and M. Sofonea: Quasistatic contact problems in viscoelasticity and viscoplasticity. Studies in Advanced Math., vol. 30, Amer. Math. Soc. and Internat. Press, New York, 2002.

[Q178] V. G. Hart: The hypercircle and J. L. Synge, Math. Proc. Roy. Irish Acad. 107 A (2007), 153–161.

[Q179] R. Horváth, I. Faragó, and W. Schilders: Iterative solution methods of the Maxwell equations using staggered grid spatial discretization. In: Conjugate Gradient Algorithms and Finite Element Methods, Springer-Verlag, Berlin, 2004, 211-221.

[Q180] J. Karátson: Gradient method in Sobolev spaces for nonlocal boundary-value problems. Electron. J. Differential Equations, No. 51 (2000), 17 pp.

[Q181] J. Karátson: On the Lipschitz continuity of derivatives for some scalar nonlinearities, J. Math. Anal. Appl. 346 (2009), 170–176.

[Q182] J. Karátson: Operator preconditioning with efficient applications for nonlinear elliptic problems, Cent. Eur. J. Math. 10 (2012), 231–249.

[Q183] Karátson, B. Kovács, and S. Korotov: Discrete maximum principles for nonlinear elliptic finite element problems on surfaces with boundary, IMA J. Numer. Anal. 40 (2020), no. 2, 1241–1265.

[Q184] J. Karátson and I. Faragó: Sobolev space preconditioning for nonlinear mixed boundary value problems. In Large Scale Scientific Computing, LSSC 2001 (eds. S. Margenov, J. Wasniewski, P. Yalamov), Sozopol, LN Comput. Sci., vol 2179, Springer, 2001, 104–112.

[Q185] J. Karátson and I. Faragó: Variable preconditioning via quasi-Newton methods for nonlinear problems in Hilber space. SIAM J. Numer. Anal. 41 (2003), 1242–1262.

[Q186] J. Karátson and I. Faragó: Preconditioning operators and Sobolev gradients for nonlinear elliptic problems, Comput. Math. Appl. 50 (2005), 1077-1092.

[Q187] J. Karátson and S. Korotov: Discrete maximum principles for finite element solutions of nonlinear elliptic problems with mixed boundary conditions, Numer. Math. 99 (2005), 669–698.

[Q188] J. Karátson and S. Korotov: On the discrete maximum principles for finite element solutions of nonlinear elliptic problems. Proc. Conf. ECCOMAS 2004 (eds. P. Neittaanmäki et al), Univ. of Jyväskylä, 2004, 1–12.

[Q189] J. Karátson and S. Korotov: Discrete maximum principles for finite element solutions of some mixed nonlinear elliptic problems using quadratures, J. Comput. Appl. Math. 192 (2006), 75–88.

[Q190] J. Karátson and S. Korotov: Discrete maximum principles for FEM solutions of some nonlinear elliptic interface problems, Internat. J. Numer. Anal. Model. 6 (2009), 1–16.

[Q191] J. Karátson and S. Korotov: An algebraic discrete maximum principle in Hilbert space with applications to nonlinear cooperative elliptic systems, SIAM J. Numer. Anal. 47 (2009), 2518–2549.

[Q192] J. Karátson and S. Korotov: Sharp upper global a posteriori error estimates for nonlinear elliptic variational problems, Appl. Math. 54 (2009), 297–336.

[Q193] J. Karátson and B. Kovács: Variable preconditioning in complex Hilbert spaces and its applications to the nonlinear Schödinger equation Comput. Math. Appl. 65 (2013), 449–459.

[Q194] J. Karátson and L. Lóczi: Sobolev gradient preconditioning for the electrostatic potential equation, Comput. Math. Appl. 50 (2005), 1093–1104.

[Q195] A. Khademi, S. Korotov, and J. E. Vatne: On interpolation error on degenerating prismatic elements, Appl. Math. 63 (2018), 237–257.

[Q196] P. Knobloch: Numerical modelling of heat phemonena induced by heat radiation, PhD. Thesis, Tech. Univ. Liberec, 2019.

[Q197] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q198] S. Korotov: A posteriori error estimation of goal-oriented quantities for elliptic type BVPs, J. Comput. Appl. Math. 191 (2006), 216–227.

[Q199] S. Korotov: Two-sided a posteriori error estimates for linear elliptic problems with mixed boundary conditions, Appl. Math. 52 (2007), 235–249

[Q200] S. Korotov: Some geometric results for tetrahedral finite elements, Proc. Conf. NUMGRID 2010, Moscow, 2011, 1–6.

[Q201] S. Korotov and J. Stańdo: Yellow-red and nonobtuse refinements of planar triangulations, Math. Notes, Miskolc 3 (2002), 39–46.

[Q202] S. Korotov and J. Stańdo: Quasi-red and quasi-yellow nonobtuse refinements of planar triangulations, submitted to Math. Notes Miskolc, 1–8.

[Q203] S. Korotov and J. Stańdo: Nonstandard nonobtuse refinements of planar triangulations, Proc. Conf. Finite Element Methods: Fifty Years of Conjugate Gradients, Univ. of. Jyväskylä, 2002, 101–112.

[Q204] J. Liu and D. Yin: Modified SPR technique for 3D tensor-product block finite elements: A computer-based test, Appl. Mech. Materials, vol. 101–102 (2012), 1190–1193.

[Q205] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[Q206] D. Lukáš: Optimization in 3-dimensional linear magnetostatics, Proc. of the 10th Sympos. on Modern Math. Methods in Engineering (in Czech), Dolní Lomná, JČMF, Ostrava, 2001, 158–162.

[Q207] D. Lukáš: An efficient implementation of methods of sensitivity analysis in optimal shape design (in Czech), Proc. of the 11th Sympos. on Modern Math. Methods in Engineering, Dolní Lomná, JČMF, Ostrava, 2002, 157–162.

[Q208] D. Lukáš: On solution to an optimal shape design problem in 3-dimensional linear magnetostatics, Appl. Math. 49 (2004), 441–464.

[Q209] D. Lukáš: Optimal shape design in magnetostatics, Ph.D. Thesis, VŠB Ostrava, 2003, 1–130.

[Q210] D. Lukáš: On the road – between Sobolev spaces and a manufacture of electromagnets, Trans. of VSB, Comput. Sci. Math. Ser. 2 (2003), No.1 , 1–10.

[Q211] D. Lukáš, D. Coprian, and J. Pištora: O existenci řešení úlohy tvarové optimalizace ve 3-dimenzionální magnetostatice a numerické řešení, Sborní Software a algoritmy numerické matematiky, Maxov, 2002.

[Q212] J. Mlýnek: Matematické modely vedení tepla v elektrických strojích. Habilitační práce, Tech. Univ. Liberec, 2007.

[Q213] H.-G. Roos and H. Schwetlick: Numerische Mathematik, B. G. Teubner, Stuttgart, Leipzig, 1999.

[Q214] V. Sobotíková: Error estimates for nonlinear boundary value problems solved by nonconforming finite element methods, Habilitation Thesis, Faculty of Electrical Engineering, Czech Technical University, Prague, 2010.

[Q215] A. Šolcová: The founders of the conjugate gradient method, In: Conjugate Gradient Algorithms and Finite Element Methods, Springer, Berlin, 2004, 3–11.

[Q216] J. Stańdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[Q217] T. Tiihonen: Finite element approximation of nonlocal heat radiation problems. Math. Models and Methods in Appl. Sci. 8 (1998), 1071–1089.

[Q218] T. Vejchodský: Finite element approximation of a nonlinear parabolic heat conduction problem and a posteriori error estimators, Ph.D. Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2003.

[Q219] T. Vejchodský: On a posteriori error estimation strategies for elliptic problems, Proc. Internat. Conf. Presentation of Mathematics '05, TU Liberec, 2006, 373–386.

[Q220] W. Weikl, H. Andrä, and E. Schnack: An alternating iterative algorithm for the reconstruction of internal cracks in three-dimensional solid body. Inverse Problems 17 (2001), 1957–1975.

[Q221] T. Zhang and S. Zhang: The gradient superconvergence of the finite volume method for a nonlinear elliptic problem of nonmonotone type, Appl. Math. 60 (2015), 573–596.

[**A4**] **M. Křížek, P. Neittaanmäki, and R. Stenberg (eds.)**, *Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates*, Proc. Conf., Jyväskylä, 1996, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 348 pp.

Cited in:

[Q222] J. H. Brandts: Superconvergence of a Galerkin boundary element method for the single layer potential using piecewise polynomial approximations, Bericht 98-10, Christian-Albrechts-Universität zu Kiel, 1998, 1-19

[Q223] J. H. Brandts: A posteriori error estimation and adaptivity in the method of lines with mixed finite elements, Appl. Math. 44 (1999), 407–419.

[Q224] J. H. Brandts: Superconvergence for triangular over $k = 1$ Raviart-Thomas mixed finite elements and for triangular standard quadratic finite element methods, Appl. Numer. Math. 34 (2000), 39–58.

[Q225] J. H. Brandts: Analysis of a non-standard mixed finite element method with applications to superconvergence, Appl. Math. 54 (2009), 225–235.

[Q226] J. Brandts and Y. Chen: Superconvregence of least-squares mixed finite elements, Internat. J. Numer. Anal. Model. 3 (2006), 303–310.

[Q227] W. Cao, C.-W. Shu, Y. Yang, and Z. Zhang: Superconvergence of discontinuous Galerkin methods for two-dimensional hyperbolic equations, J. Numer. Anal. 53 (2015), 1651–1671.

[Q228] G. F. Carey: Some further properties of the superconvergent flux projection, Comm. Numer. Methods Engrg. 18 (2002), 241–250.

[Q229] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q230] L. Du and N. N. Yan: Gradient recovery type a posteriori error estimate for finite element approximation on non-uniform meshes. Adv. Comput. Math. 14 (2001), 175–193.

[Q231] C. Grossmann and H.-G. Roos: Numerische Behandlung partieller Differentialgleichungen, Teubner-Verlag, Wiesbaden, 2005.

[Q232] C. Grossmann, H.-G. Roos, and M. Stynes: Numerical treatment of partial differential equations, Springer-Verlag, Berlin, Heidelberg, 2007.

[Q233] J. F. Hiller and K. J. Bathe: On higher-order-accuracy points in isoparametric finite element analysis and an application to error assessment. Comput. Struct. 79 (2001), 1275–1285.

[Q234] C. Huang and Z. Zhang: Polynomial preserving recovery for quadratic elements on anisotropic meshes, Numer. Methods Partial Differential Equations 28 (2012), 966–983.

[Q235] Y. Huang, J. Li, and C. Wu: Averaging for superconvergence: Verification and application of 2D edge elements to Maxwell's equations in metamaterials, Comput. Methods Appl. Mech. Engrg. 255 (2013), 121–132.

[Q236] Y. Q. Huang, J. Li, C. Wu, and W. Yang: Superconvergence analysis for linear tetrahedral edge elements, submitted to J. Sci. Comput. in 2013, 1–26.

[Q237] Y. Huang, L. Wang, and N. Yi: Mesh quality and more detailed error estimates of finite element method, Numerical Math. 10 (2017), 420–436.

[Q238] Q. Lin: Tetrahedral or cubic mesh? Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 160–182.

[Q239] Q. Lin and J. Lin: Finite elements methods: Accuracy and improvement, Science Press, Beijing, 2006.

[Q240] Q. Lin and H. Xie: A type of finite element gradient recovery method based on vertex-edge-face interpolation: The recovery technique and superconvergence property, East Asian J. Appl. Math. 1 (2011), 248–263.

[Q241] Q. Lin, H. Wang, and S. Zhang: Uniform optimal-order estimates for finite element methods for advection-diffusion equations, Jrl. Syst. Sci. & Complexity 22 (2009), 1–5.

[Q242] R. Lin: Natural superconvergence in two and three dimensional finite element methods, Dissertation, Wayne State Univ., Detroit, 2005, 1–240.

[Q243] R. Lin and Z. Zhang: Natural superconvergence points of triangular finite elements, Wiley Periodicals, 2004, 864–906.

[Q244] R. Lin and Z. Zhang: Derivative superconvergence of equilateral triangular finite elements, Contem. Math. 383 (2005), 299–310.

[Q245] R. Lin and Z. Zhang: Natural superconvergence points in three-dimensional finite elements, SIAM J. Numer. Anal. 46 (2008), 1281–1297.

[Q246] T. Lin and D. L. Russell: A superconvergent method for approximating the bending moment of elastic beams with hysteresis damping. Appl. Numer. Math. 38 (2001), 145–165.

[Q247] S. Mao, L. Shen, and A. Zhou: Adaptive finite element algorithms for eigenvalue problems based on local averaging type a posteriori error estimates, Adv. Comput. Math. 25 (2006), 135–160.

[Q248] S. Mao and Z.-C. Shi: High accuracy analysis of two nonconforming plate element, Numer. Math. 111 (2009), 407–443.

[Q249] A. Naga and Z. Zhang: A posteriori error estimates based on the polynomial preserving recovery. SIAM J. Numer. Anal. 42 (2004), 1780–1800.

[Q250] A. Naga and Z. Zhang: The polynomial-preserving recovery for higher order finite element methods in 2D and 3D, Discrete Contin. Dyn. Syst. Ser. B 5 (2005), 769–798.

[Q251] J. E. Pask, B. M. Klein, P. A. Sterne, et al.: Finite-element methods in electronic-structure theory. Comput. Phys. Commun. 135 (2001), 1–34.

[Q252] S. I. Repin: A posteriori estimates of the accuracy of dimensional reduction models in 3-D elasticity theory. Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 240–253.

[Q253] S. Repin: A posteriori estimates for partial differential equations, Radon Ser. Comput. Appl. Math., vol. 4, Walter de Gruyter, Berlin, New York, 2008.

[Q254] H.-G. Roos and T. Linss: Gradient recovery for singularly perturbed boundary value problems I: One-dimensional convection-diffusion, Computing 66 (2001), 163–178.

[Q255] H.-G. Roos and T. Linss: Gradient recovery for singularly perturbed boundary value problems II: Two-dimensional convection-diffusion, Math. Models Methods Appl. Sci. 11 (2001), 1169–1179.

[Q256] R. Wang, R. Zhang, X. Zhang, and Z. Zhang: Superconvergence analysis and polynomial preserving recovery for a class of weak Galerkin methods, submitted to Numer. Methods Partial Differential Equations in 2017, 1–20.

[Q257] Z. Xie and Z. Zhang: Superconvergence of DG method for one-dimensional singularly perturbed problems. J. Comput. Math. 25 (2007), 185–200.

[Q258] J. Xu and Z. Zhang: Analysis of recovery type a posteriori error estimators for mildly structured grids. Math. Comp. 73 (2004), 1139–1152.

[Q259] N. N. Yan: A posteriori error estimators of gradient recovery type for elliptic obstacle problems. Adv. Comput. Math. 15 (2001), 333–362.

[Q260] N. N. Yan: A posteriori error estimators of gradient recovery type for FEM of a model optimal control problem. Adv. Comput. Math. 19 (2003), 323–336.

[Q261] N. N. Yan: Superconvergence analysis and a posteriori error estimation in finite element methods, Ser. Inf. Comput. Sci., vol. 40, Science Press, Beijing, 2008.

[Q262] T. Zhang, Y. P. Lin, and R. J. Tait: The patch interpolating recovery technique and ultraconvergence, preprint, 2000, 1–17.

[Q263] T. Zhang, Y. P. Lin, and R. J. Tait: Superapproximation properties of the interpolation operator of projection type and applications, J. Comput. Math. 20 (2002), 277–288.

[Q264] T. Zhang, L. Tang: The gradient superconvergence of the finite volume element method for a nonlinear elliptic problem of nonmonotone type, submitted to Numer. Methods Partial Differential Equations in 2014, 1–28.

[Q265] T. Zhang and S. Yu: The derivative patch interpolation recovery technique and superconvergence for the discontinuous Galerkin method, Appl. Numer. Math. 85 (2014), 128–141.

[Q266] T. Zhang and S. Zhang: Finite element derivative interpolation recovery technique and superconvergence, Appl. Math. 56 (2011), 513–531.

[Q267] Z. Zhang: Superconvergent finite element method on a Shiskin mesh for convection-diffusion problems. Report no. 98-006, Dept. of Math. and Statistics, Texas Tech. Univ., 1998, 1–30.

[Q268] Z. Zhang: A posteriori error estimates on irregular grids based on gradient recovery. Adv. Comput. Math. 15 (2001), 363–374.

[Q269] Z. Zhang: Derivative superconvergent points in finite element solution of harmonic functions – A theoretical justification, Math. Comp. 71 (2002), 1421–1430.

[Q270] Z. Zhang: Finite element superconvergence on Shishkin mesh for 2-D convection-diffusion problems, Math. Comp. 72 (2003), 1147–1177.

[Q271] Z. Zhang: Polynomial preserving gradient recovery and a posteriori estimate for bilinear element on irregular quadrilaterals, Internat. J. Numer. Anal. Model. 1 (2004), 1–24.

[Q272] Z. Zhang: Polynomial preserving recovery for anisotropic and irregular grids, J. Comput. Math. 22 (2004), 331–340.

[Q273] Z. Zhang: Polynomial preserving recovery for for meshes from Delaunay triangulation or with high aspect ratio, Numer. Methods Partial Differential Equations 23 (2007), 960–971.

[Q274] Z. Zhang: Superconvergence points of polynomialspectral interpolation, SIAM J. Numer. Anal. 50 (2012), 2966–2985.

[Q275] Z. Zhang and R. Lin: Locating natural superconvergent points of finite element methods in 3D, Internat. J. Numer. Anal. Model. 2 (2005), 19–30.

[Q276] Z. Zhang and R. Lin: Derivative superconvergence of equilateral triangular finite elements, submitted to AMS Contemporary Math. in 2004, 1–12.

[Q277] Z. Zhang and A. Naga: A new finite element gradient recovery method: superconvergence property, SIAM J. Sci. Comput. 26 (2005), 1192–1213.

[Q278] Z. Zhang and A. Naga: Natural superconvergent points of equilateral triangular finite elements – A numerical example, J. Comput. Math. 24 (2006), 19–24.

[Q279] Z. Zhang, N. N. Yan, and T. Sun: Superconvergent derivative recovery for the intermediate finite element family of the second type. IMA J. Numer. Anal. 21 (2001), 643–665.

[Q280] Z. M. Zhang and Q. S. Zou: Some recent advances on vertex centered finite volume element method for elliptic equations, Sci. China Math. 56 (2013), 2507–2522.

[Q281] Q. D. Zhu: Superconvergence analysis for a high-degree triangular element of the finite element method, preprint, Hunan Normal Univ., Changsha, 1999, 1–16.

[Q282] Q. D. Zhu: Superconvergence points of two different kinds: a counterexample, preprint, 2000, 1–14.

[Q283] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[Q284] Q. D. Zhu and Q. H. Zhao: New discussions for finite element superconvergence, Advances in Math. (China), 33:4 (2004), 453–466.

[A5] **M. Křížek, F. Luca, and L. Somer**, *17 lectures on the Fermat numbers: From number theory to geometry*, CMS Books in Mathematics, vol. 9, Springer-Verlag, New York, 2001, 2011, xxiv+257 pp.

Cited in:

[Q285] D. Badziahin: Finding special factors of values of polynomials at integer points, Int. J. Number Theory 13 (2017), 209–228.

[Q286] C. W. O. Benedito, R. Palazzo Jr., and J. C. Interlando: An algorithm to construct arithmetic Fuschsian groups derived from quaternion algebras and the corresponding hyperbolic latices, J. Pure Appl. Algebra 220 (2016), 1902–1923.

[Q287] K. M. Boubaker: About Diophantine equations, an analytic approach, Internat. J. Contemp. Math. Sciences 5 (2010), 843–857.

[Q288] C. Caldwell: The prime glossary, 2002. `http://primes.utm.edu/glossary/home.php`

[Q289] C. K. Caldwell and G. L. Honaker, Jr.: Prime curios! The dictionary of primes number trivia, CreateSpace, 2009, p. 23, `http://primes.utm.edu/curios`

[Q290] S. S. Chandra: Fast digital convolutions using bit-shifts, arXiv: 1005.1497v1, 1–4.

[Q291] A. Chaumont, J. Leicht, T. Müller, and A. Reinhart: The continuing search for large elite primes, Int. J. Number Theory 5 (2009), 209–218.

[Q292] A. Chaumont and T. Müller: All elite primes up to 250 billions, J. Integer Seq. 9 (2006), Article 06.3.8, 1–5.

[Q293] S. Chern: Fermat numbers in multinomial coefficients, J. Integer Seq. 17 (2014), Article 14.3.2, 5 pp.

[Q294] J. B. Cosgrave and K. Dilcher: A role for generalized Fermat numbers, Math. Comp. 86 (2017), 899–933.

[Q295] G. Deng and P. Yuan: Symmetric digraphs from powers modulo n, Open J. Discrete Math. 1 (2011), 103–107.

[Q296] G. Deng and P. Yuan: On the symmetric digraphs from powers modulo n, Discrete Math. 312 (2012), 720–728.

[Q297] E. Deze, Mersenne numbers and Fermat numbers, World Scientific, 2022.

[Q298] G. Everest, A. van der Poorten, I. Shparlinski, and T. Ward: Exponential functions, linear recurrence sequences, and their applications, AMS, 2002. `http://www.mth.uea.ac.uk/sequences/`

[Q299] P. Goswami, S. K. Thakur, and G. C. Ray: The structure of power digraph connected with the congruence $a^{11} \equiv b$ (mod n), submitted to Ind. J. Pure Appl. Math. in 2021, 1-12.

[Q300] J. M. Grau and A. M. Oller-Marcén: An $\tilde{O}(\log^2(N))$ time primality test for generalized Cullen Numbers, Math. Comp. 80 (2011), 2315–2323.

[Q301] A. Gueye, S. E. Rihane, and A. Togbé: Coincidence between k-Fibonacci numbers and products of two Fermat numbers, Bull. Braz. Math. Soc. (N.S.) 53 (2022), 541–552.

[Q302] M. Hardy and C. Woodgold: Prime simplicity, Math. Intelligencer 31 (2009), 44–52.

[Q303] M. O. Hernane, S. E. Rihane, S. Seffah, and A. Togbé: On Fermat and Mersenne numbers expressible as product of two k-Fibonacci numbers, Bol. Soc. Mat. Mex. (3) 28 (2022), no. 2, Paper No. 36, 12 pp.

[Q304] D. Herrmann: Mathematik der Neuzeit, Geschichte der Mathematik in Europa von Vieta bis Euler, Springer Spektrum, Berlin, Heidelberg, 2023.

[Q305] W. Hindes: The Vojta conjecture implies Galois rigidity in dynamical families, Proc. Amer. Math. Soc. 144 (2016), 1931–1938.

[Q306] E. Hobst, M. Hobstová: Carl Fierdrich Gauss – zalkadadeľ modernej matematiky, Pokroky Mat. Fyz. Astronom. 52 (2007), 296–307.

[Q307] E. J. Ionascu: Number Theory-Lecture Notes, 2007, 1–42.

[Q308] J. H. Jaroma and K. N. Reddy: Classical and alternative approaches to the Mersenne and Fermat numbers, Amer. Math. Monthly 114 (2007), 677–687.

[Q309] T. Ju and M. Wu: On iteration digraph and zero-divisor graph of the ring $\mathbb{Z}_n$, Czechoslovak Math. J. 64 (2014), 611–628.

[Q310] F. Katrnoška: Latinské čtverce a genetický kód, Pokroky Mat. Fyz. Astronom. 52 (2007), 177–187.

[Q311] J. Klaška: Hypotéza Franciszka Jakóbczyka o Mersennových číslech, Kvaternion 1–2 (2021), 47–57.

[Q312] J. Klaška: Jakóbczyk's hypothesis on Mersenne numbers and generalizations of Skula's theorem, J. Integer Seq. 26 (2023), Article 23.3.8.

[Q313] M. Klazar: Prvočísla obsahují libovolně dlouhé posloupnosti, Pokroky Mat. Fyz. Astronom. 49 (2004), 177–187.

[Q314] J. Kramer-Miller: Structural properties of power digraphs modulo n, Preprint, Rose-Hulman Institute of Technology, 2009, 1–19.

[Q315] D. Křížová: Heron triangles and Heron's formula, Proc. Internat. Conf. The Mathematics Education into the 21th Century Project, Brno, 2003, 158–161.

[Q316] C. Lathrop and L. Stemkoski: Parallel in the work of Leonhard Euler and Thomas Clausen. In Euler at 300: an appreciation (ed. by R. E. Bradley, L. A. D'Antonio, C. E. Sandifer), Math. Assoc. Amer., Washington D.C., 2007, 217–225.

[Q317] X. Li: Verifying two conjectures on generalized elite primes, J. Integer. Seq. 12 (2009), Article 09.4.7, 1–13.

[Q318] P. R. Longhas, A. Abdul, A. Rosal: Factors of composite $4n^2 + 1$ using Fermats factorization method, Internat. J. Math. Trends Technol. 68 (2022), 53–60.

[Q319] P. Mathonet, M. Rigo, M. Stipulanti, and N. Zénaïdi: On digital sequences associated with Pascal's triangle, preprint Jan 2022.

[Q320] J. Mlýnek: Informační bezpečnost, Pokroky Mat. Fyz. Astronom. 51 (2006), 89–98.

[Q321] J. Mlýnek: Zabezpečení obchodních informací, Computer Press, Brno, 2007.

[Q322] T. Müller: On the exponents of non-trivial divisors of odd numbers and a generalization of Proth's primality theorem, J. Integer Seq. 20 (2017), article no. 17.2.7, 15 pp.

[Q323] T. Müller and A. Reinhart: On generalized elite primes, J. Integer Seq. 11 (2008), issue 3, article no. 08.3.1, 15 pp.

[Q324] B. Muthuswamy, J. D. Ellithorpe: A cellular automaton for factoring integers, UC Berkeley, EECS Dept., Technical Report, Spring 2008, 1–2.

[Q325] W. Narkiewicz: Rational number theory in the 20th century. From PNT to FLT, Springer, 2011, 1–617.

[Q326] Z. Polický: Některé aplikace Malé Fermatovy věty. Sborník 3. konference o matematice a fyzice na vysokých školách technických, VA Brno, 2003, 130–134.

[Q327] Z. Polický: Diophantine equation $(q^n - 1)/(q - 1) = y$ for four prime divisors of $y - 1$, Comment. Math. Univ. Carolin. 46 (2005), 577–588.

[Q328] M. Th. Rassias: Problems-solving and selected topic in number theory. In the Spirit of the Mathematical Olympiad (Foreword by P. Mihailescu), Springer, 2010.

[Q329] P. Ribenboim: The little book of bigger primes, Second Edition, Springer-Verlag, New York, 2004, p. 75.

[Q330] T. Rike: Fermat numbers and the heptadecagon, Berkeley Math. Circle, Nov. 29, 2005, 1–4.

[Q331] R. Rotheram and S. Zhou: Cores of imprimitive symmetric graphs of order a product of two distinct primes. J. Graph Theory 81 (2016), 364–392.

[Q332] A. Rotkiewicz: Lucas and Frobenius pseudoprimes, Proc. of the 10th Internat. Conf. on Fibonacci Numbers and their Applications, Flagstaff, Arizona, Kluwer, 2002, 1–21.

[Q333] A. Rotkiewicz: On pseudoprimes having special forms and a solution of Szymiczek's problem, Acta. Math. Univ. Ostraviensis 13 (2005), 57–71.

[Q334] L. Sauras-Altuzarra: Some properties of the factors of Fermat numbers, Art Disc. Appl. Math. (2022), 1–7.

[Q335] L. Sauras-Altuzarra: Some applications of Baaz's generalization method to the study of the factors of Fermat numbers, to appear in J. Logic Comput. in 2022, 1–12.

[Q336] A. Sawkmie and M. M. Singh: On the tree structure of the power digraphs modulo n, Czechoslovak Math. J. 65 (2015), 923–945.

[Q337] C. Schick: Weiche Primzahlen und das 257-Eck: eine analytische Lösung des 257-Ecks, C. Schick, Zürich, 2008.

[Q338] C. Schick: Weak numbers and the last Fermat prime. Pierpoint primes and transcendental numbers, Jäggi & Roffler AG, Zürich, 2013.

[Q339] J. Skowronek-Kaziów: Properties of digraphs connected with some congruences relations, Czechoslovak Math. J. 59 (2009), 39–49.

[Q340] J. Skowronek-Kaziów: Some digraphs arising from number theory and remarks on the zero-divisor graph of the ring Z_n, Inform. Process. Lett. 108 (2008), 165–169.

[Q341] N. J. A. Sloane: The on-line encyclopaedia of integer sequences, 2007, A000215, A023394, A152153, A152154, A152155, A152156, A121270, published eletronically at
`http://www.research.att.com/~njas/sequences/`

[Q342] A. Šolcová: D'Artagnan mezi matematiky — pocta Pierru Fermatovi k 400. výročí narození, Pokroky Mat. Fyz. Astronom. 46 (2001), 286–298.

[Q343] A. Šolcová: Fermatův odkaz, Cahiers du CEFRES 28 (2002), 173–202.

[Q344] A. Šolcová: Further Development of Fermat's ideas in Connection with Applied Mathematics in Engineering, Ph.D. Thesis, Czech Technical Univesrity, Prague, 2005, 1–115.

[Q345] C. Tsang: Fermat numbers, Preprint Univ. Washington, Math414, March 2010, 1–23.

[Q346] C. Tsang: Fermat and Mersenne numbers tutorial, R01942039, 1–23.

[Q347] A. Tyszka: A conjecture on arithmetic which imlpies that $2^{2^4}+1$ is the largest Fermat prime, ArXiv: submit/1287283, 24 June 2015, 1–10.

[Q348] E. W. Weisstein: Fermat number, MathWorld – A Wolfram Web Resource, CRC Press LLC, 1999–2006. Also in: `http://mathworld.wolfram.com/FermatNumber.html`

[Q349] E. W. Weisstein: Trigonometric angles. MathWorld – A Wolfram Web Resource, CRC Press LLC, 1999–2006. Also in: `http://mathworld.wolfram.com/TrigonometryAngles.html`

[Q350] A. Witno and F. A. Mahmoud: A note on the generalization of elite primes, JP J. Algebra Numer. Theory Appl. 15 (2009), 53–63.

[Q351] L. Xiaoqin: Verifying two conjectures on generalized elite primes, J. Integer Seq. 12 (2009), article nr. 7.

[Q352] E. V. Zima and A. M. Steward: Cunningham numbers in modular arithmetics, Programming and Computer Software 33 (2007), 80–86.

[Q353] E. V. Zima and A. M. Steward: Čisla Cunninghama v moduljarnoj arifmetike, Akademizdatcentr Nauka, 2007.

[Q354] Wikipedia, the free encyclopedia, `http://en.wikipedia.org/wiki/fermat`$_n$*umber*

[**A7**] **S. Koukal, M. Křížek, and R. Potůček**, *Fourierovy trigonometrické řady a metoda konečných prvků v komplexním oboru*, Academia, Praha, 2002, 273 pp.

Cited in:

[Q355] M. Kočandrlová: Geo-matematika II (skripta), ČVUT, Fakulta stavební, Praha, 2008.

[Q356] J. Mlýnek: Matematické modely vedení tepla v elektrických strojích. Habilitační práce, Tech. Univ. Liberec, 2007.

[Q357] A. Šolcová: Fourierův odkaz dnešku. Sborník semináře: Matematika na vysokých školách, Herbertov, JČMF, 2003, 71–76.

[**A8**] **A. Šolcová, M. Křížek, and G. Mink (eds.)**, *Matematik Pierre de Fermat*, Cahiers du CEFRES, vol. 28, Praha, 2002, 209 pp.

Cited in:

[Q358] Z. Polický: Některé aplikace Malé Fermatovy věty. Sborník 3. konference o matematice a fyzice na vysokých školách technických, VA Brno, 2003, 130–134.

[**A9**] **M. Křížek, P. Neittaanmäki, R. Glowinski, and S. Korotov (eds.)**, *Conjugate Gradient Algorithms and Finite Element Methods*, Scientific Computation, Springer-Verlag, Berlin, 2004, xv + 382 pp.

Cited in:

[Q359] J. R. Diebel, S. Thrun, and M. Brünig: A Bayesian method for probable surface reconstruction and decimation, ACM Trans. on Graphics 25 (2006), 39–59.

[Q360] J. Ha and S. Gutman: Parameter estimation problem for a damped sine-Gordon equation (submitted in 2006).

[Q361] R. Mafi and S. Sirouspour: GPU-based acceleration of computations in nonlinear finite element deformation analysis, Internat. J. Numer. Methods Biomed. Engrg. 30 (2014), 365–381.

[Q362] P. Ołcoń, S. Łopata, and M. Nowak: Comparative study of conjugate gradient algorithms performance on the example of steady-state axisymmetric heat transfer problem, Arch. Termodyn. 34 (2013), 15–44.

[Q363] M. A. Olshanski: Multigrid and iterative methods homogeneous with respect to parameter, Doctoral dissertation, Moscow State Univ., (in Russian), 2006.

[Q364] X. F. Zhang and H. Y. Liu: Efficient implementation of distributed maximum likehood estimation method in clustered wireless sensor network, Sensors and Transducers 157 (2013), 101–107.

[**A11**] **M. Křížek, L. Somer, and A. Šolcová**, *Kouzlo čísel: Od velkých objevů k aplikacím*, Edice Galileo, sv. 39, Academia, Praha, 2009, 2011, 365 pp.

Cited in:

[Q365] B. Bastl, F. Ježek, M. Lávička: Pythagorův odkaz v geometrickḿ modelování, Pokroky Mat. Fyz. Astronom. 59 (2014), 6–16.

[Q366] T. Bártlová: Apríl v režii matematiků a fyzik ů, Pokroky Mat. Fyz. Astronom. 60 (2015), 146–160.

[Q367] P. Klán: Čísla. Vztahy, vhledy a věčné inspirace, Academia, Praha, 2014.

[Q368] F. Kuřina: Jak učinit myšlenku viditelnou, Pokroky mat. fyz. astronom. 59 (2014), 117–134.

[Q369] F. Kuřina: Půvab elementární geometrie, Gaudeamus, Hradec Králové, 2021.

[Q370] F. Kuřina a N. Vondrová: 15 pohledů na školskou matematiku. Jak to vidíme, Ped. fakulta UK, Praha, 2022.

[Q371] E. Pelantová, Š. Starosta: Nestandardní zápisy čísel, Pokroky Mat. Fyz. Astronom. 56 (2011), 276–289.

[Q372] J. Polák: Didaktika matematiky, Fraus, Plzeň, 2014.

[Q373] P. Rucki, M. Genčev, S. Pulcerová: Aproximace reálných čísel a příspěvek českých matematiků, Pokroky Mat. Fyz. Astronom. 56 (2011), 238–252, 298–312.

[Q374] M. Rybanský: Pátranie po mimozemských civilizáciach (4), Kozmos 50 (2019), č. 2, 32–33.

[Q375] I. Sýkorová: Znali staří Indové řetězové zlomky? Pokroky Mat. Fyz. Astronom. 57 (2012), 296–306.

[**A13**] **M. Křížek, J. Šolc, and A. Šolcová (eds.)**, *600 let pražského orloje*, Proc. Conf., Karolinum, Prague, 2010, Special Issue of Pokroky Mat. Fyz. Astronom. No. 4, vol. 54, Union of Czech Mathematicians and Physicists, 2009, 112 pp.

Cited in:

[Q376] D. Knespl: Oslavte 600 let pražského orloje a připněte si orloj na zápěstí, Watch it! 2010, č. 3.

[**A14**] **A. Šolcová and M. Křížek**, *Cesta ke hvězdám i do nitra molekul: Osudy Vladimíra Vanda, konstruktéra počítačů*, Inst. of Math., Acad. Sci., Prague, 2011, 208 + XVI pp.

Cited in:

[Q377] H. Durnová: Matematikové u matematických strojů, Pokroky Mat. Fyz. Astronom. 56 (2011), 194–206.

[Q378] M. Efmertová, P. Golan, B. Mannová: Česká stopa v historii výpočetní techniky, FEL ČVUT, Praha, NUŠL, 2022, str. 147.

[Q379] P. Pavlíková: Miloš Kössler (1884–1961), Matfyzpress, Praha, str. 33, to appear in 2013.

[Q380] E. Tešínská, A. Jůnová Macková: Korespondence Jindřicha Bačkovského a Vladimíra Vanda z let 1946–1948 jako historický pramen k organizaci fyzikálního výzkumu v poválečném Československu, Práce z dějin Akademie věd 2 (2020), 103–180.

[Q381] J. Žd'árská: Vladimír Vand ... aneb když geny píší dějiny, Čs. čas. fyz. 68, (2018), 414–417.

[**A15**] **M. Křížek and Z. Troligová**, *Bedřich Šofr. Matematik a divadelník. Bedřich Šofr. Mathematician and Theatre Participant*, Štátna vedecká knižnica – Literárne a hudobné múzeum, Banská Bystrica, 2012, xvi + 112 pp.

Cited in:

[Q382] B. Riečan: O výchove matematikov na univerzite, Obzory Mat. Fyz. Inf. 47 (2018), 4 pp.

[**A22**] **M. Křížek, F. Křížek, L. Somer**, *Antigravity — Its Origin and Manifestations*, Lambert Acad. Publ., Saarbrücken, 2015, xiv + 348 pp.

Cited in:

[Q383] A. M. Maeder, V. G. Gueorguiev: On the relation of the lunar recession and the length-of-the-day, Astrophys. Space Sci 366 (2021), Article no. 101, 1–21.

[Q384] A. Maeder, V. G. Gueorguiev: The lunar recession as a cosmological test of general expansion, submitted in 2020, 1–25.

[Q385] V. Vavryčuk: Gravitational orbits in the expanding universe revisited, Frontiers Astron. Space Sci. 10 (2023), Article 1071743, 1–18.

[**A23**] **M. Křížek, Y. V. Dumin (eds.)**, *Cosmology on Small Scales 2016: Local Hubble Expansion and Selected Controversies in Cosmology*, Inst. of Math., Czech Acad. Sci., Prague, 2016, 224 pp.

Cited in:

[Q386] L. A. King and H. Siplilä: Cosmological expansion in the Solar System, Phys. Essays 2022, 1–19.

[**A27**] **J. Brandts, S. Korotov, M. Křížek:**, *Simplicial Partitions with Applications to the Finite Element Method, Springer, Cham*, 2020, xv + 188 pp.

Cited in:

[Q387] G. R. Barrenechea and E. Süli: Analysis of a stabilised finite element method for power-law fluids, Constr. Approx. 57 (2023), 295–325.

[**A29**] **M. Křížek, L. Somer, and A. Šolcová:**, *From Great Discoveries in Number Theory to Applications, Springer, Cham*, 2021, xv + 338 pp.

Cited in:

[Q388] L. Sauras-Altuzarra and J. Wang: Some properties of the factors of Fermat numbers, Art Disc. Appl. Math. (2022), 1–7.

[**B1**] **M. Křížek**, *Conforming equilibrium finite element methods for some elliptic plane problems*, RAIRO Anal. Numér. **17** (1983), 35–65.

Cited in:

[Q389] H. Behnke: Die Bestimmung von Eigenwertschranken mit Hilfe von Variationsmethoden und Intervallarithmetik (Dissertation), Tech. Univ. Clausthal, 1989, 1–121.

[Q390] H. Behnke: Calculation of bounds for sloshing frequencies with the use of finite elements, Z. Angew. Math. Mech. 67 (1987), T347–T349.

[Q391] J. Dvořák: Aspects of the mathematical modelling and the optimal design of composite materials (doktorandská disertační práce), MFF UK, Praha, 1998, 1–130.

[Q392] L. Gaynutdinova, M. Ladecký, A. Nekvinda, and I. Pultarová: Efficient numerical method for reliable upper and lower bounds on homogenized parameters, 2022, 1–17, arXiv 2208.09940v1.

[Q393] I. Hlaváček: Řešení variačních nerovnic metodou konečných prvků na základě duálních variačních formulací (doktorská disertační práce), MÚ ČSAV, Praha, 1983, 1–34.

[Q394] I. Hlaváček: Dual finite element analysis for some elliptic variational equations and inequalities, Acta Appl. Math. 1 (1983), 121–150.

[Q395] Z. Kestřánek: Řešení evoluční variační nerovnice teorie plasticity s isotropním zpevněním deformací metodou konečných prvků (kandidátská disertační práce), Praha, 1982, 1–72.

[Q396] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q397] N. Parés, P. Diez, and A. Huerta: Exact bounds for linear outputs of the advection-diffusion-reaction equation using flux-free error estimates, SIAM J. Sci. Comput. 31 (2009), 3064–3089.

[Q398] N. Parés, H. Santos, and P. Díez: Guaranteed energy error bounds for the Poisson equation using a flux-free approach: Solving the local problems in subdomains, Internat. J. Numer. Methods Engrg. 79 (2009), 1203–1244.

[Q399] J. E. Roberts and J. M. Thomas: Mixed and hybrid methods, Handbook of Numer. Anal., vol. II, (ed. P. G. Ciarlet, J. L. Lions), North-Holland, Amsterdam, 1991, (see p. 620).

[Q400] P. Stříbný: A posteriori error estimate for solving the Dirichlet problem for a second order elliptic equation by the finite element method (in Czech), Mgr. Thesis, MFF UK, Prague, 1983, 1–38.

[Q401] H. Strese: A new simple method for improving the boundary element method, Engineering Anal. 2 (1985), 26–30.

[Q402] T. Vejchodský: Local a posteriori error estimator based on the hypercircle method, Proc. Conf. ECCOMAS 2004, Univ. of Jyväskylä, 1–16.

[Q403] T. Vejchodský: Fast and guaranteed a posteriori error estimator, Proc. Seminar Programs and Algorithms of Numerical Mathematics 12 (eds. J. Chleboun, P. Přikryl, and K. Segeth), Dolní Maxov, Mathematical Institute, Prague, 2004, 257–272.

[Q404] T. Vejchodský: Guaranteed and locally computable a posteriori error estimate, IMA J. Numer. Anal. 26 (2006), 525–540.

[Q405] T. Vejchodský: Complementarity – the way towards guaranteed error estimates, Proc. Programs and Algorithms of Numer. Math. 15 (eds. T. Vejchodský et al.), Inst. of Math., Prague, 2010, 205–220.

[Q406] T. Vejchodský: Complementary based a posteriori error estimates and their properties, Math. Comput. Simul. 82 (2012), 2033–2046.

[Q407] T. Vejchodský: Computing upper bounds on Friedrichs' constant, Proc. Conf. Applications of Mathematics 2012 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 278–289.

[Q408] T. Vejchodský: Complementary error bounds for elliptic systems and applications, Appl. Math. Comput. 219 (2013), 7194–7205.

[Q409] T. Vejchodský: On the quality of local flux reconstructions for guaranteed error bounds, Proc. Conf. Applications of Mathematics 2015 (eds. J. Brandts et al.), Inst. of Math., Acad. Sci., Prague, 242–255.

[Q410] M. Vondrák: Desková analogie v teorii a praxi rovnovážných modelů konečných prvků pro rovinné úlohy pružnosti a plasticity (kandidátská disertační práce), Praha, 1982, 1–114.

[Q411] M. Vondrák: Slab analogy in theory and practice of conforming equilibrium stress models for finite element analysis of plane elastostatics, Apl. Mat. 30 (1985), 187–217.

[Q412] M. Vondrák: Několik poznámek k matematickým a fyzikálním aspektům metody konečných prvků a variační formulaci okrajových eliptických problémů, Zpravodaj VZLÚ 2(1991), 69–85.

[Q413] J. Wiesz: A posteriori error estimate of approximate solutions to a mildly nonlinear elliptic boundary value problem, Comment. Math. Univ. Carolin. 31 (1990), 315–322.

[Q414] J. Weisz: Aposteriórny odhad chyby približného riešenia okrajových úloh pre niektoré typy nelineárnych eliptických parciálych diferenciálnych rovníc (kandidátska dizertačná práca), MFF UK, Bratislava, 1990, 1–64.

[Q415] J. Weisz: On a-posteriori error estimate of approximate solutions to a mildly nonlinear nonpotential elliptic boundary value problem, Math. Nachr. 153 (1991), 231–236.

[Q416] J. Weisz: A posteriori error estimate of approximate solutions to a nonlinear elliptic boundary value problem, Acta Math. Univ. Comenian. LVIII-LIX (1991), 189–205.

[Q417] J. Weisz: A posteriori error estimate of approximate solutions to a special nonlinear elliptic boundary value problem, Z. Angew. Math. Mech. 75 (1995), 79–81.

[Q418] B. Zhang, S. Chen, and J. Zhao: Guaranteed a posteriori error estimates for nonconforming finite element approximations to a singularly perturbed reaction-diffusion problem, Appl. Numer. Math. 94 (2015), 1–15.

[**B2**] **M. Křížek and P. Neittaanmäki**, *On the validity of Friedrichs' inequalities*, Math. Scand. **54** (1984), 17–26.

Cited in:

[Q419] G. Auchmuty: Bounds and representations of solutions of planar div-curl problems, Quart. Appl. Math. 75 (2017), 505–524.

[Q420] E. Creuse and S. Nicaise: Discrete compactness for a discontinuous Galerkin approximation of Maxwell's system, ESAIM Math. Model. Numer. Anal., 40 (2006), 413–430.

[Q421] M. Costabel and M. Dauge: Singularities of electromagnetic fields in polyhedral domains. Arch. Ration. Mech. Anal. 151 (2000), 221–276.

[Q422] F. Dassi, J. Gedicke, and L. Mascotto: Adaptive virtual element methods with equilibrated fluxes, Appl. Numer. Math. 173 (2022), 249–278.

[Q423] B. B. Delgado and R. M. Porter: Hilbert transform for the three-dimensional Vekua equation, Complex Var. Elliptic Equ. 64 (2019), 1797–1824.

[Q424] B. Delourme: High-order asymptotics for the electromagnetic scattering by thin periodic layers, Math. Methods Appl. Sci. 38 (2015), 811–833.

[Q425] H. Y. Duan and G. P. Liang: On the velocity-pressure-vorticity least-squares mixed finite element method for the 3D Stokes equation, SIAM J. Numer. Anal. 41 (2003), 2114–2130.

[Q426] S. Q. Gao: Least-squares mixed finite element methods for incompressible magnetohydrodynamic equations, J. Comput. Math. 23 (2005), 327–336.

[Q427] T. Giorgi and R. G. Smiths: Gauge uniqueness of solutions to the Ginzburg-Landau system for small superconducting domains, SIAM J. Math. Anal. 42 (2010), 163–182.

[Q428] T. Kärkkäinen: Recovery of scalar-diffusion form the distributed observation by minimizing the dual norm. Report 16/1996. Univ. of Jyäskylä, 1996, 1–20.

[Q429] T. Kärkkäinen: An equation error method to recover diffusion form the distributed observation. Inverse Problems 13 (1997), 1033–1051.

[Q430] U. Kangro and R. Nicolaides: Divergence boundary conditions for vector Helmholtz equations with divergence constraints. RAIRO Modèl. Math. Anal. Numér. 33 (1999), 479–492.

[Q431] W. Lee and Q. Du: Nonlocal gradient operators with a nonspherical interaction neighborhood and their applications, ESAIM Math. Model. Numer. Anal. 54 (2020), 105–128.

[Q432] J. Lequeurre and A. Munnier: Vorticity and stream function formulations for the 2D Navier-Stokes equations in a bounded domain, J. Math. Fluid Mech. 22 (2020), no. 2, Paper No. 15, 73 pp.

[Q433] D. Mitrea: Integral equations methods for div-curl problems for planar vector fields in nonsmooth domains, Differential Integral Equations 18 (2005), 1039–1054.

[Q434] P. Monk: Finite element methods for Maxwell's equations, preprint, 1996, 1–13.

[Q435] P. Monk and L. Demkowicz: Discrete compactness and the approximation of Maxwell's equations in R^3, Math. Comp. 70 (2001), 507–523.

[Q436] P. Monk and S. Y. Zhang: Multigrid computation of vector potentials. J. Comput. Appl. Math. 62 (1995), 301–320.

[Q437] A. I. Pehlivanov and G. F. Carey: Error estimates for least-squares mixed finite elements, RAIRO Modèl. Math. Anal. Numér. 28 (1994), 499–516.

[Q438] A. I. Pehlivanov, G. F. Carey, and P. S. Vassilevski: Least-squares mixed finite element methods for non-selfadjoint elliptic problems: I. Error estimates, Numer. Math. 72 (1996), 501–522.

[B3] **M. Křížek and P. Neittaanmäki**, *Superconvergence phenomenon in the finite element method arising from averaging gradients*, Numer. Math. **45** (1984), 105–116.

Cited in:

[Q439] G. D. Andreasyan: Superconvergence of averaged gradients on an irregular mesh in the finite element method, (Russian), Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet, no. 2 (1987), 11–16.

[Q440] A. B. Andreev and R. D. Lazarov: Superconvergence of the gradient for quadratic triangular finite elements, Numer. Methods Partial Differential Equations 4 (1988), 15–32.

[Q441] I. Babuška, L. Planck, and R. Rodríguez: Basic problems of a posteriori error estimation, Comput. Methods Appl. Mech. Engrg. 101 (1992), 97–112.

[Q442] I. Babuška, T. Strouboulis, S. K. Gangaraj, and C. S. Upadhyay: Validation of recipes for the roceovery of stresses and derivatives by a computer-based approach, Math. Comput. Model. 20 (1994), 45–89.

[Q443] I. Babuška, T. Strouboulis, and C. S. Upadhyay: $\eta\%$-superconvergence of finite element approximations in the interior of general meshes of triangles. Comput. Methods Appl. Mech. Engrg. 122 (1995), 273–305.

[Q444] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient in finite element solutions of Laplace's and Poisson's equations, CMC Report No. 93-07, Texas A&M Univ., 1993, 1–59.

[Q445] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient of the displacement, the strain and stress in finite element solutions for plane elasticity. Technical Note BN-1166, Univ. of Maryland, 1994, 1–41.

[Q446] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Computer-based proof of the existence of superconvergence points in the finite element method; superconvergence of the derivatives in finite element solutions of Laplace's, Poisson's, and elasticity equations. Numer. Methods Partial Differential Equations 12 (1996), 347–392.

[Q447] D. Calvetti, A. Cosmo, S. Perotto, and E. Somersalo: Bayesian mesh adaptation for estimating distributed parameters, SIAM J. Sci. Comput. 42 (2020), no. 6, A3878–A3906.

[Q448] C. M. Chen: Element analysis method and superconvergence, Proc. Conf. Finite Element Methods: Superconvergence, Post-processing and A Posteriori Estimates, Univ. of Jyväskylä, 1996, Marcel Dekker, New York, 1998, 71–84.

[Q449] C. M. Chen: Two classes of superconvergence in finite element methods. Proc. of China-Sweden Seminar on Numer. Math., Oct. 1997, 1–9.

[Q450] C. M. Chen: Some problems on superconvergence in finite element methods, Preprint Hunan Normal Univ., Changsha, 1999, 1–14.

[Q451] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q452] C. M. Chen: Orthogonality correction technique in superconvergence analysis, Internat. J. Numer. Anal. Model. 2 (2005), 31–42.

[Q453] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[Q454] C. M. Chen and J. Q. Liu: Superconvergence of the gradient of triangular linear element in general domain, Natur. Sci. J. Xiangtan Univ. 9 (1987), 114–127.

[Q455] C. Chen and S. Hu: The highest order superconvergence for Bi-k degree rectangular elements at nodes. A proof of $2k$-conjecture, Math. Comp. 82 (2013), 1337–1355.

[Q456] H. S. Chen and J. P. Wang: An interior estimate of superconvergence for finite element solutions for second-order elliptic problems on quasi-uniform meshes by local projections, SIAM J. Numer. Anal. 41 (2003), 1318–1338.

[Q457] L. Chen and H. Li: Superconvergence of gradient recovery schemes on graded meshes for corner singularities, J. Comput. Math. 28 (2010), 11–31.

[Q458] Y. P. Chen: Superconvergent recovery of gradients of piecewise linear finite element approximations on non-uniform mesh partitions. Numer. Methods Partial Differential Equations 14 (1998), 169–192.

[Q459] P. G. Ciarlet: Basic error estimates for elliptic problems, Handbook of Numer. Anal., vol. II. (ed. P. G. Ciarlet, J. L. Lions), North-Holland, Amsterdam, 1991, (see p. 181).

[Q460] J. Chleboun: An application of the averaged gradient technique, In Programs and Algorithms of Numer. Math. 14, Inst. of Math., Prague, 2008, 65–70.

[Q461] J. Dalík: Quadratic interpolation in vertices of planar triangulations and an application, preprint, VUT Brno, 2004, 1–31.

[Q462] J. Dalík: Local quadratic interpolation in vertices of regular triangulations, East J. Approx. 14 (2008), 81–102.

[Q463] J. Dalík: Optimal-oder quadratic interpolation in vertices of unstructured triangulations, Appl. Math. 53 (2008), 547–560.

[Q464] J. Dalík: Averaging of directional derivatives in vertices of nonobtuse regular triangulations, Numer. Math. 116 (2010), 619–644.

[Q465] J. Dalík: Complexity of the method of averaging, Proc. Programs and Algorithms of Numer. Math. 15 (eds. T. Vejchodský et al.), Inst. of Math., Prague, 2010, 65–77.

[Q466] J. Dalík: Approximations of the partial derivatives by averaging, Cent. Eur. J. Math. 10 (2012), 44–54.

[Q467] J. Dalík and V. Valenta: Averaging of gradient in the space of linear triangular and bilinear rectangular finite elements, Cent. Eur. J. Math. 11 (2013), 597–608.

[Q468] R. Durán, M. A. Muschietti, and R. Rodríguez: On the asymptotic exactness of error estimators for linear triangular finite elements, Numer. Math. 59 (1991), 107–127.

[Q469] S. E. Gawlik and J. A. Lew: Supercloseness of orthogonal projections onto nearby finite element spaces, ESAIM Math. Model. Numer. Anal. 49 (2015), 559–576.

[Q470] M. El Hatri: Superconvergence in finite element method for a degenerated boundary value problem, Proc. Conf. Constructive Theory of Functions 84, Izd. Bulg. Acad. Sci., Sofia, 1984, 328–333.

[Q471] M. El Hatri: Estimation de l'erreur de la méthode des éléments finis avec integration numérique pour un problème aux limites dégénéré (Thesis), Fac. de Math. et Mécanique, Univ. Sofia, 1985.

[Q472] M. El Hatri: Estimation d'erreur optimale et de type superconvergence de la méthode des éléments finis pour un problème aux limites dégénéré, RAIRO Modèl. Math. Anal. Numér. 21 (1987), 27–61.

[Q473] P. E. Farrell, S. Micheletti, and S. Perotto: An anisotropic Zienkiewicz-Zhu-type error estimator for 3D applications, Internat. J. Numer. Methods Engrg. 85 (2011), 671–692.

[Q474] X. Feng, R. He, and Z. Chen: H^1-superconvergence of finite difference method based on Q_1-conforming element on quasi-uniform mesh for 3D Poisson equation, Numer. Methods Partial Differential Equations 2019, 1-36.

[Q475] J. A. Ferreira and R. D. Grigorieff: Supraconvergence and supercloseness of a scheme for elliptic equations on nonuniform grids. Numer. Funct. Anal. Optim. 27 (2006), 539–564.

[Q476] L. P. Franca: On the superconvergence of the satisfying Babuška-Brezzi method, Internat. J. Numer. Methods Engrg. 29 (1990), 1715–1726.

[Q477] L. Fu, L. Han, X. Y. Hu, and A. N. Adams: An isotropic unstructured mesh generation method based on a fluid relaxation analogy, Comput. Methods Appl. Mech. Engrg. 350 (2019), 396–431.

[Q478] S. E. Gawlik and J. A. Lew: Supercloseness of orthogonal projections onto nearby finite element spaces, ESAIM Math. Model. Numer. Anal. 49 (2015), 559–576.

[Q479] G. Goodsell: Pointwise superconvergence of the gradient for the linear tetrahedral element. Numer. Methods Partial Differential Equations 10 (1994), 651–666.

[Q480] G. Goodsell and J. R. Whiteman: A unified treatment of superconvergent recovered gradient functions for piecewise linear finite element approximations, Internat. J. Numer. Methods Engrg. 27 (1989), 469–481.

[Q481] H. Guo and Z. Zhang: Gradient recovery for the Crouzeix-Raviart element, J. Sci. Comput. 64 (2015), 456–476.

[Q482] A. Hannukainen and S. Korotov: Techniques for a posteriori error estimation in terms of linear functionals for elliptic type boundary value problems, Far East J. Appl. Math. 21 (2005), 289–304.

[Q483] R. He, X. Feng, and Z. Chen: H^1-superconvergence of a difference finite element method based on the $P_1 - P_1$-conforming element on non-uniform meshes for the 3D Poisson equations, Math. Comp. 87 (2018), 1659–1688.

[Q484] B. O. Heimsund, X. C. Tai, and J. Wang: Superconveregnce for the gradient of finite element approximations by L^2-projections, SIAM J. Numer. Anal. 40 (2002), 1263–1280.

[Q485] T. L. Horváth and F. Izsák: Implicit a posteriori error estimation using path recovery techniques, Cent. Eur. J. Math. 10 (2012), 55–72.

[Q486] H. T. Huang: Global superconvergence of finite element methods for elliptic equations, Ph.D. Thesis, Dept. Appl. Math., Nat. Sun Yan-set Univ., Kaohsiung, Taiwan, 2003, 1–170.

[Q487] H. T. Huang and Z. C. Li: Global superconvergence of Adini's elements coupled with the Trefftz method for singular problem, Engrg. Anal. with Boundary Elements 27 (2003), 227–240.

[Q488] H. T. Huang and Z. C. Li: Effective condition number and superconvergence of the Trefftz method coupled with high order FEM for singularity problem, Engrg. Anal. with Boundary Elements 30 (2006), 270–283.

[Q489] H. T. Huang, Z. C. Li, and A. Zhou: New error estimates of biquadratic Lagrange elements for Poisson's equation, Appl. Numer. Math. 56 (2006), 712–744.

[Q490] R. Jari, L. Mu, A. Harris, and L. Fox: Superconvergence for discontinuous Galerkin finite element method by L^2-projection methods, Comput. Math. Appl. 65 (2013), 665–672.

[Q491] V. Kantchev: Superconvergence of the gradient for linear finite elements for nonlinear elliptic problems, Proc. of the Second Internat. Sympos. on Numer. Anal., Prague, 1987, Teubner-Texte zur Mathematik, Band 107, Teubner, Leipzig, 1988, 199–204.

[Q492] V. Kantchev and R. D. Lazarov: Superconvergence of the gradient of linear finite elements for 3D Poisson equation, Proc. Internat. Conf. Optimal Algorithms (ed. B. Sendov), Blagoevgrad, 1986, Izd. Bulg. Akad. Nauk, Sofia, 1986, 172–182.

[Q493] A. Kliková: Finite volume–finite element solution of compressible flow, Ph.D. Thesis, Charles Univ., Prague, 2000, 1–188.

[Q494] K. Kolman: Superconvergence by the Steklov averaging in the finite element method, Appl. Math. (Warsaw) 32 (2005), 477–488.

[Q495] K. Kolman: Higher-order approximations in the finite element method, Ph. D. Thesis, Charles Univ., Prague, 2010.

[Q496] S. Korotov: A posteriori error estimation of goal-oriented quantities for elliptic type BVPs, J. Comput. Appl. Math. 191 (2006), 216–227.

[Q497] S. Korotov: A posteriori estimates for error control in terms of linear functionals for linear elasticity, submitted to Appl. Math. in 2005, 1–18.

[Q498] S. Korotov and P. Turchyn: A posteriori error estimation of "quantities of interest" on tetrahedral meshes, Proc. Conf. ECCOMAS, 2004.

[Q499] S. Korotov and P. Turchyn: A posteriori error estimation of goal-oriented quantities for elliptic type BVPs, Internat. Conf. of Comput. Methods in Sci. and Engrg., ICCMSE - 2004, Athens, Lecture Series on Computer and Computational Sciences, vol. 1, (eds. T. Simon and G. Maroulis) VSP, Utrecht, 2004, 269–273.

[Q500] D. Kuzmin: Numerical simulation of reactive bubbly flows. Jyväskylä Studies in Computing 2 (1999), 1–109.

[Q501] A. M. Lakhany, I. Marek, and J. R. Whiteman: Superconvergence results on mildly stuctured triangulations, Comput. Methods Appl. Mech. Engrg. 189 (2000), 1–75.

[Q502] A. M. Lakhany and J. R. Whiteman: Superconvergent recovery operators: derivative recovery techniques, In: Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 195–215.

[Q503] R. Lazarov, S. Repin, and S. K. Tomar: Functional a posteriori error estimates for discontinuous Galerkin approximation of elliptic problem, Numer. Methods Partial Differential Equations 25 (2009), 952–971.

[Q504] N. Levine: Superconvergent recovery of the gradient from piecewise linear finite-element approximations, IMA J. Numer. Anal. 5 (1985), 407–427.

[Q505] N. Levine: Superconvergent estimation of the gradient from linear finite element approximations on triangular elements. Numerical Analysis Report No. 3/85, Univ. of Reading, 1985, 1–202.

[Q506] D. Li, Y. Nie, and C. Wang: Superconvergence of numerical gradient for weak Galerkin finite element methods on nonuniform Cartesian partitions in three dimensions, Comput. Math. Appl. 78 (2019), 905–928.

[Q507] Z. C. Li: Superconvergence of coupling techniques in combined methods for elliptic equations with singularities, Comput. Math. Appl. 41 (2001), 379–398.

[Q508] Z. C. Li: Penalty combinations of the Ritz-Galerkin and finite difference methods for singularity problems, J. Comput. Appl. Math. 81 (1997), 1–17.

[Q509] Z. C. Li: Global superconvergence of simplified hybrid combinations for elliptic equations with singularities, I. Basic theorem, Computing 65 (2000), 27–44.

[Q510] Z. C. Li and H. T. Huang: Global superconvergence of simplified hybrid combinations of the Ritz-Galerkin and FEMs for elliptic equations with singularities, II. Lagrange elements and Adini's elements, Appl. Numer. Math. 43 (2002), 253–273.

[Q511] Z. C. Li, Q. Fang, and S. Wang: Superconvergence of solution derivatives for the Shortley-Weller difference approximation for parabolic problems, Numer. Funct. Anal. Optim. 30 (2009), 11–12.

[Q512] Z. C. Li, H. T. Huang, and J. Huang: Stability analysis and superconvergence for the penatly Trefftz method coupled with FEM for singularity problems, Engrg. Anal. with Boundary Elements 31 (2007), 631–645.

[Q513] Z. C. Li, H. T. Huang, and N. N. Yan: Global superconvergence of finite elements for elliptic equations and its applications, Science Press, Beijing, 2012.

[Q514] Z. C. Li, Q. Lin, and N. N. Yan: Global superconvergence in combinations of Ritz-Galerkin-FEM for singularity problems, J. Comput. Appl. Math. 106 (1999), 325–344.

[Q515] Z. C. Li and T. T. Lu: Global superconvergence of finite element methods for biharmonic equations and blending surfaces, Comput. Math. Appl. 44 (2002), 413–437.

[Q516] Z. C. Li, T. Yamamoto, and Q. Fang: Superconvergence of solution derivatives for the Shortley-Weller difference approximation of Poisson's equation, Part I: Smoothness problems, J. Comput. Appl. Math. 151 (2003), 307–333.

[Q517] Z. C. Li and N. N. Yan: New error estimates of bi-cubic Hermite finite element methods for biharmonic equations, J. Comput. Appl. Math. 142 (2002), 251–285.

[Q518] Q. Lin: Tetrahedral or cubic mesh? Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 160–182.

[Q519] Q. Lin and T. Lu: Asymptotic expansions for finite element approximation of elliptic problem on polygonal domains, Proc. Internat. Conf. Comput. Methods in Appl. Sci. and Engrg. VI, Versailles, 1983 (ed. R. Glowinski and J.-L. Lions), Elsevier, 1984, 317–321.

[Q520] Q. Lin and N. N. Yan: The construction and analysis for efficient finite elements (Chinese), Hebei Univ. Publ. House, 1996.

[Q521] G. Maisano, S. Micheletti, S. Perotto et al.: On some new recovery-based a posreriori error estimators, Comput. Methods Appl. Mech. Engrg. 195 (2006), 4794–4815.

[Q522] S. Micheletti and S. Perotto: Anisotropic recovery-based error estimator, Proc. Internat. Conf. ENUMATH 2001, Jyväskylä, 731–742.

[Q523] S. Micheletti and S. Perotto: Reliability and efficiency of an anisotropic Zienkiewicz-Zhu error estimator, Comput. Methods Appl. Mech. Engrg. 195 (2006), 799–835.

[Q524] A. A. Naga: On recovery-type a posteriori error estimators in adaptive C^0 Galerkin finite element methods, Dissertation, Wayne State Univ., Detroit, 2004.

[Q525] M. T. Nakao: Some superconvergence for a Galerkin method by averaging gradients in one dimensional problems, J. Inform. Process. 9 (1986), 130–134.

[Q526] M. T. Nakao: Superconvergence of the gradient of Galerkin approximations for elliptic problems, J. Comput. Appl. Math. 20 (1987), 341–348.

[Q527] M. T. Nakao: Superconvergence of the gradient of Galerkin approximations for elliptic problems, RAIRO Modèl. Math. Anal. Numér. 21 (1987) 679–695.

[Q528] D. Omeragic and P. P. Silvester: Numerical differentiation in magnetic field postprocessing. Internat. J. Numer. Model. El. 9 (1996), 99–113.

[Q529] M. Picasso, F. Alauzet, H. Borouchaki, and P.-L. George: A numerical study of some Hessian recovery techniques on isotropic and anisotropic meshes, SIAM J. Sci. Comput. 33 (2011), 1058–1076.

[Q530] G. M. Porta, S. Perotto, and F. Ballio: Anisotropic mesh adaptation driven by a recovery-based error estimator for shallow water flow modeling, Internat. J. Numer. Methods Fluids 70 (2012), 269–299.

[Q531] T. Regińska: Superconvergence of external approximation for two-point boundary value problems, Apl. Mat. 32 (1987), 25–36.

[Q532] S. Repin: A posteriori estimates for partial differential equations, Radon Ser. Comput. Appl. Math., vol. 4, Walter de Gruyter, Berlin, New York, 2008.

[Q533] S. Repin, S. Sauter, and A. Smolianski: Two-sided a posteriori error estimates for mixed formulations of elliptic problems, SIAM J. Numer. Anal. 45 (2007), 928–945.

[Q534] R. Rodríguez: Some remarks on Zienkiewicz-Zhu estimator, Numer. Methods Partial Differential Equations 10 (1994), 625–635.

[Q535] R. Rodríguez: A-posteriori error analysis in the finite element method. Proc. Conf. Finite Element Methods: Fifty Years of the Courant Element, Marcel Dekker, Inc., New York, 1994, 389–397.

[Q536] M. Schneider and D. Wicht: Superconvergence of the effective Cauchy stress incomputational homogenization of inelastic materials, Internat. J. Numer. Methods Engrg. 124 (2023), 959–978.

[Q537] L. H. Shen and A. Zhou: A defect correction scheme for finite element eigenvalues with applications to quantum chemistry, SIAM J. Sci. Comput. 28 (2006), 321–338.

[Q538] A. Smolianski: Numerical modelling of two-fluid interfacial flows. Jyväskylä Studies in Computing 8 (2001), 1–109.

[Q539] A. Smolianski: Finite-element/level-set/operator-splitting (FELSOS) approach for computing two-fluid unsteady flows with free moving interfaces, Internat. J. Numer. Methods Fluids 48 (2005), 231–269.

[Q540] S. I. Sololev: Superconvergence of finite-element approximations of eigenfunctions, Differential Equations 30 (1994), 1138–1146.

[Q541] V. Thomée, J. Xu, and N. Zhang: Superconvergence of the gradient in piecewise linear finite element approximation to a parabolic problem, SIAM J. Numer. Anal. 26 (1989), 553–573.

[Q542] T. Tsuchiya: Finite element approximations of conformal mappings, Numer. Funct. Anal. Optim. 22 (2001), 419–440.

[Q543] J. Valášek and P. Sváček: On aerodynamic force computation in fluid-structure interaction problems – Comparison of different approaches, J. Comput. Appl. Math. 429 (2023), No. 115208.

[Q544] L. B. Wahlbin: Local behaviour in finite element methods. Handbook of Numer. Anal., vol. II. (ed. P. G. Ciarlet, J. L. Lions), North-Holland, Amsterdam, 1991, (see p. 508).

[Q545] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q546] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q547] M. Weymuth, S. Sauter, and S. A. Repin: A posteriori modelling-discretization error estimate for elliptic problems with L^∞-coefficients, Comput. Methods Appl. Math. 17 (2017), 515–531.

[Q548] M. F. Wheeler and J. R. Whiteman: Superconvergent recovery of gradients on subdomains from piecewise linear finite-element approximations, Numer. Methods Partial Differential Equations 3 (1987), 65–82, 357–374.

[Q549] J. R. Whiteman and G. Goodsell: Superconvergent recovery for stresses from finite element approximations on subdomains for planar problems of linear elasticity, In: The Mathematics of Finite Elements and Applications VI (ed. J. R. Whiteman), 1987, Academic Press, London, 1988, 29–53.

[Q550] J. R. Whiteman and G. Goodsell: Some gradient superconvergence results in the finite-element method, LN in Math., vol 1397, 1989, 182–260.

[Q551] R. Wohlgemuth: Superkonvergenz des Gradienten im Postprocessing von Finite-Elemente-Methoden, Preprint Nr. 94, Tech. Univ. Chemnitz, 1989, 1–15.

[Q552] L. Zhang and L. K. Li: Superconvergent recoveries of Carey non-conforming element approximations, Comm. Numer. Methods Engrg. 13 (1997), 439–452.

[Q553] T. Zhang, C. J. Li, Y. Y. Nie et al.: A highly accurate derivative recovery formula for finite element approximations in one space dimension, Dyn. Contin. Discrete Impuls. Syst. Ser. B Appl. Algorithms 10 (2003), 755–764.

[Q554] X.-Y. Zhang and Q. Fang: Superconvergence of FDM for IBV problems of parabolic equations, Information (Japan) 16 (2013), 7817–7826.

[Q555] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[**B4**] **M. Křížek and P. Neittaanmäki**, *Internal FE approximation of spaces of divergence-free functions in three-dimensional domains*, Internat. J. Numer. Methods Fluids **6** (1986), 811–817.

Cited in:

[Q556] S. Adam, P. Arbenz, and R. Geus: Eigenvalue solvers for electromagnetic fields in cavities, Technical Report no. 275, Eidgenössische Technische Hochschule, Zürich, 1995, 1–33.

[Q557] Y. Chang and D. Yang: Superconvergence analysis of finite element methods for the optimal control with the stationary Bénard problem, accepted by J. Comput. Math. in 2008, 1–16.

[Q558] L. Gaynutdinova, M. Ladecký, A. Nekvinda, and I. Pultarová: Efficient numerical method for reliable upper and lower bounds on homogenized parameters, 2022, 1–17, arXiv 2208.09940v1.

[Q559] S. Korotov: On equilibrium finite elements in three-dimensional case, Appl. Math. 42 (1997), 233–242.

[Q560] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q561] J. E. Roberts and J. M. Thomas: Mixed and hybrid methods, Handbook of Numer. Anal., vol. II, (ed. P. G. Ciarlet, J. L. Lions), North-Holland, Amsterdam, 1991, (see p. 620).

[Q562] D. Yang and L. Wang: Two finite-element schemes for steady convective heat transfer with system rotation and variable thermal properties, Numer. Heat Transfer B 47 (2005), 343–360.

[B5] **M. Křížek and P. Neittaanmäki**, *On a global superconvergence of the gradient of linear triangular elements*, J. Comput. Appl. Math. **18** (1987), 221–233.

Cited in:

[Q563] M. Ainsworth and A. Craig: A posteriori error estimators in the finite element method. Numer. Math. 60 (1992), 429–463.

[Q564] I. Babuška, T. Strouboulis, S. K. Gangaraj, and C. S. Upadhyay: Validation of recipes for the roceovery of stresses and derivatives by a computer-based approach, Math. Comput. Model. 20 (1994), 45–89.

[Q565] I. Babuška, T. Strouboulis, and C. S. Upadhyay: η%-superconvergence of finite element approximations in the interior of general meshes of triangles. Comput. Methods Appl. Mech. Engrg. 122 (1995), 273–305.

[Q566] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient in finite element solutions of Laplace's and Poisson's equations, CMC Report No. 93-07, Texas A&M Univ., 1993, 1–59.

[Q567] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient of the displacement, the strain and stress in finite element solutions for plane elasticity. Technical Note BN-1166, Univ. of Maryland, 1994, 1–41.

[Q568] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Computer-based proof of the existence of superconvergence points in the finite element method; superconvergence of the derivatives in finite element solutions of Laplace's, Poisson's, and elasticity equations. Numer. Methods Partial Differential Equations 12 (1996), 347–392.

[Q569] S. Barbeiro and J. A. Ferreira: A superconvergent linear FE approximation for the solution of an elliptic system of PDE's, J. Comput. Appl. Math. 177 (2005), 287–300.

[Q570] S. Barbeiro, J. A. Ferreira, and J. Brandts: Superconvergence of piecewise linear semi-discretizations for parabolic equations with nonuniform triangulations, J. Math. Fluid Mech. 7 (2005), S192–S214.

[Q571] J. H. Brandts: Superconvergence for second order triangular mixed and standard finite elements, Report 9/1996, Dept. of Math., Univ. of Jyväskylä, 1996, 1–20.

[Q572] J. H. Brandts: Superconvergence similarities in standard and mixed finite element methods, In: Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 19–39.

[Q573] J. H. Brandts: Superconvergence for triangular over $k = 1$ Raviart-Thomas mixed finite elements and for triangular standard quadratic finite element methods, Appl. Numer. Math. 34 (2000), 39–58.

[Q574] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q575] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[Q576] J. Chleboun: An application of the averaged gradient technique, In Programs and Algorithms of Numer. Math. 14, Inst. of Math., Prague, 2008, 65–70.

[Q577] J. A. Ferreira and R. D. Grigorieff: Supraconvergence and supercloseness of a scheme for elliptic equations on nonuniform grids, Numer. Funct. Anal. Optim. 27 (2006), 539–564.

[Q578] M. Frolov: Computational properties of a posteriori error estimates based on duality majorants, Master Thesis, Univ. of Jyväskylä, 2003.

[Q579] G. Goodsell: Pointwise superconvergence of the gradient for the linear tetrahedral element. Numer. Methods Partial Differential Equations 10 (1994), 651–666.

[Q580] H. Y. Hu and Z. C. Li: Verification of reduced convergence rates, Computing 74 (2005), 67–73.

[Q581] H. T. Huang: Global superconvergence of finite element methods for elliptic equations, Ph.D. Thesis, Dept. Appl. Math., Nat. Sun Yan-set Univ., Kaohsiung, Taiwan, 2003, 1–170.

[Q582] H. T. Huang and Z. C. Li: Global superconvergence of Adini's elements coupled with the Trefftz method for singular problem, Engrg. Anal. with Boundary Elements 27 (2003), 227–240.

[Q583] H. T. Huang and Z. C. Li: Effective condition number and superconvergence of the Trefftz method coupled with high order FEM for singularity problem, Engrg. Anal. with Boundary Elements 30 (2006), 270–283.

[Q584] H. T. Huang, Z. C. Li, and N. N. Yan: New error estimates of Adini's elements for Poisson's equation, Appl. Numer. Math. 50 (2004), 49–74.

[Q585] H. T. Huang, Z. C. Li, and A. Zhou: New error estimates of biquadratic Lagrange elements for Poisson's equation, Appl. Numer. Math. 56 (2006), 712–744.

[Q586] Y. Q. Huang, S. Shu, and H. Y. Yu: Superconvergence and asymptotic expansions for linear finite element approximations on criss-cross mesh, Science in China, Ser. A Math. 47 (2004), 136–145.

[Q587] B. Jin, R. Lazarov, and Z. Zhou: Error estimates for a semidiscrete finite element method for fractional order parabolic equations, SIAM J. Numer. Anal. 51 (2013), 445–466.

[Q588] S. Karaa, K. Mustapha, and A. K. Pani: Optimal error analysis of a FEM for fractional diffusion problems by energy arguments, J. Sci. Comput. 74 (2018), 519–535.

[Q589] O. Korobkin, B. Aksoylu, M. Holst, E. Pazos, and M. Tiglio: Solving the Einstein constraint equation on multi-block triangulations using finite element methods, Class. Quant. Grav. 26 (2009), 145007.

[Q590] S. Korotov: A posteriori estimates for error control in terms of linear functionals for linear elasticity, submitted to Appl. Math. in 2005, 1–18.

[Q591] A. M. Lakhany, I. Marek, and J. R. Whiteman: Superconvergence results on mildly stuctured triangulations, Comput. Methods Appl. Mech. Engrg. 189 (2000), 1–75.

[Q592] A. M. Lakhany and J. R. Whiteman: Superconvergent recovery operators: derivative recovery techniques, In: Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 195–215.

[Q593] Z. C. Li: Superconvergence of coupling techniques in combined methods for elliptic equations with singularities, Comput. Math. Appl. 41 (2001), 379–398.

[Q594] Z. C. Li: Global superconvergence of simplified hybrid combinations for elliptic equations with singularities, Computing 65 (2000), 27–44.

[Q595] Z. C. Li: Penalty combinations of the Ritz-Galerkin and finite difference methods for singularity problems, J. Comput. Appl. Math. 81 (1997), 1–17.

[Q596] Z. C. Li, C. S. Chien, and H. T. Huang: Effective condition number for finite difference method, J. Comput. Appl. Math. 198 (2007), 208–235.

[Q597] Z. C. Li, Q. Fang, and S. Wang: Superconvergence of solution derivatives for the Shortley-Weller difference approximation for parabolic problems, Numer. Funct. Anal. Optim. 30 (2009), 1360–1380.

[Q598] Z. C. Li, Q. Fang, S. Wang, and H. Y. Hu: Superconvergence of solution derivatives for the Shortley-Weller difference approximation to elliptic equations with singularities involving the mixed type boundary conditions, Numer. Funct. Anal. Optim. 29 (2008), 161–196.

[Q599] Z. C. Li, H. Y. Hu, S. Wang, and Q. Fang: Superconvergence of solution derivatives of the Shortley-Weller difference approximation to Poisson's equation with singularities on polygonal domains, Appl. Numer. Math. 58 (2008), 689–704.

[Q600] Z. C. Li, H. Y. Hu, S. Wang, and Q. Fang: Superconvergence of solution derivatives of the Shortley-Weller difference approximation to elliptic equations with singularities involving the mixed type of boundary conditions, Numer. Funct. Anal. Optim. 29 (2008), 161–196.

[Q601] Z. C. Li and H. T. Huang: Global superconvergence of simplified hybrid combinations of the Ritz-Galerkin and FEMs for elliptic equations with singularities, II. Lagrange elements and Adini's elements, Appl. Numer. Math. 43 (2002), 253–273.

[Q602] Z. C. Li and H. T. Huang: A note on numerical verification of reduced convergence rates, Preprint I-Shou Univ., Taiwan, 2003, 1–11.

[Q603] Z. C. Li, H. T. Huang, C. S. Huang, T. T. Lu, and Q. Fang: Efective condition number of finite difference method for Poisson's equation involving boundary singularities, Numer. Funct. Anal. Optim. 32 (2011), 659–681.

[Q604] Z. C. Li, H. T. Huang, and J. Huang: Stability analysis and superconvergence for the penatly Trefftz method coupled with FEM for singularity problems, Engrg. Anal. with Boundary Elements 31 (2007), 631–645.

[Q605] Z. C. Li, H. T. Huang, and J. Huang: Superconvergence and stability for boundary penalty techniques of finite difference methods, Numer. Methods Partial Differential Equations 24 (2008), 972–990.

[Q606] Z. C. Li, H. T. Huang, and N. N. Yan: The Adini's elements for the Neumann problems of Poisson's equation, submitted to SIAM J. Numer. Anal. 2001, 1–30.

[Q607] Z. C. Li, H. T. Huang, and N. N. Yan: Global superconvergence of finite elements for elliptic equations and its applications, Science Press, Beijing, 2012.

[Q608] Z. C. Li, Q. Lin, and N. N. Yan: Global superconvergence in combinations of Ritz-Galerkin-FEM for singularity problems, J. Comput. Appl. Math. 106 (1999), 325–344.

[Q609] Z. C. Li and T. T. Lu: Global superconvergence of finite element methods for biharmonic equations and blending surfaces, Comput. Math. Appl. 44 (2002), 413–437.

[Q610] Z. C. Li, Y. Wei, H. T. Huang, and J. Y. Chiang: Stability analysis for singularly perturbed differential equations by the upwind difference scheme, Numer. Methods Partial Differential Equations 30 (2014), 1595–1613.

[Q611] Z. C. Li, T. Yamamoto, and Q. Fang: Superconvergence of solution derivatives for the Shortley-Weller difference approximation of Poisson's equation, Part I: smoothness problems, J. Comput. Appl. Math. 151 (2003), 307–333.

[Q612] Z. C. Li and N. N. Yan: New error estimates of bi-cubic Hermite finite element methods for biharmonic equations, J. Comput. Appl. Math. 142 (2002), 251–285.

[Q613] Q. Lin and N. N. Yan: The construction and analysis for efficient finite elements (Chinese), Hebei Univ. Publ. House, 1996.

[Q614] G. Maisano, S. Michelleti, S. Perotto, and C. L. Bottasso: Some new recovery-based a posteriori error estimators, Comput. Methods Appl. Mech. Engrg. 195 (2006), 4794–4815.

[Q615] S. Micheletti and S. Perotto: Anisotropic recovery-based error estimator, Proc. Internat. Conf. ENUMATH 2001, Jyväskylä, 731–742.

[Q616] S. Micheletti and S. Perotto: Reliability and efficiency of an anisotropic Zienkiewicz-Zhu error estimator, Comput. Methods Appl. Mech. Engrg. 195 (2006), 799–835.

[Q617] G. Schmidt and H. Strese: BEM for Poisson equation, Engineering Anal. with Boundary Elements 10 (1992), 119–123.

[Q618] A. Smolianski: Numerical modelling of two-fluid interfacial flows. Jyväskylä Studies in Computing 8 (2001), 1–109.

[Q619] S. I. Sololev: Superconvergence of finite-element approximations of eigenfunctions, Differential Equations 30 (1994), 1138–1146.

[Q620] T. Tsuchiya: Finite element approximations of conformal mappings, Numer. Funct. Anal. Optim. 22 (2001), 419–440.

[Q621] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q622] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q623] J. R. Whiteman and G. Goodsell: Some gradient superconvergence results in the finite-element method, LN in Math., vol 1397, 1989, 182–260.

[Q624] R. Wohlgemuth: Superkonvergenz des Gradienten im Postprocessing von Finite-Elemente-Methoden, Preprint Nr. 94, Tech. Univ. Chemnitz, 1989, 1–15.

[Q625] X.-Y. Zhang and Q. Fang: Superconvergence of FDM for IBV problems of parabolic equations, Information (Japan) 16 (2013), 7817–7826.

[Q626] L. Zhang and L. K. Li: Superconvergent recoveries of Carey non-conforming element approximations, Comm. Numer. Methods Engrg. 13 (1997), 439–452.

[Q627] Q. D. Zhu: A survey of superconvergence techniques in finite element methods. Proc. Conf. Finite Element Methods: Superconvergence, Post-processing and A Posteriori Estimates, Univ. of Jyväskylä, 1996, Marcel Dekker, New York, 1998, 287–302.

[Q628] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[Q629] Q. D. Zhu and Q. Lin: Superconvergence theory of finite element methods (in Chinese), Hunan Science and Technology Publishers, Hunan, 1989, (see p. 261).

[**B6**] **M. Křížek and P. Neittaanmäki**, *On superconvergence techniques*, Acta Appl. Math. **9** (1987), 175–198.

Cited in:

[Q630] M. Ainsworth and A. Craig: A posteriori error estimators in the finite element method. Numer. Math. 60 (1992), 429–463.

[Q631] M. Ainsworth and J. T. Oden: A posteriori error estimation in finite element analysis, Comput. Methods Appl. Mech. Engrg. 142 (1997), 1–88.

[Q632] M. Ainsworth and J. T. Oden: A posteriori error estimation in finite element analysis, John Wiley & Sons, Inc., New York, 2000.

[Q633] A. A. Amosov and Y. E. Youssef: Error estimates of projection type methods for solving weakly singular integral equations, J. Math. Sci. (N.Y.) 216 (2016), no. 2, Problems in mathematical analysis. No. 84 (Russian), 182–218.

[Q634] A. B. Andrejev: Superconvergence of the gradient of finite element eigenfunctions, C. R. Acad. Bulgare Sci. 43 (1990), 9–11.

[Q635] A. B. Andreev and R. D. Lazarov: Superconvergence of the gradient for quadratic triangular finite elements, Numer. Methods Partial Differential Equations 4 (1988), 15–32.

[Q636] I. Babuška, L. Planck, and R. Rodríguez: Basic problems of a posteriori error estimation, Comput. Methods Appl. Mech. Engrg. 101 (1992), 97–112.

[Q637] I. Babuška, T. Strouboulis, S. K. Gangaraj, and C. S. Upadhyay: Validation of recipes for the roceovery of stresses and derivatives by a computer-based approach, Math. Comput. Model. 20 (1994), 45–89.

[Q638] I. Babuška, T. Strouboulis, S. K. Gangaraj, and C. S. Upadhyay: $\eta\%$ superconvergence in the interior of locally refined meshes of quadrilaterals: Superconvergence of the gradient in finite element solutions of Laplace's and Poisson's equations, Appl. Numer. Math. 16 (1994), 3–49.

[Q639] I. Babuška, T. Strouboulis, and C. S. Upadhyay: $\eta\%$-superconvergence of finite element approximations in the interior of general meshes of triangles. Comput. Methods Appl. Mech. Engrg. 122 (1995), 273–305.

[Q640] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient in finite element solutions of Laplace's and Poisson's equations, CMC Report No. 93-07, Texas A&M Univ., 1993, 1–59.

[Q641] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient of the displacement, the strain and stress in finite element solutions for plane elasticity. Technical Note BN-1166, Univ. of Maryland, 1994, 1–41.

[Q642] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Computer-based proof of the existence of superconvergence points in the finite element method; superconvergence of the derivatives in finite element solutions of Laplace's, Poisson's, and elasticity equations. Numer. Methods Partial Differential Equations 12 (1996), 347–392.

[Q643] I. Babuška and B. Szabó: Trends and new problems in finite element methods. TICAM Report 96-37, The Univ. of Texas at Austin, also in: The Mathematics of Finite Elements and Applications 1996 (ed. J. R. Whiteman), John Wiley & Sons, New York, 1997, 1–33.

[Q644] J. Baranger and H. Elamri: Numerical solution of a spectral problem for an ODE with a small parameter using an asymptotic-expansion and finite-element method, Numer. Funct. Anal. Optim. 11 (1990), 621–642.

[Q645] R. Bausys, P. Hager, and N. E. Wiberg: Postprocessing techniques and h-adaptive finite element-eigenproblem analysis, Comput. & Structures 79 (2001), 2039–2052.

[Q646] C. J. Bi and L. K. Li: Superconvergence analysis of least-squares mixed finite element method for second-order non-self-adjoint two-point boundary value problem. Comm. Numer. Methods Engrg. 14 (1998), 1027–1037.

[Q647] C. Bi and L. Li: Superconvergent recoveries of Carey nonconforming element approximations for non-selfadjoint and indefinite elliptic problems. East-West J. Numer. Anal. 7 (1999), 1–11.

[Q648] J. H. Brandts: Superconvergence phenomena in finite element methods, Ph.D. Thesis, Utrecht Univ., 1994, 1–115.

[Q649] J. H. Brandts: On the origin of some superconvergence phenomena. Part I: Fortin interpolation and vector fields. Preprint no. 847, Mathematical Institute, Utrecht Univ., 1994, 1–16.

[Q650] J. H. Brandts: Superconvergence similarities in standard and mixed finite element methods. In: Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 19–39.

[Q651] J. H. Brandts: The Cauchy-Riemann equations: Discretization by finite elements, fast solution, and a posteriori error estimation. Adv. Comput. Math. 15 (2001), 61–77.

[Q652] J. Brandts and Y. P. Chen: Superconvergence of least-squares mixed finite elements, Internat. J. Numer. Anal. Model. 3 (2006), 303–310.

[Q653] H. Brunner and H. Roth: Collocation in space and: Experience with the Korteweg-de Vries equation. Appl. Numer. Math. 25 (1997), 369–390.

[Q654] A. Bucher, A. Meyer, U. J. Gorke et al.: A comparison of mapping algorithms for hierarchical adaptive FEM in finite elasto-plasticity, Comput. Mech. 39 (2007), 521–536.

[Q655] W. Cao, L. Jia, and Z. Zhang: A C^1 conforming Petrov-Galerkin method for convection-diffusion equations and superconvergence analysis over rectangular meshes, SIAM J. Numer. Anal. 60 (2022), 274–311.

[Q656] W. Cao, L. Jia, and Z. Zhang: A C^1 Petrov-Galerkin method and Gauss collocation method for 1D general elliptic problems and superconvergence, Discrete Contin. Dyn. Syst. Ser. B 26 (2021), 81–105.

[Q657] W. Cao, L. Jia, and Z. Zhang: Superconvergence analysis of C^m finite element methods for fourth-order elliptic equations I: One dimensional case, Comm. Comput. Phys. 33 (2023), 1466–1508.

[Q658] W. Cao, C.-W. Shu, Y. Yang, and Z. Zhang: Superconvergence of discontinuous Galerkin methods for two-dimensional hyperbolic equations, SIAM J. Numer. Anal. 53 (2015), 1651–1671.

[Q659] W. Cao, X. Zhang, and Z. Q. Zhimin: Superconvergence of immersed finite volume methods for one-dimensional interface problems, J. Sci. Comput. 73 (2017), 543–565.

[Q660] W. Cao, X. Zhang, and Z. Zhang: Superconvergence of immersed finite element methods for interface problems, Adv. Comput. Math. 43 (2017), 795–821.

[Q661] W. Cao, Z. Zhang, and Q. Zou: Is $2k$-conjecture valid for finite volume methods?, SIAM J. Numer. Anal. 53 (2015), 942–962.

[Q662] G. F. Carey: Computational grids. Generation, adaptation and solution strategies. Taylor & Francis, 1997.

[Q663] G. F. Carey: Projection in finite element analysis and application, In: Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 53–70.

[Q664] G. F. Carey: A note on superconvergent flux projection, Comm. Numer. Methods Engrg., submitted in 2000, 1–11.

[Q665] P. Chatzipanteldis, R. Lazarov, and V. Thomée: Some error estimates for the finite volume element method for a parabolic problem, Comput. Meth. Appl. Math. 13 (2013), 251–279.

[Q666] C. M. Chen: Some problems on superconvergence in finite element methods, Preprint Hunan Normal Univ., Changsha, 1999, 1–14.

[Q667] C. M. Chen: New progress on superconvergence in finite element method, Preprint Hunan Normal Univ., Changsha, 1999, 1–8.

[Q668] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q669] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[Q670] H. Chen, Q. Lin, J. Zhou, and H. Wang: Uniform error estimates for triangular finite element solutions of advection-diffusion equations, Adv. Comput. Math. 38 (2013), 83–100.

[Q671] H. S. Chen: An L^2- and L^∞-error analysis for parabolic finite element equations with applications to superconvergence and error expansions (Thesis), Preprint 93-11 (SFB 359), Univ. Heidelberg, 1993, 1–134.

[Q672] H. S. Chen: Interior superconvergence of finite element solutions for Stokes problem by local L^2 projections, J. Numer. Math. 12 (2004), 77–96.

[Q673] H. S. Chen: An analysis of superconvergence of mixed finite element methods for second-order elliptic problems by L^2 projections, submitted to Numer. Methods Partial Differential Equations in 2003, 1–26.

[Q674] H. Chen: Superconvergence properties of discontinuous Galerkin methods for two-point bounday value problem, Internat. J. Numer. Anal. Model. 3 (2006), 163–185.

[Q675] H. S. Chen and B. Li: Superconvergence analysis and error expansion for the Wilson nonconforming finite element, Numer. Math. 69 (1994), 125–140.

[Q676] H. Chen, Q. Lin, V. V. Shaidurov, and J. Zhou: Error estimates for triangular and tetrahedral finite elements in combination with trajectory approximation of the first derivatives for advection-diffusion equations, Numer. Anal. Appl. 4 (2011), 345–362.

[Q677] H. Chen, Q. Lin, J. Zhou, and H. Wang: Uniform error estimates for triangular finite element solutions of advection-diffusion equations, Adv. Comput. Math. 38 (2013), 83–100.

[Q678] H. S. Chen and R. Rannacher: Superconvergence properties of finite element schemes for the Navier-Stokes problem. Preprint 93-37, IWR, Univ. Heidelberg, 1993, 1–27.

[Q679] H. S. Chen and J. P. Wang: An interior estimate of superconvergence for finite element solutions for second-order elliptic problems on quasi-uniform meshes by local projections. SIAM J. Numer. Anal. 41 (2003), 1318–1338.

[Q680] L. Chen and H. Li: Superconvergence of gradient recovery schemes on graded meshes for corner singularities, J. Comput. Math. 28 (2010), 11–31.

[Q681] S. Chen, L. Yin, and S. Mao: An anisotropic, superconvergent nonconforming plate finite element, J. Comput. Appl. Math. 220 (2008), 96–110.

[Q682] W. Chen and Q. Lin: Approximation of an eigenvalue problem associated with the Stokes problem by the stream function-vorticity-pressure method, Appl. Math. 51 (2006), 73–88.

[Q683] S. S. Chow and G. F. Carey: Superconvergence phenomena in nonlinear two-point boundary-value problems, Numer. Methods Partial Differential Equations 9 (1993), 561–577.

[Q684] S. S. Chow, G. F. Carey, and R. D. Lazarov: Natural and postprocessed superconvergence in semilinear problems, Numer. Methods Partial Differential Equations 7 (1991), 245–259.

[Q685] S. S. Chow and R. D. Lazarov: Superconvergence analysis of flux computations for nonlinear problems. Bull. Austral. Math. Soc. 40 (1989), 465–479.

[Q686] A. W. Craig, M. Ainsworth, J. Z. Zhu, et al.: Hand $h-p$ version error estimation and adaptive procedures from theory to practice, Engrg. Comput. 5 (1989), 221–234.

[Q687] J. Dalík: A Lagrange interpolation in vertices of a strongly regular triangulation, Proc. Conf. Finite Element Methods: Superconvergence, Post-Processing and A Posteriori Estimates, Univ. of Jyväskylä, 1996, Marcel Dekker, New York, 1998, 85–94.

[Q688] J. Dalík: Quadratic interpolation in vertices of planar triangulations and an application, preprint, VUT Brno, 2004, 1–31.

[Q689] K. Delaere, U. Pahner, R. Belmans, et al.: Highly accurate 3D field gradient computation using local post-solving. IEEE Trans. Magnet. 35 (1999), 3754–3756.

[Q690] L. Du and N. N. Yan: Gradient recovery type a posteriori error estimate for finite element approximation on non-uniform meshes. Adv. Comput. Math. 14 (2001), 175–193.

[Q691] R. Durán: Superconvergence for rectangular mixed finite elements. Numer. Math. 58 (1990), 287–298.

[Q692] R. Durán and R. Rodríguez: On the asymptotic exactness of Bank-Weiser's estimator, Numer. Math. 62 (1992), 297–303.

[Q693] R. Durán, M. A. Muschietti, and R. Rodríguez: Asymptotically exact error estimators for rectangular finite elements, SIAM J. Numer. Anal. 29 (1992), 78–88.

[Q694] R. Durand and M. M. Farias: A local extrapolation method for finite elemets, Adv. Engrg. Soft. 67 (2014), 1–9.

[Q695] E. G. D'yakonov: Optimization in solving elliptic problems, CRC Press, New York, 1996.

[Q696] L. P. Franca: On the superconvergence of the satisfying Babuška-Brezzi condition, Internat. J. Numer. Methods Engrg. 29 (1990), 1715–1726.

[Q697] J. Franz and M. Kasper: Suprconvergent finite element solutions of Laplace and Poisson equation IEEE Trans. Magnet. 32 (1996), 643–646.

[Q698] M. Frolov: Computational properties of a posteriori error estimates based on duality majorants, Master Thesis, Univ. of Jyväskylä, 2003.

[Q699] E. S. Gawlik and A. J. Lew: Supercloseness of orthogonal projections onto nearby finite element spaces, ESAIM Math. Model. Numer. Anal. 49 (2015), 559–576.

[Q700] S. Goebbels: On the sharpness of a superconvergence estimate in connection with one-dimensional Galerkin methods, J. Inequal. Appl. 3 (1999), 91–107.

[Q701] G. Goodsell and J. R. Whiteman: A unified treatment of superconvergent recovered gradient functions for piecewise linear finite element approximations, Internat. J. Numer. Methods Engrg. 27 (1989), 469–481.

[Q702] G. Goodsell and J. R. Whiteman: Pointwise superconvergence of recovered gradients for piecewise linear finite element approximations to problems of planar linear elasticity, Numer. Methods Partial Differential Equations 6 (1990), 59–74.

[Q703] P. M. Gresho and R. L. Sani: Incompressible flow and the finite element method. Advection-diffusion and isothermal laminar flow. John Wiley and Sons, New York, 1998.

[Q704] C. Grossmann and H.-G. Roos: Numerik partiellen Differentialgleichungen, Teubner Studienbücher, Mathematik, Stuttgart, 1994.

[Q705] C. Grossmann and H.-G. Roos: Numerische Behandlung partieller Differentialgleichungen, Teubner-Verlag, Wiesbaden, 2005.

[Q706] H. Gu and A. Zhou: Superconvergence of the mortar finite element approximation to a parabolic problem, Systems Sci. Math. Sci. 12 (1999), 350–356.

[Q707] H. Gu and A. Zhou: Multi-parameter finite elements and their applications to three-dimensional problems. Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 98–108.

[Q708] W. He, Z. Zhang, and Q. Zou: Local superconvergence of post-processed high-order finite volume element solutions, Adv. Comput. Math. 46 (2020), Paper No. 60, 26 pp.

[Q709] I. Hlaváček and J. Chleboun: A recovered gradient method applied to smooth optimal shape problems, Appl. Math. 41 (1996), 281–297.

[Q710] J. Huang, X. Huang, and S. Zhang: A superconvergence of the Morley element via postprocessing, Recent advances in scientific computing and applications, 189–196, Contemp. Math., 586, Amer. Math. Soc., Providence, RI, 2013.

[Q711] Y. Q. Huang: The superconvergence of finite element methods on domains with reentrant corners, Proc. Conf. Finite Element Methods: Superconvergence, Post-processing and A Posteriori Estimates, Univ. of Jyväskylä, 1996, Marcel Dekker, New York, 1998, 169–182.

[Q712] Y. Huang, J. Li, and Q. Lin: Superconvergence analysis for time dependent Maxwell's equations in metamaterials, Numer. Methods Partial Differential Equations 28 (2012), 1794–1816.

[Q713] V. Kantchev and R. D. Lazarov: Superconvergence of the gradient of linear finite elements for 3D Poisson equation, Proc. Internat. Conf. Optimal Algorithms (ed. B. Sendov), Blagoevgrad, 1986, Izd. Bulg. Akad. Nauk, Sofia, 1986, 172–182.

[Q714] M. Kasper and J. Franz: Highly accurate computation of field quantities and forces by superconvergence in finite-elements, IEEE Trans. Magnet. 31 (1995), 1424–1427.

[Q715] P. Klouček, B. Li, and M. Luskin: Analysis of a class of nonconforming finite elements for crystalline microstructures. Math. Comp. 65 (1996), 1111–1135.

[Q716] K. Kolman: Higher-order approximations in the finite element method, Ph. D. Thesis, Charles Univ., Prague, 2010.

[Q717] A. M. Lakhany, I. Marek, and J. R. Whiteman: Superconvergence results on mildly stuctured triangulations, Comput. Methods Appl. Mech. Engrg. 189 (2000), 1–75.

[Q718] A. M. Lakhany and J. R. Whiteman: Superconvergent recovery operators: derivative recovery techniques, In: Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 195–215.

[Q719] O. Lakkis and T. Pryer: Gradient recovery in adaptive finite-element methods for parabolic problems, IMA J. Numer. Anal. 32 (2012), 246–278.

[Q720] D. Li, Y. Nie, and C. Wang: Superconvergence of numerical gradient for weak Galerkin finite element methods on nonuniform Cartesian partitions in three dimensions, Comput. Math. Appl. 78 (2019), 905–928.

[Q721] X. D. Li and N. E. Wiberg: A-posteriori error estimate by element path post-processing adaptive analysis in energy and L^2 norms, Comput. Struct. 53 (1994), 907–919.

[Q722] B. Li: Lagrange interpolation and finite element superconvergence, Numer. Methods Partial Differential Equations 20 (2004), 33–59.

[Q723] B. Li and Z. Zhang: Analysis of a class of superconvergence path recovery techniques for linear and bilinear finite elements, Numer. Methods Partial Differential Equations, 15 (1999), 151–167.

[Q724] M. Li, X. Guan, and S. Mao: Convergence and superconvergence analysis of Lagrange rectangular elements with any order on arbitary rectangular meshes, J. Comput. Math. 32 (2014), 169–182.

[Q725] G. P. Liang and P. Luo: Superconvergence of the $h-p$ version for nonconforming domain decomposition method with Lagrangian multipliers. Preprint Academia Sinica, Inst. of Systems Science, 1996, 1–15.

[Q726] G. P. Liang and P. Luo: Error analysis and global superconvergences for the Signorini's problem with Lagrange multiplier methods. J. Comput. Math. (2002), 79–88.

[Q727] S. Liang, X. Ma, and A. Zhou: Finite volume method for eigenvalue problem, BIT 41 (2001), 345–363.

[Q728] S. Liang, X. Ma, and A. Zhou: A symmetric finite volume scheme for selfadjoint elliptic problems, J. Comput. Appl. Math. 147 (2002), 121–136.

[Q729] Q. Lin: Superconvergence of FEM for singular solution, In: The Mathematics of Finite Elements and Applications 1990, also in J. Comput. Math. 9 (1991), 111–114.

[Q730] Q. Lin: Interpolated finite elements and global superconvergence, Proc. of the Second Chinese Conf. on Numer. Methods for P. D. E., Tianjin, 1991, World Sci. Publ., River Edge, NJ, 1992, 91–95.

[Q731] Q. Lin: Interpolated finite elements and global error recovery. Contemporary Math. 163 (1994), 93–109.

[Q732] Q. Lin and J. Lin: Finite elements methods: Accuracy and improvement, Science Press, Beijing, 2006.

[Q733] Q. Lin and D. S. Wu: High-accuracy approximations for eigenvalue problems by the Carey non-conforming finite element, Comm. Numer. Methods Engrg. 15 (1999), 19–31.

[Q734] Q. Lin and R. Xie: Error expansions for finite element approximations and their applications, LN in Math. 1297, 1987, 98–112.

[Q735] Q. Lin and R. Xie: How to recover the convergent rate for Richardson extrapolation on bounded domains, J. Comput. Math. 6 (1988), 68–79.

[Q736] Q. Lin and R. Xie: Error expansion for FEM and superconvergence under natural assumption, J. Comput. Math. 7 (1989), 402–411.

[Q737] Q. Lin and N. N. Yan: The construction and analysis for efficient finite elements (Chinese), Hebei Univ. Publ. House, 1996.

[Q738] Q. Lin, N. Yan, and A. Zhou: A rectangle test for interpolated finite elements. Proc. of Systems Sci. & Systems Engrg., Great Wall (H. K.), Culture Publ. Co., 1991, 217–229.

[Q739] Q. Lin, N. Yan, and A. Zhou: Interpolated finite elements with rectangular meshes, Academia Sinica, Inst. of Systems Science, Research Report No. 91/04, 1991, 1–14.

[Q740] Q. Lin, N. Yan, and A. Zhou: A sparse finite element method with high accuracy. Part I. Numer. Math. 88 (2001), 731–742.

[Q741] Q. Lin and J. R. Whiteman: Superconvergence of recovered gradients of finite element approximations on nonuniform rectangular and quadrilateral meshes, In: The Mathematics of Finite Elements and Applications VII (ed. J. R. Whiteman), 1990, Academic Press, London, 1991, 563–571.

[Q742] Q. Lin and A. Zhou: Notes on superconvergence and its related topics. J. Comput. Math. 11 (1993), 211–214.

[Q743] Q. Lin and Q. D. Zhu: The preprocessing and postprocessing for the finite element method (in Chinese), Shanghai Scientific & Technical Publishers, 1994, (see p. 11).

[Q744] R. Lin: Natural superconvergence in two and three dimensional finite element methods, Dissertation, Wayne State Univ., Detroit, 2005, 1–240.

[Q745] R. Lin and Z. Zhang: Derivative superconvergence of equilateral triangular finite elements, Contem. Math. 383 (2005), 299–310.

[Q746] R. Lin and Z. Zhang: Natural superconvergence points in three-dimensional finite elements, SIAM J. Numer. Anal. 46 (2008), 1281–1297.

[Q747] T. Lin and D. L. Russell: A superconvergent method for approximating the bending moment of elastic beam with hysteresis damping. Appl. Numer. Math. 38 (2001), 145–165.

[Q748] T. Lin and H. Wang: Recovering the gradients of the solutions of second-order hyperbolic equations by interpolating the finite element solutions, IMA Preprint Series #1157, Univ. of Minnesota, 1993, 1–38.

[Q749] T. Lin and H. Wang: A class of globally super-convergent post-processing techniques for approximating the gradients of solutions to elliptic boundary value problems. ICAM Report 94-01-01, Univ. of South Carolina, 1994, 1–34.

[Q750] T. Lin and H. Wang: A class of error estimators based on interpolating the finite element solution for reaction-diffusion equations, In: Modeling, Mesh Generation, and Adaptive Numerical Methods for Partial Differential Equations (eds. I. Babuška, W. D. Henshaw, J. E. Oliger, J. E. Flaherty, J. E. Hopcroft and T. Tezduyar), IMA Vol. Math. Appl. no. 75, Springer-Verlag, Berlin, 1995, 129–151.

[Q751] A. F. D. Loula, A. F. Rochinha, and A. M. Murad: Higher-order gradient post-processings for second-order elliptic problems. Comput. Methods Appl. Mech. Engrg. 128 (1995), 361–381.

[Q752] D. Lukáš: Optimal shape design in magnetostatics, Ph.D. Thesis, VŠB Ostrava, 2003, 1–130.

[Q753] P. Luo: Superconvergence estimates for a nonconforming membrane element. Northeast. Math. J. 8 (1992), 477–482.

[Q754] P. Luo and G. P. Liang: Global superconvergence of the domain decomposition methods with nonmatching grids. J. Comput. Math. 19 (2001), 187–194.

[Q755] P. Luo and G. P. Liang: Error analysis and global superconvergence for the Signorini problem with Lagrange multiplier methods. J. Comput. Math. 20 (2002), 79–88.

[Q756] P. Luo and G. P. Liang: Domain decomposition methods with nonmathching grids for the unilateral problem. J. Comput. Math. 20 (2002), 197–206.

[Q757] P. Luo and Q. Lin: High accuracy analysis of the Wilson element, J. Comput. Math. 17 (1999), 113–124.

[Q758] P. Luo and Q. Lin: Superconvergence of the Adini's element for second order equation, J. Comput. Math. 17 (1999), 569–574.

[Q759] P. Luo and Q. Lin: High accuracy analysis of the Adini's nonconforming element, Computing 68 (2002), 65–79.

[Q760] P. Luo and Q. Lin: Accuracy analysis of the Adini element for biharmonic problem, Acta Math. Sinica 20 (2004), 135–146.

[Q761] S. Mao, S. Chen, and D. Y. Shi: Convergence and superconvergence of a nonconforming finite element on anisotropic meshes, Internat. J. Numer. Anal. Model. 4 (2007), 16–38.

[Q762] S. Mao, S. Chen, and H. Sun: A quadrilateral, anisotropic, superconvergent, nonconforming double set parameter element, Appl. Numer. Math. 56 (2006), 937–961.

[Q763] S. Mao and Z.-C. Shi: High accuracy analysis of two nonconforming plate element, Numer. Math. 111 (2009), 407–443.

[Q764] J. Maryška: Optimalizace termoelastického systému v osově symetrické oblasti (kandidátská disertační práce), ČVUT, Praha, 1993, 1–90.

[Q765] E. Nadal, P. Díez, J. J. Ródenas, M. Tur, F. J. Fuenmayor: A recovery-explicit error estimator in energy norm for linear elasticity, Comput. Methods Appl. Mech. Engrg. 287 (2015), 172-190.

[Q766] Q. X. Niu and M. S. Shephard: Superconvergent extraction techniques for finite element analysis, Internat. J. Numer. Methods Engrg. 36 (1993), 811–836.

[Q767] Q. X. Niu and M. S. Shephard: Superconvergent boundary stress extraction and some experiments with adaptive pointwise error control, Internat. J. Numer. Methods Engrg. 37 (1994), 877–891.

[Q768] L. Nöel and P. Duysinx: Shape optimization of microstructural designs subject to local stress constraints within an XFEM-level set framework, Struc. Multidisciplinary Optim. 55 (2016), 2323–2338.

[Q769] A. K. Noor: Computational structures technology; leap frogging into the twenty-first century, Comput. Struct. 73 (1999), 1–31

[Q770] D. Omeragic and P. P. Silvester: 3-dimensional gradient recovery by local smoothing of finite-element solutions, COMPEL 13 (1994), 553–566.

[Q771] D. Omeragic and P. P. Silvester: Numerical differentiation in magnetic field postprocessing. Internat. J. Numer. Model. - Electronic Networks Devices and Fields 9 (1996), 99–113.

[Q772] D. Omeragic and P. P. Silvester: Progress in differentiation of approximate data. IEEE Antennas Propag. 38 (1996), 25–30.

[Q773] D. Omeragic and P. P. Silvester: Differentiation of finite element solutions to non-linear problems, Internat. J. Numer. Model. - Electronic Networks Devices and Fields 13 (2000), 305–319.

[Q774] A. K. Pany, M. Khebchareon, and A. K. Pani: Negative norm estimates and superconvergence results in Galerkin method for strongly nonlinear parabolic problems, Comput. Math. Appl. 99 (2021), 26–36.

[Q775] A. I. Pehlivanov: Interior estimates of type superconvergence of the gradient in the finite element method, C. R. Acad. Bulgare Sci. 42 (1989), 29–32.

[Q776] A. I. Pehlivanov: Superconvergence of the gradient for quadratic 3D simplex finite elements. Numer. Methods and Appl., Sofia, Bulgar. Acad. Sci., 1989, 361–366.

[Q777] A. I. Pehlivanov, R. D. Lazarov, G. F. Carey, and S. S. Chow: Superconvergence analysis of approximate boundary-flux calculations, Numer. Math. 63 (1992), 483–501.

[Q778] C. Pflaum and A. Zhou: Error analysis of the combination technique, Numer. Math. 84 (1999), 327–350.

[Q779] R. Porcù and M. M. Chiaramonte: Orthogonality constrained gradient reconstruction for superconvergent linear functionals, BIT 60 (2020), 465–479.

[Q780] R. Rannacher: Extrapolation techniques in the finite element method, Proc. Summer School in Numer. Anal. (ed. O. Nevanlinna), Helsinki, 1987, Helsinki Univ. of Technology, 1988, 80–113.

[Q781] T. Regińska: The superconvergence effect in the finite element method for two-point boundary value problems, (Polish), Mat. Stos. 30 (1987), 97–111.

[Q782] T. Regińska: Error estimates for external approximation of ordinary differential equations and the superconvergence property, Apl. Mat. 33 (1988), 277–290.

[Q783] H. R. Riggs, A. Tessler, and H. Chu: C^1-continuous stress recovery in finite element analysis. Comput. Methods Appl. Mech. Engrg. 143 (1997), 299–316.

[Q784] H.-G. Roos, M. Stynes, and L. Tobiska: Numerical methods for singularly perturbed differential equations. Convection-diffusion and flow problems, Springer-Verlag, Berlin, 1996.

[Q785] H.-G. Roos, M. Stynes, and L. Tobiska: Robust numerical methods for singularly perturbed differential equations. Springer Series in Comput. Math. vol. 24, Springer-Verlag, Berlin, Heidelberg, 2008.

[Q786] A. A. Samarskii, P. N. Vabishchevich, and P. P. Matus: Finite-difference approximations of higher accuracy order on nonuniform grids, Differential Equations 32 (1996), 269–280.

[Q787] A. H. Schatz: Perturbations of forms and error estimates for the finite element method at a point, with an application to improved superconvergence error estimates for subspaces that are symmetric with respect to a point, SIAM J. Numer. Anal. 42 (2005), 2342–2365.

[Q788] A. H. Schatz, I. H. Sloan, and L. B. Wahlbin: Superconvergence in finite element methods and meshes which are symmetric with respect to a point, SIAM J. Numer. Anal. 33 (1996), 505–521.

[Q789] A. Schleupen and E. Ramm: Local and global error estimators in linear structural dynamics, Comput. & Structures 76 (2000), 741–756.

[Q790] D. Y. Shi, S. P. Mao, and S. C. Chen: An anisotropic nonconforming finite element with some superconvergence results, J. Comput. Math. 23 (2005), 261–274.

[Q791] D. Y. Shi, S. P. Mao, and S. C. Chen: On the anisotropy accuracy analysis of ACM's nonconforming finite element, J. Comput. Math. 23 (2005), 635–646.

[Q792] D. Y. Shi, S. P. Mao, and H. Liang: Anisotropic biquadratic element with supercolose result, J. Syst. Sci. Complex. 19 (2006), 566–576.

[Q793] S. Shu, C. Nie, H. Yu, and Y. Q. Huang: A preserving-symmetry finite volume scheme and superconvergence on quadrangle grids, sumbmitted to Internat. J. Numer. Anal. Model. in 2004, 1–15.

[Q794] S. Shu, H. Y. Yu, Y. Q. Huang et al.: A symmetric finite volume element scheme on quadrilateral grids and superconvergence, Internat. J. Numer. Anal. Model. 3 (2006), 348–360.

[Q795] R. C. C. Silva, A. F. Loula, and J. N. C. Guerreiro: Local gradient and stress recovery for triangular elements, Comput. & Structures 82 (2004), 2083-2092.

[Q796] P. P. Silvester and D. Omeragic: A 2-dimensional Zhu-Zienkiewicz method for gradient recovery from finite-element solutions, COMPEL 12 (1993), 191–204.

[Q797] S. I. Sololev: Superconvergence of finite-element approximations of eigenfunctions, Differential Equations 30 (1994), 1138–1146.

[Q798] A. Tessler, H. R. Riggs, and S. C. Macy: Application of a variational method for computing smooth stresses, stress gradients, and error estiamtion in finite element analysis, In: The Mathematics of Finite Elements and Applications (ed. J. R. Whiteman), John Wiley & Sons, New York, 1994, 189–198.

[Q799] A. Tessler, H. R. Riggs, and S. C. Macy: A variational method for finite element stress recovery and error estimation, Comput. Methods Appl. Mech. Engrg. 111 (1994), 369–382.

[Q800] V Thomée: Galerkin finite element methods for parabolic problems, Springer-Verlag, Berlin, 1997.

[Q801] V Thomée: From finite differences to finite elements. A short history of numerical analysis of partial differential equations. J. Comput. Appl. Math. 128 (2001), 1–54.

[Q802] V. Thomée, J. Xu, and N. Zhang: Superconvergence of the gradient in piecewise linear finite element approximation to a parabolic problem, SIAM J. Numer. Anal. 26 (1989), 553–573.

[Q803] T. Vejchodský: Finite element approximation of a nonlinear parabolic heat conduction problem and a posteriori error estimators, Ph.D. Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2003.

[Q804] L. B. Wahlbin: Local behaviour in finite element methods. Handbook of Numer. Anal., vol II. (ed. P. G. Ciarlet, J. L. Lions), North-Holland, Amsterdam, 1991, (see p. 508).

[Q805] L. B. Wahlbin: On superconvergence up to boundaries in finite element methods: A counterexample, SIAM J. Numer. Anal. 29 (1992), 937–946.

[Q806] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q807] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q808] L. B. Wahlbin: General principles of superconvergence in Galerkin finite element methods, Proc. Conf. Finite Element Methods: Superconvergence, Post-processing and A Posteriori Estimates, Univ. of Jyväskylä, 1996, Marcel Dekker, New York, 1998, 269–286.

[Q809] C. Wang: Superconvergence of Ritz-Galerkin finite element approximations for second order elliptic problems, Numer. Methods Partial Differential Equations 34 (2018), 838–856.

[Q810] X. Wang and Y. Li: Superconvergence of quadratic finite volume method on triangular meshes, J. Comput. Appl. Math. 348 (2019), 181–199.

[Q811] X. Wang, J. Lv, and Y. Li: New superconvergent structures developed from the finite volume element method in 1D, Math. Comp. 90 (2021), 1179–1205.

[Q812] X. Wang, Y. Zhang, and Z. Zhang: New superconvergent structures with optional superconvergent points for the finite volume element method, Comm. Comput. Phys. 33 (2023), 1332–1356.

[Q813] M. Weymuth, S. Sauter, and S. Repin: A posteriori modelling-discretization error estimate for elliptic problems with L^∞ coefficients, Comput. Methods Appl. Math. 17 (2017), 515–531.

[Q814] M. F. Wheeler and J. R. Whiteman: Superconvergence of recovered gradients of discrete time/piecewise linear Galerkin approximations for linear and nonlinear parabolic problems, Numer. Methods Partial Differential Equations 10 (1994), 271–294.

[Q815] J. R. Whiteman and G. Goodsell: Some gradient superconvergence results in the finite-element method, LN in Math., vol 1397, 1989, 182–260.

[Q816] J. R. Whiteman and G. Goodsell: Some features of the nodal recovery of gradients from finite element approximations which produces superconvergence, Proc. Conf. EQUADIFF 7 (ed. J. Kurzweil), Prague, 1989, Teubner-Texte zur Mathematik, Band 118, Teubner, Leipzig, 1990, 305–308.

[Q817] J. R. Whiteman and G. Goodsell: A survey of gradient superconvergence for finite element approximations to second order elliptic problems on triangular and tetrahedral meshes, In: The Mathematics of Finite Elements and Applications VII (ed. J. R. Whiteman), 1990, Academic Press, London, 55–74.

[Q818] N. E. Wiberg, F. Abdulwahab, and X. D. Li: Error estimation and adaptive procedures based on superconvergent path recovery (SPR) techniques, Arch. Comput. Method E. 4 (1997), 203–242.

[Q819] N. E. Wiberg and X. D. Li: Superconvergence patch recovery of finite-element solution and a posteriori L_2-norm error estimate. Comm. Numer. Methods Engrg. 10 (1994), 313–320.

[Q820] Y. Xu and A. Zhou: Fast Boolean approximation methods for solving integral equations in high dimensions, J. Integral Equations Appl. 16 (2004), 83–110.

[Q821] N. N. Yan and A. Zhou: Gradient recovery type a posteriori error estimate for finite element approximations on irregular meshes. Comput. Methods Appl. Mech. Engrg. 190 (2001), 4289–4299.

[Q822] P. Yang, Y. Li, and X. Wang: Global L^2 superconvergence of the tetrahedral quadratic finite element, Comput. Math. Appl. 133 (2023), 104–123.

[Q823] L. Yi: On the asymptotic exactness of error estimators based on the equilibrated residual method for quadrilateral elements, Appl. Numer. Math. 62 (2012), 1925–1937.

[Q824] L. Zhang and L. K. Li: On superconvergence of isoparametric bilinear finite elements. Comm. Numer. Methods Engrg. 12 (1996), 849–862.

[Q825] L. Zhang and L. K. Li: Superconvergent recoveries of Carey non-conforming element approximations, Comm. Numer. Methods Engrg. 13 (1997), 439–452.

[Q826] L. Zhang and L. K. Li: Some superconvergence results of Wilson-like elements, J. Comput. Math. 16 (1998), 81–96.

[Q827] Z. Zhang: Superconvergence points of polynomialspectral interpolation, SIAM J. Numer. Anal. 50 (2012), 2966–2985.

[Q828] Z. Zhang and H. D. Victory: Mathematical analysis of Zienkiewicz-Zhu's derivative patch recovery technique. Numer. Methods Partial Differential Equations 12 (1996), 507–524.

[Q829] Z. Zhang and R. Lin: Derivative superconvergence of equilateral triangular finite elements, submitted to AMS Contemporary Math. in 2004, 1–12.

[Q830] Z. Zhang and R. Lin: Locating natural superconvergence points of finite element methods in 3D, Internat. J. Numer. Anal. Model. 2 (2005), 19–30.

[Q831] Z. Zhang and A. Naga: Natural superconvergent points of equilateral triangular finite elements – A numerical example, J. Comput. Math. 24 (2006), 19–24.

[Q832] Z. M. Zhang and J. Z. Zhu: Analysis of the superconvergent path recovery technique and a-posteriori error estimator in the finite-element method, Comput. Methods Appl. Mech. Engrg. 123 (1995), 173–187.

[Q833] Z. M. Zhang and J. Z. Zhu: Superconvergence of the derivative patch recovery technique and a posteriori error estimation, In: Modeling, Mesh Generation, and Adaptive Numerical Methods for Partial Differential Equations (eds. I. Babuška, W. D. Henshaw, J. E. Oliger, J. E. Flaherty, J. E. Hopcroft and T. Tezduyar), IMA Vol. Math. Appl. 75, Springer-Verlag, Berlin, 1995, 431–450.

[Q834] Z. M. Zhang and J. Z. Zhu: Analysis of the superconvergent path recovery technique and a-posteriori error estimator in the finite-element method (II). Comput. Methods Appl. Mech. Engrg. 163 (1998), 159–170.

[Q835] J. Z. Zhu and O. C. Zienkiewicz: Superconvergence recovery technique and a posteriori error estimators, Internat. J. Numer. Methods Engrg. 30 (1990), 1321–1339.

[Q836] Q. D. Zhu: A survey of superconvergence techniques in finite element methods. Proc. Conf. Finite Element Methods: Superconvergence, Post-processing and A Posteriori Estimates, Univ. of Jyväskylä, 1996, Marcel Dekker, New York, 1998, 289–302.

[Q837] Q. D. Zhu: Survey for different approaches to superconvergence phenomena. Proc. Fourth National Conf. on Finite Elements, Guiyang, Guizhou, 1997, 1–11.

[Q838] Q. D. Zhu: A review of two different approaches for superconvergence analysis. Appl. Math. 43 (1998), 401–411.

[Q839] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[Q840] Q. D. Zhu and Q. Lin: Superconvergence theory of finite element methods (in Chinese), Hunan Science and Technology Publishers, Hunan, 1989, (see p. 145, 248).

[Q841] A. Ženíšek: Nonlinear elliptic and evolution problems and their finite element approximations, Academic Press, London, 1990, (see p. 383).

[Q842] O. C. Zienkiewicz, R. Taylor, and J. Z. Zhu: The finite element method: Its basis and fundamentals (7th edition), Elsevier Ltd., 2013, pp. 714.

[Q843] O. C. Zienkiewicz and J. Z. Zhu: Adaptivity and mesh generation, Internat. J. Numer. Methods Engrg. 32 (1991), 783–810.

[Q844] O. C. Zienkiewicz and J. Z. Zhu: The superconvergent patch recovery and a posteriori error estimates, Part 1: The recovery technique, Internat. J. Numer. Methods Engrg. 33 (1992), 1331–1364.

[Q845] O. C. Zienkiewicz and J. Z. Zhu: Superconvergence and the superconvergent path recovery, Finite Element Anal. Design 19 (1995), 11–23.

[Q846] A. A. Zlotnik: Some finite-element and finite-difference methods for solving mathematical physics problems with non-smooth data in an n-dimensional cube. Part I. Sov. J. Numer. Anal. Math. Modelling 6 (1991), 421–451.

[**B7**] **M. Křížek, Q. Lin, and Y. Huang**, *A nodal superconvergence arising from combination of linear and bilinear elements*, J. Systems Sci. Math. Sci. **1** (1988), 191–197.

Cited in:

[Q847] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q848] C. Nie, S. Shu, H. Yu, and Y. Yang: Superconvergence and asymptotic expansion for semidiscrete bilinear finite volume element approximation of the parabolic problem, Comput. Math. Appl. 66 (2013), 91–104.

[Q849] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q850] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q851] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[**B8**] **M. Křížek and P. Neittaanmäki**, *On $\mathcal{O}(h^4)$-superconvergence of piecewise bilinear FE-approximations*, Mat. Apl. Comput. **8** (1989), 49–61.

Cited in:

[Q852] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q853] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[Q854] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q855] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q856] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[**B9**] **M. Křížek**, *Conforming finite element approximation of the Stokes problem*, Banach Center Publ. **24** (1990), 389–396.

Cited in:

[Q857] H. Chen, S. Jia, and H. Xie: Postprocessing and higher order convergence for the mixed finite element approximations of the Stokes eigenvalue problems, Appl. Math. 54 (2009), 237–250.

[Q858] W. Chen and Q. Lin: Approximation of an eigenvalue problem associated with the Stokes problem by the stream function-vorticity-pressure method, Appl. Math. 51 (2006), 73–88.

[Q859] A. Golbabai and H. Rabiei: A meshfree method based on radial basis functions for the eigenvalue of transient Stokes equations, Engrg. Anal. Boundary Elements 36 (2012), 1555–1559.

[Q860] S. Jia, H. Xie, X. Yin, and S. Gao: Approximation and eigenvalue extrapolation of Stokes eigenvalue problem by nonconforming finite element methods, Appl. Math. 54 (2009), 1–15.

[Q861] X. Yin, H. Xie, and S. Gao: Asymptotic expansions and extrapolations of eigenvalues for the Stokes problem by mixed finite elmenet methods, J. Comput. Appl. Math. 215 (2008), 127–141.

[**B10**] **M. Křížek, P. Neittaanmäki, and M. Vondrák**, *A nontraditional approach for solving the Neumann problem by the finite element method*, Mat. Apl. Comput. **11** (1992), 31–40.

Cited in:

[Q862] X. C. Tai: Parallel computing with splitting - up methods and the distributed parameter identification problems (Thesis), Dept. of Math., Univ. of Jyväskylä, Report 50, 1991, 1–94, (see p. 61).

[**B11**] **M. Křížek**, *On the maximum angle condition for linear tetrahedral elements*, SIAM J. Numer. Anal. **29** (1992), 513–520.

Cited in:

[Q863] G. A. Acosta: Lagrange and average interpolation over $3d$ anisotropic elements. J. Comput. Appl. Math. 135 (2001), 91–109.

[Q864] G. A. Acosta, T. Apel, R. G. Durán, and L. A. Lombardi: Error estimates for Raviart-Thomas interpolation of any order on anisotropic tetrahedra, Math. Comp. 80 (2011), 141–163.

[Q865] G. A. Acosta and R. G. Durán: The maximum angle conditon for mixed and non conforming elements: Application to the Stokes equations, SIAM J. Numer. Anal. 37 (1999), 18–36.

[Q866] G. A. Acosta and R. G. Durán: Error estimates for $\mathcal{Q}_1$ isoparametric elements satisfying a weak angle condition, SIAM J. Numer. Anal. 38 (2000), 1073–1088.

[Q867] M. Aiffa and J. E. Flaherty: A geometrical approach to mesh smooting, Comput. Methods Appl. Mech. Engrg. 192 (2003), 4497–4514.

[Q868] T. Apel: A note on anisotropic interpolation error estimates for isoparametric quadrilateral finite elements, Preprint SFB 393/96-10, TU Chemnitz-Zwickau, 1996, 1–14.

[Q869] T. Apel: Anisotropic interpolation error-estimates for isoparametric quadrilateral finite-elements. Computing 60 (1998), 157–174.

[Q870] T. Apel: Anisotropic finite elements: Local estimates and applications. Advances in Numerical Mathematics, B. G. Teubner, Stuttgart, Leipzig, 1999.

[Q871] T. Apel, M. Berzins, P. K. Jimack, G. Kunert, A. Plaks, I. Tsukerman, and M. Walkley: Mesh shape and anisotropic elements: theory and practice. Proc. Conf.: The Mathematics of Finite Elements and Applications X, MAFELAP 1999, Elsevier, Amsterdam, 2000, 367–376.

[Q872] T. Apel, V. Kempf, A. Linke, and C. Merdon: A nonconforming pressure-robust finite element method for the Stokes equations on anisotropic meshes, IMA J. Numer. Anal. 42 (2022), 392–416.

[Q873] T. Apel and G. Lube: Anisotropic mesh refinement for a singularly perturbed reaction diffusion model problem, Appl. Numer. Math. 26 (1998), 415–433.

[Q874] T. Apel and G. Lube: Anisotropic mesh refinement for singularly perturbed reaction diffusion model problem. Appl. Numer. Math. 26 (1998), 415–433.

[Q875] T. Apel and G. Lube: Anisotropic mesh refinement in stabilized Galerkin methods. Numer. Math. 74 (1996), 261–282.

[Q876] T. Apel, S. Nicaise, and J. Schöberl: Crouzeix-Raviart type finite elements on anisotropic meshes. Numer. Math. 89 (2001), 193–223.

[Q877] F. Auricchio, F. Brezzi, A. Lefieux, and A. Reali: An "immeresed" finite element method based on locally anisotropic remeshing for the incompressible Stokes problem, Comput. Methods Appl. Mech. Engrg. 294 (2015), 428–448.

[Q878] I. Babuška and M. Suri: The p and $h-p$ versions of the finite element method, basic principles and properties, SIAM Review 36 (1994), 578–632.

[Q879] N. V. Baidakova: On P. Jamet's estimates for finite elements with interpolation at uniform nodes of a simplex (Russian), Mat. Tr. 20 (2017), 43–74; translation in Siberian Adv. Math. 28 (2018), 1–22.

[Q880] P. A. Bakhvalov and M. D. Surnachev: Method of averaged element splittings for diffusion terms discretization in vertex-centered framework, J. Comput. Phys. 450 (2022), Paper No. 110819, 26 pp.

[Q881] E. Bänsch: Anisotropic interpolation estimates, Sonderforschungsbereich 256, Univ. Bonn, 1994, 1–12.

[Q882] M. Berzins: A solution-based triangular and tetrahedral mesh quality indicator. SIAM J. Sci. Comput. 19 (1998), 2051–2060.

[Q883] M. Berzins: Mesh quality: a function of geometry, error estimates or both? Engineering with Computers 15 (1999), 236–247.

[Q884] M. Berzins: Solution-based mesh quality indicators for triangular and tetrahedral meshes, Internat. J. Comput. Geom. Appl. 10 (2000), 333–346.

[Q885] J. Brandts: From binary cube triangulations to acute binary simplices, Proc. Conf. Applications of Mathematics 2012 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 31–42.

[Q886] A. Buffa, M. Costabel, and M. Dauge: Algebraic convergence for anisotropic edge elements in polyhedral domains, Numer. Math. 101 (2005), 29–65.

[Q887] S. Cao and L. Chen: Anisotropic error estimates of the linear virtual element method on polygonal meshes, SIAM J. Numer. Anal. 56 (2018), 2913–2939.

[Q888] S. Cao, L. Chen, and R. Guo: A virtual finite element method for two-dimensional Maxwell interface problems with a background unfitted mesh, Math. Models Methods Appl. Sci. 31 (2021), 2907–2936.

[Q889] S. Cao, L. Chen, R. Guo, and F. Lin: Immersed virtual element methods for elliptic interface problems in two dimensions, J. Sci. Comput. 93 (2022), no. 1, Paper No. 12, 44 pp.

[Q890] P. R. Cavalcanti, Y. P. Atencio, C. Esperanca, and F. P. Nascimento: 3D triangulations for industrial applications, Proc. 25th Conf. on Graphics, Patterns and Images, Ouro Preto, 2012, 102–109.

[Q891] L. Chen, H. Wei, and M. Wen: An interface-fitted mesh generator and virtual element methods for elliptic interface problems, J. Comput. Phys. 334 (2017), 327–348.

[Q892] S. Chen, Y. Zheng, and S. Mao: Anisotropic error bounds of Lagrange interpolation with any order in two and three dimensions, Appl. Math. Comput. 217 (2011), 9313–9321.

[Q893] L. T. Dechevsky and W. L. Wendland: On the Bramble-Hilbert lemma, II. Preprint 2007/002, Univ. Stuttgart, Berichte aus dem Inst. für Angewandte Anal. und Numer. Simulation, 2007, 1–67.

[Q894] S. Dey, M. S. Shephard, and M. K. Georges: Elimination of the adverse effects of small model features by the local modification of automatically generated meshes, Engrg. Comput. 13 (1997), 134–152.

[Q895] B. Diskin and J. L. Thomas: Effects of mesh regularity on accuracy of finite volume schemes, 50th AIAA Aerospace Sci. Metting Including the New Horizons Forum and Aerospace Exposition, 2012, Article Number AIAA 2012-0609.

[Q896] Q. Du, D. Wang, and L. Zhu: On the mesh geometry and stiffness matrix conditioning for general finite element spaces, SIAM J. Numer. Anal. 47 (2009), 1421–1444.

[Q897] H.-Y. Duan and R. C. E. Tan: On the Poincaré-Friedrichs inequality for piecewise H^1 functions in anisotropic discontinuous Galerkin finite element methods, Math. Comp. 80 (2010), 119–140.

[Q898] M. Duprez, V. Lleras, and A. Lozinski: Finite element method with local damage of the mesh, ESAIM Math. Model. Numer. Anal. 53 (2019), 1871–1891.

[Q899] R. G. Durán: Error estimates for 3-D narrow finite elements, Math. Comp. 68 (1999), 187–199.

[Q900] R. G. Durán and A. L. Lambardi: Error estimates for the Raviart-Thomas interpolation under the maximum angle condition, SIAM J. Numer. Anal. 46 (2007), 1442–1453.

[Q901] A. Gillette and A. Rand: Interpolation error estimates for harmonic coordinates on polytopes, ESAIM Math. Model. Numer. Anal. 50 (2016), 651–676.

[Q902] B. Gmeiner, T. Gradl, F. Gaspar, and U. Rüde: Optimization of the multigrid-convergence rate on semi-structured meshes by local Fourier analysis, Comput. Math. Appl. 65 (2013), 694–711.

[Q903] N. A. Golias and T. D. Tsiboukis: An approach to refining three-dimensional tetrahedral meshes based on Delaunay transformations, Internat. J. Numer. Methods Engrg. 37 (1994), 793–812.

[Q904] S. Gosselin, C. Ollivier-Gooch: Constructing constrained Delaunay tetrahedralizations of volumes bounded by piecewise smooth surfaces, Internat. J. Comput. Geom. Appl. 21 (2011), 571–594.

[Q905] S. Gosselin, C. Ollivier-Gooch: Tetrahedral mesh generation using Delaunay refinement with non-standard quality measures, Internat. J. Numer. Methods Engrg. 87 (2011), 795–820.

[Q906] F. Grunewald and W. Huntebrinker: A numerical study of eigenvalues of the hyperbolic Laplacian for polyhedra with one cusp, Experiment. Math. 5 (1996), 57–80.

[Q907] N. V. Hattangady, M. S. Stephard, and A. B. Chaudhary: Towards realistic automated 3D modelling of metal forming problems, Engineers with Computers 15 (1999), 356–374.

[Q908] W. He: Local ultraconvergence of finite element method for second-order elliptic problems with singularity, Numer. Methods Partial Differential Equations, submitted in 2019, 1–18.

[Q909] W. He and Z. Zhang: $2k$ superconvergence of Q_k finite elements by anisotropic mesh approximation in weighted Sobolev spaces, Math. Comp. 86 (2017), 1693–1718.

[Q910] W. He, R. Zhao, G. Li, and W. Li: Local ultraconvergence of finite element methods for second-order elliptic problems with singularity, Numer. Methods Partial Differential Equations 37 (2021), 2132–2149.

[Q911] W. Z. Huang: Measuring mesh qualities and application to variational mesh adaptation, SIAM J. Sci. Comput. 26 (2005), 1643–1666.

[Q912] H. Ishizaka: Anisotropic RaviartThomas interpolation error estimates using a new geometric parameter, Calcolo 59 (2022), Article No. 50, 27 pp,

[Q913] H. Ishizaka, K. Kobayashi, R. Suzuki, and T. Tsuchiya: A new geometric condition equivalent to the maximum angle condition for tetrahedrons, Comput. Math. Appl. 99 (2021), 323–328.

[Q914] H. Ishizaka, K. Kobayashi, and T. Tsuchiya: General theory of interpolation error estimates on anisotropic meshes, Japan J. Indust. Appl. Math. 38 (2021), 163–191.

[Q915] H. Ishizaka, K. Kobayashi, and T. Tsuchiya: Anisotropic interpolation error estimates using a new geometric parameter, Japan J. Indust. Appl. Math. 40 (2023), 475–512.

[Q916] A. Khademi: Convergence on degenerating finite element meshes, PhD Thesis, Western Norway Univ. of Appl. Sci., Bergen, 2020.

[Q917] A. Khademi, S. Korotov, and J. E. Vatne: On generalization of the Synge-Křížek maximum angle condition for d-simplices, J. Comput. Appl. Math. 358 (2019), 29–33.

[Q918] A. Khademi and J. E. Vatne: Estimation of the interpolation error for general prismatic elements, Appl. Numer. Math. submitted in 2019, 1–26.

[Q919] K. Kobayashi and T. Tsuchiya: Extending Babuška-Aziz's theorem to higher-order Lagrange interpolation, Appl. Math. 61 (2016), 121–133.

[Q920] K. Kobayashi and T. Tsuchiya: Error analysis of Lagrange interpolation on tetrahedrons. Proc. Conf. Numerical Analysis: New Developments for Elucidating Interdisciplinary Problems II (ed. Norikazu Saito), Research Inst. for Math. Sciences, Kyoto Univ., 2016, 41–43.

[Q921] K. Kobayashi and T. Tsuchiya: Error analysis of Lagrange interpolation on tetrahedrons, J. Approx. Theory 249 (2020), 105302, 20 pp.

[Q922] K. Kobayashi and T. Tsuchiya: Lectures on Error Analysis of Interpolation on Simplicial Triangulations without the Shape-Regularity Assumption Part 1: Two-dimensional Lagrange Interpolation, arXiv:1908.03894v1, Aug 2019, 34 pp.

[Q923] M. Klejchová: The discrete maximum principle in the first order finite element method, Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2010, 1–59.

[Q924] P. Knabner and L. Angermann: Numerical methods for elliptic and parabolic partial differential equations, Texts in Appl. Math., vol. 44, Springer, New York, 2003.

[Q925] S. Korotov: Some geometric results for tetrahedral finite elements, Proc. Conf. NUMGRID 2010, Moscow, 2011, 1–6.

[Q926] S. Korotov: On conforming nonobtuse tetrahedralizations of some cylindrical-type domains, Proc. Conf. Applications of Mathematics 2012 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 127–133.

[Q927] S. Korotov and T. Rahman: On conforming local post-refinement of adjacent tetrahedral and hexahedral meshes, LN in Computer Sci. 9574, Springer, 2016, 365–370.

[Q928] S. Korotov and J. E. Vatne: On regularity of tetrahedral meshes produced by some red-type refinements, to appear in Springer-Verlag, Berlin, 2020, 1–7.

[Q929] F. Labelle and J. R. Shewchuk: Isosurface stuffing: Fast tetrahedral meshes with good dihedral angles, ACM Trans. on Graphics 26 (2007), article no. 57.

[Q930] H. Li and S. Nicaise: Regularity and a priori error analysis on anisotropic meshes of a Dirichlet problem in polyhedral domains. Numer. Math. 139 (2018), 47–92.

[Q931] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[Q932] A. L. Lombardi: Interpolation error estimates for edge elements on anisotropic meshes, IMA J. Numer. Anal. 31 (2011), 1683–1712.

[Q933] A. L. Lombardi: The discrete compactness property for anisotropic edge elements on polyhedral domains, ESAIM Math. Model. Numer. Anal. 47 (2013), 169–181.

[Q934] D. Lukáš: Optimal shape design in magnetostatics, Ph.D. Thesis, VŠB Ostrava, 2003, 1–130.

[Q935] J. Mackerle: Finite element linear and nonlinear, static and dynamic analysis of structural elements: a bibliography (1992–1995), Engrg. Computation 14 (1997), 347.

[Q936] J. Mackerle: 2D and 3D finite element meshing and remeshing: A bibliography (1990–2001), Engrg. Computations (Swansea) 18 (2001), 1108–1197.

[Q937] S. P. Mao, S. Nicaise, and Z. C. Shi: On the interpolation error estimates for Q_1 quadrilateral elements, SIAM J. Numer. Anal. 47 (2008/2009) 1421–1444. 7 (2010), 639–655.

[Q938] S. P. Mao, S. Nicaise, and Z. C. Shi: Error estimates of Morley triangular element satisfying the maximum angle condition, Internat. J. Numer. Anal. Model. 7 (2010), 639–655.

[Q939] S. P. Mao and Z. C. Shi: Nonconforming rotated $Q(1)$ element on non-tensor product anisotropic meshes, Science in China, Ser. A-Math. 49 (2006), 1363–1375

[Q940] S. P. Mao and Z. C. Shi: Explicit error estimates for mixed and nonconforming finite elements, J. Comput. Math. 27 (2009), 425–440

[Q941] M. Y. Matveev and A. C. Long: Numerical modelling for predicting failture in textile composites, Numer. Model. of Failture in Advanced Composite Materials, Elsevier, 2015, 435–455.

[Q942] M. Y. Matveev, A. C. Long, and I. A. Jones: Modelling of textile composites with fibre strength variability, Composites Sci. Technol. 105 (2014), 44–50.

[Q943] E. A. Melissaratos: Optimal size finite element meshes without obtuse and small angles, Preprint RUU-CS-92-39, Dept. Comput. Sci., Utrecht Univ., 1992, 1–45.

[Q944] Z. Milka: Řešení stacionární úlohy vedení tepla s nelineární Newtonovou okrajovou podmínkou metodou konečných prvků (kandidátská disertační práce), MÚ ČSAV, Praha, 1992, 1–49.

[Q945] N. F. Morrison and J. M. Rallison: Transient 3D flow of polymer solutions: A Lagrangian computational method, J. Non-Newtonian Fluid Mech. 165 (2010), 1241–1257.

[Q946] S. Nicaise and E. Creuse: Isotropic and anisotropic a posteriori error estimation of mixed finite element method for second order operators in divergence form, Electronic Trans. Numer. Anal. 23 (2006), 38–62.

[Q947] C. Pflaum: Semi-unstructured grids. Computing 67 (2001), 141–166.

[Q948] C. Pflaum: The maximum angle condition of semi-unstructured grids. Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. Jyväskylä, Finland, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 226–239.

[Q949] M. D. Piggott, C. C. Pain, G. J. Gorman et al.: h, r, and hr adaptivity with applications in numerical ocean modelling, Ocean Modelling 10 (2005), 95–113.

[Q950] A. Plaza, M. A. Padrón, J. P. Suárez, and S. Falcón: The 8-tetrahedra longest-edge partition of right-type tetrahedra, Finite Elem. Anal. Des. 41 (2004), 253–265.

[Q951] A. Rand: Average interpolation under the maximum angle condition, SIAM J. Numer. Anal. 50 (2012), 2538–2559.

[Q952] J. R. Shewchuk: What is a good linear finite element? Interpolation, conditioning, anisotropy, and quality measures, Preprint Dept. of Eletrical Engrg. and Comput. Sci., Univ. of California at Berkeley, 2002, 1–66.

[Q953] J. Stańdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[Q954] C. Tapp: Anisotrope Gitter – Generierung und Verfeinerung, Den Naturwissenschaftlichen Fakultäten der Friedrich-Alexander-Universität Erlangen-Nürnberg zur Erlangung des Doktorgrades, 1999, 1–191.

[Q955] I. Tsukerman and A. Plaks: Refinement strategies and approximation errors for tetrahedral elements. IEEE Trans. Magnet. 35 (1999), 1342–1345.

[Q956] J. E. Vatne: Simplices rarely contain their circumcenter in high dimensions, Appl. Math. 62 (2017), 213–223.

[Q957] S. W. Walker: Tetrahedralization of isosurfaces with guaranteed-quality by edge rearrangement (tiger), SIAM J. Sci. Comput. 35 (2013), A294–A326.

[Q958] G. Wang, X. Zhang, Q. Su et al. A novel cortical thicknees estimation method based on volumetric Laplace-Beltrami operator and heat kernel, Medical Image Anal. 22 (2015), 1–20.

[Q959] R. Wentorf, R. Collar, M. S. Shephard, et al.: Automated modeling for complex woven mesostructures. Comput. Methods Appl. Mech. Engrg. 172 (1999), 273–291.

[Q960] P. D. Zavattieri, G. C. Buscaglia, and E. A. Dari: Finite element mesh optimization in three-dimensions, Latin Amer. Appl. Res. 26 (1996), 233–236.

[Q961] A. Ženíšek: Finite element approximations of the Hermite type on triangles and tetrahedrons, Proc. Conf. Finite Element Methods: Three-dimensional Problems, Jyäskyla, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 322–340.

[Q962] A. Ženíšek: Sobolev spaces and their applications in the finite element method. VUTIUM Brno, 2005.

[Q963] A. Ženíšek and J. Hoderová-Zlámalová: Semiregular Hermite tetrahedral finite elemets. Appl. Math. 46 (2001), 295–315.

[B12] **I. Hlaváček and M. Křížek**, *Dual finite element analysis of 3D-axisymmetric elliptic problems - Part I*, Numer. Methods Partial Differential Equations **9** (1993), 507–526.

Cited in:

[Q964] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q965] J. Mackerle: Error estimates and adaptive finite element methods: A bibliography (1990–2000), Engrg. Computations (Swansea) 18 (2001), 802–914.

[Q966] R. Mäkinen: On computer aided optimal shape design. Report no. 45, Univ. of Jyväskylä, Dept. of Math., 1989, 1–13.

[B13] **I. Hlaváček and M. Křížek**, *Dual finite element analysis of 3D-axisymmetric elliptic problems - Part II*, Numer. Methods Partial Differential Equations **9** (1993), 527–550
Cited in:.

[Q967] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q968] R. Mäkinen: On computer aided optimal shape design. Report no. 45, Univ. of Jyväskylä, Dept. of Math., 1989, 1–13.

[B14] **M. Feistauer, M. Křížek, and V. Sobotíková**, *An analysis of finite element variational crimes for a nonlinear elliptic problem of a nonmonotone type*, East-West J. Numer. Math. **1** (1993), 267–285.

Cited in:

[Q969] A. Abdulle and G. Vilmart: The effect of numerical integration in the finite element method for nonmonotone nonlinear elliptic problems with applications to numerical homogenization methods, C. R. Math. Acad. Sci. 349 (2011), 1041–1046.

[Q970] A. Abdulle and G. Vilmart: A priori error estimates for the finite element method with numerical quadrature for nonmonotone nonlinear elliptic problems, Numer. Math. 121 (2012), 397–431.

[Q971] A. Abdulle and G. Vilmart: Analysis of the finite element heterogenous multiscale method for quasilinear elliptic homogenization problems, Math. Comp. 83 (2014), 513–536.

[Q972] J. Felcman: Adaptive finite volume solution of compressible flow (Habil. Thesis, MFF UK, Prague), 1997.

[Q973] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q974] M. Lukáčová-Medvid'ová, H. Mizerová, B. She, and J. Stebel: Error analysis of finite element and finite volume methods for some viscoelastic fluids, J. Numer. Math. 24 (2016), 105–123.

[Q975] K. Nedaiasl and R. Dehbozorgi: Galerkin finite element method for nonlinear fractional differential equations. Numer. Algorithms 88 (2021), 113–141.

[Q976] P. Sváček: Finite element method for a problem with nonlinear boundary conditions, Ph.D. Thesis, Faculty of Mathematics and Physics, Prague, 2002, 1–106.

[Q977] P. Sváček and K. Najzar: Error estimates for the FE solution of problems with nonlinear Newton boundary conditions, submitted in 2003.

[B15] **I. Hlaváček and M. Křížek**, *On a nonpotential and nonmonotone second order elliptic problem with mixed boundary conditions*, Stability Appl. Anal. Contin. Media **3** (1993), 85–97.

Cited in:

[Q978] C. Bi and V. Ginting: A residual-type a posteriori error estimate of finite volume element method for a quasi-linear elliptic problem, Numer. Math. 114 (2009), 107–132.

[Q979] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q980] T. Zhang and S. Zhang: The gradient superconvergence of the finite volume method for a nonlinear elliptic problem of nonmonotone type, Appl. Math. 60 (2015), 573–596.

[B16] **M. Křížek, Z. Milka**, *On a nonconventional variational method for solving the problem of linear elasticity with Neumann or periodic boundary conditions*, Banach Center Publ. **29** (1994), 65–77.

Cited in:

[Q981] C.-J. Thore: Topology optimization of freely floating elastic continua using the inertia relief method, Comput. Methods Appl. Mech. Engrg. 361 (2020), 112733, 33 pp.

[B17] **M. Křížek and V. G. Litvinov**, *On the methods of penalty functions and Lagrange's multipliers in the abstract Neumann problem*, Z. Angew. Math. Mech. **74** (1994), 216–218.

Cited in:

[Q982] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95

[Q983] Y. I. Rubezhanskii: Optimal control of the bending of unattached heated spherical shells, Int. Appl. Mech. 32 (1996), 190–195.

[**B18**] **M. Křížek**, *Superconvergence phenomena in the finite element method*, Comput. Methods Appl. Mech. Engrg. **116** (1994), 157–163.

Cited in:

[Q984] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q985] J. Chen and D. Wang: Three-dimensional finite element superconvergent gradient recovery on Par6 patterns, Numer. Math. Theory Methods Appl. 3 (2010), 178–194.

[Q986] D. Giannacopoulos and S. McFee: An experimental study of superconvergence phenomena in finite element magnetics. IEEE Trans. Magnet. 33 (1997), 4137–4139.

[Q987] H. Gu and A. Zhou: Superconvergence of the mortar finite element approximation to a parabolic problem, Systems Sci. Math. Sci. 12 (1999), 350–356.

[Q988] H. Gu and A. Zhou: Multi-parameter finite elements and their applications to three-dimensional problems. Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 98–108.

[Q989] Y. Huang, H. Qin, and D. Wang: Centroidal Voronoi tessellation-based finite element superconveregnce, Internat. J. Numer. Methods Engrg. 76 (2008), 1819–1839.

[Q990] Y. Huang, H. Qin, D. Wang, and Q. Du: Convergent adaptive finite element method based on centroidal Voronoi tessellations and superconvergence, Commun. Comput. Phys. 10 (2011), 339–370.

[Q991] G. P. Liang and P. Luo: Error analysis and global superconvergences for the Signorini's problem with Lagrange multiplier methods. J. Comput. Math. (2002), 79–88.

[Q992] S. Liang, X. Ma, and A. Zhou: Finite volume method for eigenvalue problem, BIT 41 (2001), 345–363.

[Q993] Q. Lin: How the superconvergence theory reduces from thick to thin. Preprint Academia Sinica, 1993.

[Q994] Q. Lin: Error resolution of finite element method. Preprint Academia Sinica, 1994, 1–21.

[Q995] Q. Lin and N. N. Yan: The construction and analysis for efficient finite elements (Chinese), Hebei Univ. Publ. House, 1996.

[Q996] R. Lin: Natural superconvergence in two and three dimensional finite element methods, Dissertation, Wayne State Univ., Detroit, 2005, 1–240.

[Q997] P. Luo and G. P. Liang: Global superconvergence of the domain decomposition methods with nonmatching grids. J. Comput. Math. 19 (2001), 187–194.

[Q998] P. Luo and G. P. Liang: Error analysis and global superconvergence for the Signorini problem with Lagrange multiplier methods. J. Comput. Math. 20 (2002), 79–88.

[Q999] P. Luo and G. P. Liang: Domain decomposition methods with nonmathching grids for the unilateral problem. J. Comput. Math. 20 (2002), 197–206.

[Q1000] D. Omeragic and P. P. Silvester: Progress in differentiation of approximate data. IEEE Antennas Propag. 38 (1996), 25–30.

[Q1001] D. Omeragic and P. P. Silvester: Numerical differentiation in magnetic field postprocessing. Internat. J. Numer. Model. El. 9 (1996), 99–113.

[Q1002] D. Omeragic and P. P. Silvester: Differentiation of finite element solutions to non-linear problems, Internat. J. Numer. Model. - Electronic Networks Devices and Fields 13 (2000), 305–319.

[Q1003] C. Pflaum: Semi-unstructured grids. Computing 67 (2001), 141–166.

[Q1004] C. Pflaum and A. Zhou: Error analysis of the combination technique, Numer. Math. 84 (1999), 327–350.

[Q1005] M. Piller and E. Stalio: Development of a mixed control volume-finite element method for advection-diffusion equation with spectral convergence, Comput. & Fluids 40 (2011), 269–279.

[Q1006] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q1007] Y. Xu and A. Zhou: Fast Boolean approximation methods for solving integral equations in high dimensions, J. Integral Equations Appl. 16 (2004), 83–110.

[Q1008] P. Zeng: Composite element method for vibration analysis of structure, Part I: Principle and C^0 element (bar). J. Sound. Vib. 218 (1998), 619–658.

[Q1009] L. Zhang and L. K. Li: Superconvergent recoveries of Carey non-conforming element approximations, Comm. Numer. Methods Engrg. 13 (1997), 439–452.

[Q1010] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[**B19**] **I. Hlaváček, M. Křížek, and J. Malý**, *On Galerkin approximations of a quasilinear nonpotential elliptic problem of a nonmonotone type*, J. Math. Anal. Appl. **184** (1994), 168–189.

Cited in:

[Q1011] A. Abdulle and G. Vilmart: The effect of numerical integration in the finite element method for nonmonotone nonlinear elliptic problems with applications to numerical homogenization methods, C. R. Math. Acad. Sci. 349 (2011), 1041–1046.

[Q1012] A. Abdulle and G. Vilmart: A priori error estimates for the finite element method with numerical quadrature for nonmonotone nonlinear elliptic problems, Numer. Math. 121 (2012), 397–431.

[Q1013] T. Aryeni, Q. Deng, and V. Ginting: On the application of stable generalized finite element method for quasilinear elliptic two-point BVP, J. Sci. Comput. 90 (2022), no. 1, Paper No. 33, 38 pp.

[Q1014] C. Bi, C. Wang, Cheng, and Y. Lin: Two-grid finite element method and its a posteriori error estimates for a nonmonotone quasilinear elliptic problem under minimal regularity of data, Comput. Math. Appl. 76 (2018), 98–112.

[Q1015] C. Bi and V. Ginting: A residual-type a posteriori error estimate of finite volume element method for a quasi-linear elliptic problem, Numer. Math. 114 (2009), 107–132.

[Q1016] E. Casas and V. Dhamo: Error estimates for the numerical approximation of a quasilinear Neumann problem under minimal regularity of data, Numer. Math. 117 (2011), 115–145.

[Q1017] E. Casas and V. Dhamo: Error estimates for the numerical approximation of Neumann control problem governed by a class of quasilinear elliptic equations, Comput. Optim. Appl. 52 (2012), 719–756.

[Q1018] E. Casas and V. Dhamo: Optimality conditions for a class of optimal boundary control problems with quasilinear elliptic equations, Control and Cybernetics 40 (2011), 457–490.

[Q1019] E. Casas and F. Tröltzsch: First- and second-order optimality conditions for a class of optimal control problems with quasilinear elliptic equations, SIAM J. Control Optim. 48 (2009), 688–718.

[Q1020] E. Casas and F. Tröltzsch: Numerical analysis of some optimal control problems governed by a class of quasilinear elliptic equations, ESAIM Control Optim. Cal. Var. 17 (2011), 771–800.

[Q1021] C. Chen, Y. Chen, and X. Zhao: A posteriori error estimates of two-grid finite volume element methods for nonlinear elliptic problems, Comput. Math. Appl. 75 (2018), 1756–1766.

[Q1022] J. Chleboun: Application of the reliable solution concept to a temperature distribution problem. Proc. of the Workshop on Functional Anal. and its Applications, Německá, 1997, 6–8.

[Q1023] J. Chleboun: Numerické řešení problému rozložení teploty v tělese s nejistými koeficienty tepelné vodivosti, Programy a algoritmy numerické matematiky, Kořenov, MÚ AV ČR, Praha, 1998, 59–64.

[Q1024] J. Chleboun: Reliable solution for 1D quasilinear elliptic equation with uncertain coefficients. J. Math. Anal. Appl. 234 (1999), 514–528.

[Q1025] J. Chleboun: On a reliable solution of a quasilinear elliptic equation with uncertain coefficients: sensitivity analysis and numerical examples. Nonlinear Anal. 44 (2001), 375–388.

[Q1026] J. Chleboun: The worst scenario method: A red thread running through various approaches to problems with uncertain input data, Numer. Math. and Advanced Appl. (eds. K. Kunish, G. Of., O. Steinbach), Prof. Conf. ENUMATH 2007, Springer-Verlag, 2008, 1–13.

[Q1027] M. Dala Riva and G. Mishuris: Existence results for a nonlinear transmission problem. J. Math. Appl. Anal. 430 (2015), 718–741.

[Q1028] Y. Du, Y. Li, and Z. Sheng: Quadratic finite volume method for a nonlinear elliptic problem, Adv. Appl. Math. Mech. 11 (2019), 838–869.

[Q1029] I. Faragó and J. Karátson: Numerical solution of nonlinear elliptic problems via preconditioning operators: Theory and applications. Nova Science Publisher, New York, 2002.

[Q1030] M. Feistauer: The effect of numerical integration and approximation of the boundary in the finite element method for nonlinear problems. Proc. of the Xth Summer School: Software and Algorithms of Numerical Mathematics (ed. I. Marek), Cheb, 1993, 23-36.

[Q1031] M. Feistauer: Finite element variational crimes in the solution of nonlinear stationary problems. In: Problems and Methods in Mathematical Physics, Teubner-Texte zur Mathematik, Band 134, Leipzig, 1994, 33–42.

[Q1032] T. Gudi, G. Mallik, and T. Pramanick: A hybrid high-order method for quasilinear elliptic problems of nonmonotone type, SIAM J. Numer. Anal. 60 (2022), 2318–2344.

[Q1033] L. Guo and C. Bi: Adaptive finite element method for nonmonotone quasi-linear elliptic problems, Comput. Math. Appl. 93 (2021), 94–105.

[Q1034] L. Guo and C. Bi: Convergence and quasi-optimality of an adaptive finite element method for nonmonotone quasi-linear elliptic problems on L^2 errors, Comput. Math. Appl. 139 (2023), 38–56.

[Q1035] L. Guo, Z. Huang, and C. Wang: A posteriori error estimates of edge residual type of finite element method for nonmonotone quasi-linear elliptic problems, Numer. Methods Partial Differential Equations 30 (2014), 813–837.

[Q1036] L. Guo, Q. Sheng, C. Wang, and Z. Huang: A modified weak Galerkin finite element method for nonmonotone quasilinear elliptic problems, J. Comput. Appl. Math. 406 (2022), Paper No. 113928, 19 pp.

[Q1037] H. D. Han, Z. Y. Huang, and D. S. Yin: Exact artificial boundary conditions for quasilinear elliptic equations in unbounded domains. Commun. Math. Sci. 6 (2008), 71–83.

[Q1038] P. Harasim: On the worst scenario method: a modified convergence theorem and its application to an uncertain differential equation. Appl. Math. 53 (2008), 583–598.

[Q1039] P. Harasim: On the worst scenario method: Application to a quasilinear elliptic 2D-problem with uncertain coefficients, Appl. Math. 56 (2011), 459–480.

[Q1040] P. Harasim: On the worst scenario method and its application to uncertain differential equations. Ph.D. Thesis, Inst. of Math., Silesian University, Opava, 2009.

[Q1041] M. Klejchová: The discrete maximum principle in the first order finite element method, Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2010, 1–59.

[Q1042] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q1043] M. Laitinen: Asymptotic analysis of conductive-radiative heat transfer, Asymptot. Anal. 29 (2002), 323–342.

[Q1044] M. Laitinen: Mathematical modelling of conductive-radiative heat transfer. Jyväskylä Studies in Computing 6 (2000).

[Q1045] B. Liu and Q. Du: A nonoverlapping domain decomposition method for an exterior anisotropic quasilinear elliptic problem in elongated domains, Math. Problems Engrg. 2013 (2013), Article number 828615.

[Q1046] B. Liu and Q. Du: The coupling of NBEM and FEM for quasilinear problems in a bounded or unbounded domain with a concave angle, J. Comput. Math. 31 (2013), 308–325.

[Q1047] B. Liu and Q. Du: Dirichlet-Neumann alternating algorithm for an exterior anisotropic quasilinear elliptic problem, Appl. Math. 59 (2014), 285–301.

[Q1048] J. Malík: Generalized G-convergence for quasilinear elliptic differential operators, Nonlinear Anal., Theory, Methods and Appl. 68 (2008), 304–314.

[Q1049] J. Mlýnek: Matematické modely vedení tepla v elektrických strojích. Habilitační práce, Tech. Univ. Liberec, 2007.

[Q1050] K. Nedaiasl and R. Dehbozorgi: Galerkin finite element method for nonlinear fractional differential equations, Numer. Algorithms 88 (2021), 113–141.

[Q1051] S. Pollock and Y. Zhu: Uniqueness of discrete solutions of nonmonotone PDEs without a globally fine mesh condition. Numer. Math. 139 (2018), 845–865.

[Q1052] S. Pollock and Y. Zhu: A matrix analysis approach to discrete comparison principles for nonmonotone PDE, Numer. Algorithms 83 (2020), 1007–1027.

[Q1053] S. Pollock and Y. Zhu: Discrete comparison principles for quasilinear elliptic PDE, Appl. Numer. Math. 156 (2020), 106–124.

[Q1054] M. Práger: Numerical implementation of the factorization method for a nonlinear two-point problem. In: Numerické metódy a ich aplikácie '95, Colloquium devoted to 80th birthday of A. Huťa, Bratislava, JSMF, 1995, 59–63.

[Q1055] V. Sobotíková: Řešení nelineárních eliptických úloh metodou konečných prvků (kandidátská disertační práce), MFF UK, Praha, 1993, 1–116.

[Q1056] Y. Sun and P. Sun: Finite element approximation analysis for a steady state two-phase transport model of proton exchange membrane fuel cell, J. Comput. Appl. Math. 270 (2014), 198–210.

[Q1057] X. C. Tai: Parallel function and space decomposition methods with application to optimization, splitting and domain decomposition methods, Technical Report No. 231, Tech. Univ. Graz, 1992, 1–93.

[Q1058] T. Vejchodský: Fully discrete error estimation with the method of lines for a nonlinear parabolic equation, Appl. Math. 48 (2003), 129–151.

[Q1059] T. Vejchodský: A posteriori error estimates for a nonlinear parabolic problem, Proc. Conf. WDS, Faculty of Mathematics and Physics, Prague, 2001, 1–5.

[Q1060] T. Vejchodský: Comparison principle for a nonlinear parabolic problem of a nonmonotone type, Appl. Math. (Warsaw) 29 (2002), 65–73.

[Q1061] T. Vejchodský: On the nonmonotony of nonlinear operators in divergence form, Adv. Math. Sci. Appl. 14 (2004), 25–33.

[Q1062] C. H. Yao: Finite element approximation for TV regularization, Internat. J. Numer. Anal. Model. 5 (2008), 516–526.

[Q1063] T. Zhang and S. Zhang: The gradient superconvergence of the finite volume method for a nonlinear elliptic problem of nonmonotone type, Appl. Math. 60 (2015), 573–596.

[Q1064] X. Zhang: Solvability of non-linear parabolic boundary value problem with equivalued surface, Math. Methods Appl. Sci. 22 (1999), 259–265.

[Q1065] X. Zhang and F. Q. Li: Existence, uniqueness and limit behavior of solutuions to a nonlinear boundary-value problem with equivalued surface. Nonlinear Anal. Theory Methods Appl. 34 (1998), 525–536.

[B20] **M. Křížek and J. Mlýnek**, *On the preconditioned biconjugate gradients for solving linear complex equations arising from finite elements*, Banach Center Publ. **29** (1994), 195–205.

Cited in:

[Q1066] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[Q1067] J. Nedoma: Numerical modelling in applied geodynamics. John Wiley & Sons, Chichester, New York, 1998.

[Q1068] J. Segethová: Incomplete block factorizations applied to the biconjugate gradient method. In: Proc. Prague Math. Conf., ICARIS, Prague, 1996, 301–306.

[**B21**] **M. Křížek and Q. Lin**, *On diagonal dominancy of stiffness matrices in 3D*, East-West J. Numer. Math. **3** (1995), 59–69.

Cited in:

[Q1069] M. Ackerknecht: Discrete maximum principle for the finite element method for elliptic partial differential equations, Master Thesis, Inst. of Math., Univ. of Zurich, 2008, 1–93.

[Q1070] J. Barret and K. Deckelnick: Existence and approximation of a nonlinear degenerate parabolic system modeling acid-mediated tumour invasion, Interfaces Free Bound. 14 (2012), 343–363.

[Q1071] S. Bartels: Stability and convergence of finite element approximation schemes for harmonic maps, SIAM J. Numer. Anal. 43 (2005), 220–238.

[Q1072] W. M. Boon, N. Balbarini, P. J. Binning, and J. M. Nordbotten: Efficient water table evolution discretization using domain transformation, Comput. Geosci. 21 (2017), 3–11.

[Q1073] S. Bauer, D. Drzisga, M. Mohr, U. Rüde, C. Waluga, and B. Wohlmuth, A stencil scaling approach for accelerating matrix-free finite element implementations, SIAM J. Sci. Comput. 40 (2018), C748–C778.

[Q1074] J. Brandts: From binary cube triangulations to acute binary simplices, Proc. Conf. Applications of Mathematics 2012 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 31–42.

[Q1075] O. Davydov: Discrete maximum principles in finite element analysis, Master Thesis, Dept. of Math. Inform. Technology, Uviv. of Jyväskylä, 2003.

[Q1076] K. Deckelnick and K. G. Siebert: $W^{1,\infty}$-convergence of the discrete free boundary for obstacle problems, IMA J. Numer. Anal. 20 (2000), 481–498.

[Q1077] L. Diening, C. Kreuzer, and S. Schwarzcher: Convex hull property and maximum principle for finite element minimisers of general convex functionals, Numer. Math. 124 (2013), 685–700. 242 (2013), 24–36.

[Q1078] V. Dolejší, M. Feistauer, J. Felcman, and A. Kliková: Error estimates for barycentric finite volumes combined with nonconforming finite elements applied to nonlinear convection-diffusion problems, Appl. Math. 47 (2002), 301–340.

[Q1079] I. Faragó: Numerical treatment of linear parabolic problems. MTA Doctor Thesis for the Hungarian Academy of Sciences, Eötvös Loránd University, Budapest, 2008.

[Q1080] I. Faragó and R. Horváth: Continuous and discrete parabolic operators and their qualitative properties, IMA J. Numer. Anal. 29 (2009), 606–631.

[Q1081] I. Faragó, R. Horváth, and S. Korotov: Discrete maximum principle for linear parabolic problems solved on hybrid meshes, Appl. Numer. Math. 53 (2005), 249–264.

[Q1082] I. Faragó, R. Horváth, and S. Korotov: Discrete maximum principle for FE solutions of nonstationary diffusion-reaction problems with mixed boundary conditions, Numer. Methods Partial Differential Equations 27 (2011), 702–720.

[Q1083] I. Faragó, J. Karátson, and S. Korotov: Discrete maximum principles for nonlinear parabolic PDE systems, IMA J. Numer. Anal. 32 (2012), 1541–1573.

[Q1084] I. Faragó, S. Korotov, and Á. Rádonyi: New local nonobtuse tetrahedral refinements of a cube, Preprint Univ. Jyväskylä, 2002, 1–9.

[Q1085] I. Faragó, S. Korotov, and T. Szabó: On modification of continuous and discrete maximum principles for reaction-diffusion problems, Adv. Appl. Math. Mech. 3 (2011), 109–120.

[Q1086] I. Faragó, S. Korotov, and T. Szabó: On continuous and discrete maximum principles for elliptic problems with the third boundary condition, Appl. Math. Comput. 219 (2013), 7215–7224.

[Q1087] I. Faragó, S. Korotov, and T. Szabó: On continuous and discrete maximum/minimum principles for reaction-diffusion problems with the Neumann boundary condition, Proc. Conf. Applications of Mathematics 2015 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 34–44.

[Q1088] M. Feistauer, J. Felcman, M. Lukáčová – Medvid'ová, and G. Warnecke: Error estimates of a combined finite volume – finite element method for nonlinear convection-diffusion problems. SIAM J. Numer. Anal. 36 (1999), 1528–1548.

[Q1089] J. Felcman: Adaptive finite volume solution of compressible flow (Habil. Thesis, MFF UK, Prague), 1997.

[Q1090] X. Feng, Y. Li, and Y. Zhang: Strong convergence of a fully discrete finite element method for a class of semilinear stochastic partial differential equations with multiplicative noise, J. Comput. Math. 39 (2021), 574–598.

[Q1091] H. Gao and W. Qiu: The pointwise stabilities of piecewise linear finite element method on non-obtuse tetrahedral meshes of nonconvex polyhedra, J. Sci. Comput. 87 (2021), Paper No. 53, 5 pp.

[Q1092] A. Hannukainen, S. Korotov, and T. Vejchodský: Discrete maximum principle for FE solution of the diffucion-reaction problem on prismatic meshes, J. Comput. Appl. Math. 226 (2009), 275–287.

[Q1093] A. Hannukainen, S. Korotov, and T. Vejchodský: On weakening conditions for discrete maximum principles for linear finite element schemes, Proc. 4th Internat. Conf. on Numer. Anal Appl., Lorenetz, 2008, LNCS, vol. 5434, 297–304.

[Q1094] W. Huang: Discrete maximum principle and a Delaunay-type mesh condition for linear finite element approximations of two-dimensional anisotropic diffusion problem, Numer. Math. 4 (2011), 319–334.

[Q1095] W. Huang: Sign-preserving of principal eigenfunctions in P1 finite element approximation of eigenvalue problems of second-order elliptic operators, J. Comput. Phys. 274 (2014), 230–244.

[Q1096] W. Huang and L. Kamenski: On the mesh nonsingularity of the moving mesh PDE method, Math. Comp. 87 (2018), 1887–1911.

[Q1097] W. Huang and Y. Wang: Discrete maximum principle for the weak Galerkin method for anisotropic diffusion problems, Commun. Comput. Phys. 18 (2015), 65–90.

[Q1098] J.-I. Itoh, T. Zamfirescu: Acute triangulations of the regular icosahedral surface. Discrete Comput. Geom. 31 (2004), 197–206.

[Q1099] J.-I. Itoh, T. Zamfirescu: Acute triangulations of the regular dodecahedral surface. European J. Combin. 28 (2007), 1072–1086.

[Q1100] J. Karátson: A discrete maximum principle for nonlinear elliptic systems with interface condtions, Proc. of the 6th Internat. Conf. on Large-Scale Sci. Comput., Sozopol, Bulgaria, 2009, (ed. by I. Lirkov et al.), LNCS 5910, Springer-Verlag, 2010, 580–587.

[Q1101] J. Karátson and S. Korotov: Continuous and discrete maximum principles for nonlinear elliptic problems. Proc. Internat. Conf. on Comput. and Math. Methods in Sci. and Engrg. (E. Brändas, J. Vigo-Aguiar eds.), Uppsala, 2004, 191–200.

[Q1102] J. Karátson and S. Korotov: Discrete maximum principles for finite element solutions of nonlinear elliptic problems with mixed boundary conditions, Numer. Math. 99 (2005), 669–698.

[Q1103] J. Karátson and S. Korotov: On the discrete maximum principles for finite element solutions of nonlinear elliptic problems. Proc. Conf. ECCOMAS 2004 (eds. P. Neittaanmäki et al), Univ. of Jyväskylä, 2004, 1–12.

[Q1104] J. Karátson and S. Korotov: Discrete maximum principles for finite element solutions of some mixed nonlinear elliptic problems using quadratures, J. Comput. Appl. Math. 192 (2006), 75–88.

[Q1105] J. Karátson and S. Korotov: Discrete maximum principles for FEM solutions of some nonlinear elliptic interface problems, Internat. J. Numer. Anal. Model. 6 (2009), 1–16.

[Q1106] J. Karátson and S. Korotov: An algebraic discrete maximum principle in Hilbert space with applications to nonlinear cooperative elliptic systems, SIAM J. Numer. Anal. 47 (2009), 2518–2549.

[Q1107] J. Karátson and S. Korotov: Some discrete maximum principles arising for nonlinear elliptic finite element problems, Comput. Math. Anal. 70 (2015), 2732–2741.

[Q1108] A. Kliková: Finite volume–finite element solution of compressible flow, Ph.D. Thesis, Charles Univ., Prague, 2000, 1–188.

[Q1109] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q1110] S. Korotov, J. Staǹdo: Yellow-red and nonobtuse refinements of planar triangulations, Math. Notes, Miskolc 3 (2002), 39–46.

[Q1111] S. Korotov, J. Staǹdo: Quasi-red and quasi-yellow nonobtuse refinements of planar triangulations, Preprint Univ. of Jyväskylä, 2001, 1–8.

[Q1112] S. Korotov and J. Staǹdo: Nonstandard nonobtuse refinements of planar triangulations, Proc. Conf. Finite Element Methods: Fifty Years of Conjugate Gradients, Univ. of. Jyväskylä, 2002, 101–112.

[Q1113] X. Li: Anisotropic mesh adaptation for the finite element solution of anisotropic diffusion problems, Thesis, Univ. of Kansas, 2011, pp. viii + 139.

[Q1114] X. Li and W. Huang: An anisotropic mesh adaptation method for the finite element solution of heterogeneous anisotropic diffusion problems, J. Comput. Phys. 229 (2010), 8072–8094.

[Q1115] X. Li and W. Huang: Anisotropic mesh adaptation for 3D anisotropic diffusion problems with application to fractured reservoir simulation, Numer. Math. Theory Methods Appl. 10 (2017), 913–940.

[Q1116] X. Li, D. Svyatskiy, and M. Shashkov: Mesh adaptation and discrete maximum principle for 2D anisotropic diffusion problems, preprint, 2011, 1–14.

[Q1117] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[Q1118] C. Lu, W. Huang, and J. Qiu: Maximum principle in linear finite element approximations of anisotropic diffusion-convection-reaction problem, Numer. Math. 127 (2014), 515–537.

[Q1119] C. Lu, W. Huang, and E. S. Van Vleck: The cutoff method for numerical computation of nonnegative solutions of parabolic PDEs with application to anisotropic diffusion and Lubrication-type equations, J. Comput. Phys. 242 (2013), 24–36.

[Q1120] E. Maisse and J. Pousin: Finite element approximation of mass transfer in porous medium with non equilibrium phase change, J. Numer. Math. 12 (2004), 207–231.

[Q1121] A. Plaza, M. A. Padrón, J. P. Suárez, and S. Falcón: The 8-tetrahedra longest-edge partition of right-type tetrahedra, Finite Elem. Anal. Des. 41 (2004), 253–265.

[Q1122] J. Staǹdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[Q1123] T. Tiihonen: Finite element approximation of nonlocal heat radiation problems, Math. Models and Methods in Appl. Sci. 8 (1998), 1071–1089.

[Q1124] E. VanderZee, A. N. Hirani, D. Guoy, V. Zharnitsky, and E. A. Ramos: Geometric and combinatorial properties of well-centered triangulations in three and higher dimensions, Comput. Geom. 46 (2013), 700–724.

[Q1125] T. Vejchodský: Finite element approximation of a nonlinear parabolic heat conduction problem and a posteriori error estimators, Ph.D. Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2003.

[Q1126] T. Vejchodský: The discrete maximum principle for Galerkin solutions of elliptic problems, Cent. Eur. J. Math. 10 (2012), 25–43.

[Q1127] J.-P. Wang and R. Zhang: Maximum principles for $P1$-conforming finite element approximation of quasi-linear second order elliptic equations, SIAM J. Numer. Anal. 50 (2012), 626–642.

[Q1128] L. Yuan: Acute triangulations, Ph.D. Thesis, Dortmund Univ., 2006, 1–79.

[Q1129] T. Zamfirescu: Acute triangulations: a short survey. Proc. of the Sixth Nat. Conf. of S.S.M.R, Sibiu, Romania, 2002, 9–17.

[B23] **M. Křížek**, *Numerical experience with the three-body problem*, J. Comput. Appl. Math. **63** (1995), 403–409.

Cited in:

[Q1130] Z. S. Kuo: Asymptotic solutions of the restricted three-body problem by use of perturbation methods, Trans. Japan Soc. for Aeronautical and Space Sci. 45 (2002), 162–169.

[Q1131] J. Němec: Numerical solution of the three-body problem (in Czech), Mgr. Thesis, MFF UK, Prague, 1996, 1–68.

[Q1132] J. Němec: Lagrangeovy librační body. Rozhledy mat.-fyz. 76 (1999), 12–18.

[Q1133] J. Němec: An alternative proof of Painlevé's theorem. Appl. Math. 45 (2000), 291–299.

[B24] **I. Hlaváček and M. Křížek**, *Optimal interior and local error estimates of a recovered gradient of linear elements on nonuniform triangulations*, J. Comput. Math. **14** (1996), 345–362.

Cited in:

[Q1134] J. Chleboun: An application of the averaged gradient technique, In Programs and Algorithms of Numer. Math. 14, Inst. of Math., Prague, 2008, 65–70.

[Q1135] T. L. Horváth and F. Izsák: Implicit a posteriori error estimation using path recovery technique, Cent. Eur. J. Math. 10 (2012), 55–72.

[Q1136] J. Mackerle: Error estimates and adaptive finite element methods. A bibliography (1900–2000), Engrg. Comput. 18 (2001), 802–914.

[Q1137] M. Picasso, F. Alauzet, H. Borouchaki, and P.-L. George: A numerical study of some Hessian recovery techniques on isotropic and anisotropic meshes, SIAM J. Sci. Comput. 33 (2011), 1058–1076.

[B25] **M. Křížek and L. Liu**, *On a comparison principle for a quasilinear elliptic boundary value problem of a nonmonotone type*, Appl. Math. (Warsaw) **24** (1996), 97–107.

Cited in:

[Q1138] A. A. Amosov: Stationary nonlinear nonlocal problem of radiative-conductive heat transfer in a system of opaque bodies with properties depending on the radiation frequency, J. Math. Sci. 164 (2011), 309–344.

[Q1139] A. A. Amosov: A non-stationary problem of complex heat transfer in a system of semitransparent bodies with diffuse radiation reflection and refraction boundary conditions (Russian), Sovrem. Mat. Fundam. Napravl. 59 (2016), 5–34; translation in J. Math. Sci. (N.Y.) 233 (2018), 777–806.

[Q1140] A. A. Amosov: Unique solvability of a nonstationary problem of radiative-conductive heat exchange in a system of semitransparent bodies, Russ. J. Math. Phys. 23 (2016), 309–334.

[Q1141] A. Amosov: Unique solvability of a stationary radiative-conductive heat transfer problem in a system consisting of an absolutely black body and several semitransparent bodies. Math. Methods Appl. Sci. 44 (2021), no. 13, 10703–10733.

[Q1142] A. Amosov: Unique solvability of a stationary radiative-conductive heat transfer problem in a semitransparent body with absolutely black inclusions. Z. Angew. Math. Phys. 72 (2021), no. 3, Paper No. 104, 30 pp.

[Q1143] A. Amosov: Nonstationary complex heat transfer problem in a system of grey bodies with semitransparent inclusions, J. Math. Sci. (N.Y.) 267 (2022), 289–318.

[Q1144] A. Amosov: Nonstationary radiative-conductive heat transfer problem in an absolutely black body with semitransparent inclusions, Math. Methods Appl. Sci. 46 (2023), 4237–4262.

[Q1145] A. A. Amosov and D. A. Maslov: Two stationary radiative-conductive heat transfer problems for a system of two-dimensional plates, J. Math. Sci. (N.Y.) 210 (2015), 557–570.

[Q1146] R. M. Dalla and G. Mishuris: Existence results for a nonlinear transmission problem, J. Math. Anal. Appl. 430 (2015), 718–741.

[Q1147] E.-P. Druet, O. Klein, J. Sprekels, F. Tröltzsch, and I. Yousept: Optimal control of three-dimensional state-constrained induction heating problems with nonlocal radiation effects, SIAM J. Control Optim. 49 (2011), 1707–1736.

[Q1148] J. Karátson and S. Korotov: Discrete maximum principles for finite element solutions of some mixed nonlinear elliptic problems using quadratures, J. Comput. Appl. Math. 192 (2006), 75–88.

[Q1149] M. Klejchová: The discrete maximum principle in the first order finite element method, Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2010, 1–59.

[Q1150] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q1151] M. Laitinen: Mathematical modelling of conductive-radiative heat transfer. Jyväskylä Studies in Computing 6 (2000).

[Q1152] M. Laitinen and T. Tiihonen: Conductive-radiative heat transfer in grey materials, Quart. Appl. Math. 59 (2001), 737–768.

[Q1153] T. Vejchodský: Comparison principle for a nonlinear parabolic problem of a nonmonotone type, Appl. Math. (Warsaw) 29 (2002), 65–73.

[Q1154] T. Vejchodský: On the nonmonotony of nonlinear operators in divergence form, Adv. Math. Sci. Appl. 14 (2004), 25–33.

[Q1155] T. Vejchodský: Finite element approximation of a nonlinear parabolic heat conduction problem and a posteriori error estimators, Ph.D. Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2003.

[Q1156] T. Vejchodský: The discrete maximum principle for Galerkin solutions of elliptic problems, Cent. Eur. J. Math. 10 (2012), 25–43.

[B26] **M. Křížek and T. Strouboulis**, *How to generate local refinements of unstructured tetrahedral meshes satisfying a regularity ball condition*, Numer. Methods Partial Differential Equations **13** (1997), 201–214.

Cited in:

[Q1157] J. Brandts: From binary cube triangulations to acute binary simplices, Proc. Conf. Applications of Mathematics 2012 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 31–42.

[Q1158] P. Burda: A posteriori error estimates for the Stokes flow in 2D and 3D domains. Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 34–44.

[Q1159] P. Burda, J. Novotný, and B. Sousedík: A posteriori error estimates applied to flow in a channel with corners. Math. Comput. Simulation 61 (2002), 375–383.

[Q1160] C. Carstensen, L. Demkowicz, and J. Gopalakrishnan: Breaking spaces and forms for the DPG method and applications including Maxwell equations, Comput. Math. Appl. 72 (2016), 494–522.

[Q1161] W.-M. He, X.-F. Guan, and J.-Z. Cui: The local superconvergence of the trilinear element for the three-dimensional Poisson problem, J. Math. Anal. Appl. 388 (2012), 863–872.

[Q1162] W.-M. He, R. Lin, Runchang, and Z. Zhang: Local ultraconvergence of linear and bilinear finite element method for second order elliptic problems, J. Comput. Appl. Math. 372 (2020), 112715, 19 pp.

[Q1163] W.-M. He, Y. Wang, and X.-F. Guan: Local ultraconvergence of quadratic rectangular element for the Poisson problem, Comput. Math. Appl., to appear in 2020, 1–18.

[Q1164] W.-M. He and R. Zhao: Local ultraconvergence of quadratic element. Calcolo 58 (2021), no. 3, Paper No. 33, 29 pp.

[Q1165] A. Khademi: Convergence on degenerating finite element meshes, PhD Thesis, Western Norway Univ. of Appl. Sci., Bergen, 2020.

[Q1166] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q1167] S. Korotov, Á Plaza, and J. P. Suárez: Longest-edge n-section algorithms: Properties and open problems, J. Comput. Appl. Math. 293 (2016), 139–146.

[Q1168] S. Korotov, Á Plaza, J. P. Suárez, and T. Moreno: On Zlámal minimum angle condition for the longest-edge n-section algorithm with $n \geq 4$, Proc. of the 12th European Conf. on Numer. Math. and Advanced Appl., ENUMATH 2017, Voss, Springer-Verlag, Berlin, Heidelberg, 2018.

[Q1169] S. Korotov and P. Turchyn: A posteriori error estimation of "quantities of interest" on tetrahedral meshes, Proc. Conf. ECCOMAS, 2004.

[Q1170] S. Korotov and J. E. Vatne: On regularity of tetrahedral meshes produced by some red-type refinements, to appear in Springer-Verlag, Berlin, 2020, 1–7.

[Q1171] X. Liu: Superconvergence of the high-degree FE method for second-degree elliptic problem with periodic boundary, Mediterr. J. Math. 18 (2021), no. 3, Paper No. 99, 13 pp.

[Q1172] J. Mackerle: 2D and 3D finite element meshing and remeshing: A bibliography (1990–2001), Engrg. Computations (Swansea) 18 (2001), 1108–1197.

[Q1173] C. Tapp: Anisotrope Gitter – Generierung und Verfeinerung, Den Naturwissenschaftlichen Fakultäten der Friedrich-Alexander-Universität Erlangen-Nürnberg zur Erlangung des Doktorgrades, 1999, 1–191.

[Q1174] M. Zítka: On some aspects of adaptive higher-order finite element method for three-dimensional elliptic problems, Ph.D. Thesis, Faculty of Math. and Phys., Charles Univ., Prague, 2008, 1–119.

[B27] **M. Křížek and J. Chleboun**, *Is any composite Fermat number divisible by the factor* $5h2^n + 1$*?*, Tatra Mt. Math. Publ. **11** (1997), 17–21.

Cited in:

[Q1175] K. R. Guy: Unsolved problems in number theory, the third edition, Springer, Berlin, 2004.

[B28] **M. Křížek and L. Liu**, *Finite element approximation of a nonlinear heat conduction problem in anisotropic media*, Comput. Methods Appl. Mech. Engrg. **157** (1998), 387–397.

Cited in:

[Q1176] L. Angermann and S. Wang: Multidimensional exponetially fitted simplicial finite elements for convection-diffusion equations with tensor-valued diffusion, Calcolo 42 (2005), 71–91.

[Q1177] N. Bilă and J. Niesen: A new class of symmetry reductions for parameter identification problems, J. Nonlinear Math. Phys. 16 (2009), 355–371.

[Q1178] M. Darwish and F. Moukalled: A compact procedure for discretization of the anisotropic diffusion operator, Numer. Heat Transfer B 55 (2009), 339–360.

[Q1179] S. Deng and Y. Hwang: Solving the temperature distribution field in nonlinear heat conduction problem using the Hopfield neutral network, Numer. Heat Transfer, Part B–Fundamentals 51 (2007), 375–389.

[Q1180] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q1181] R. Liska and M. Shashkov: Enforcing the discrete maximum principle for linear finite element solutions of elliptic problems, Commun. Comput. Phys. 3 (2008), 852–877.

[Q1182] J. Mackerle: Heat transfer analysis by finite element and boundary element methods. A bibliography (1997–1998). Finite Elem. Anal. Des. 34 (2000), 309–320.

[Q1183] G. Manzini, M. Putti: Mesh locking effects in the finite volume solution of 2-D anisotropic diffusion problems, J. Comput. Phys. 220 (2007), 751–771.

[Q1184] M. Mierzwiczak, W. Chen, and Z.-J. Fu: The singular boundary method for steady-state nonlinear heat conduction problem with temperature-dependent thermal conductivity, Internat. J. Heat Mass Transfer 91 (2015), 205–217.

[Q1185] K. B. Nakshatrala and A. J. Valocchi: Non-negative mixed finite element formulations for a tensorial diffusion equation, J. Comput. Phys. 228 (2009), 6726–6752.

[Q1186] K. D. Pennell, P. P. E. Carriere, C. Gallo, et al.: Groundwater quality. Water Environ. Res. 71 (1999), 973–1053.

[Q1187] B. V. Protsyuk and O. P. Horun: Quasistatic thermoelastic state of a heat-sensitive three-component layer under the conditions of convective-radiative heat exchange. J. Math. Sci. (N.Y.) 223 (2017), 117–131.

[Q1188] A. Salama, S. Sun, and M. F. El Amin: A multipoint flux approximation of the steady-state heat conduction equation in anisotropic media, J. Heat Transfer 135 (2013), 041302.

[Q1189] L. Stals: Comparison of non-linear solvers for the solution of radiation transport equations, Electronic Trans. Numer. Anal. 15 (2003), 78–93.

[Q1190] H. Wang, M.-Y. Han, F. Yuan, and Z.-R. Xiao: Fundamental-solution-based hybrid element model for heat conduction problems with temperature-dependent material properties, Math. Problems Engrg. 2013 (2013), 695457.

[**B29**] **L. Liu and M. Křížek**, *Finite element analysis of a radiation heat transfer problem*, J. Comput. Math. **16** (1998), 327–336.

Cited in:

[Q1191] M. Feistauer, K. Najzar, and V. Sobotíková: Error estimates for the finite element solution of elliptic problems with nonlinear Newton boundary conditions, Numer. Funct. Anal. Optim. 20 (1999), 835–851.

[Q1192] M. Feistauer, K. Najzar, and V. Sobotíková: On the finite element analysis of problems with nonlinear Newton boundary conditions in nonpolygonal domains, Appl. Math. 46 (2001), 353–382.

[Q1193] M. Feistauer, K. Najzar, and K. Švadlenka: On a parabolic problem with nonlinear Newton boundary condition, Comment. Math. Univ. Carolin. 43 (2002), 429–455.

[Q1194] P. Knobloch: Numerical modelling of heat phemonena induced by heat radiation, PhD. Thesis, Tech. Univ. Liberec, 2019.

[Q1195] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q1196] J. Mackerle: Heat transfer analysis by finite element and boundary element methods. A bibliography (1997–1998). Finite Elem. Anal. Des. 34 (2000), 309–320.

[Q1197] L. Simon, G. Stoyan: On the existence of a generalized solution to a three-dimensional elliptic equation with radiation boundary condition. Appl. Math. 46 (2001), 241–250.

[Q1198] V. Sobotíková: Error estimates for nonlinear boundary value problems solved by nonconforming finite element methods, Habilitation Thesis, Faculty of Electrical Engineering, Czech Technical University, Prague, 2010.

[Q1199] P. Sváček: Finite element method for a problem with nonlinear boundary conditions, Ph.D. Thesis, Faculty of Mathematics and Physics, Prague, 2002, 1–106.

[Q1200] P. Sváček and K. Najzar: Error estimates for the FE solution of problems with nonlinear Newton boundary conditions, submitted in 2003.

[**B30**] **M. Křížek, L. Liu, and P. Neittaanmäki**, *Postprocessing of Gauss-Seidel iterations*, Numer. Linear Algebra Appl. **6** (1999), 147–156.

Cited in:

[Q1201] J. H. Brandts: Acceleration of Krylov subspaces methods by preprocessing of the initial residual. Preprint Univ. of New South Wales, Sydney, 1998, 1–30.

[Q1202] J. H. Brandts: Deliberate ill-conditioning of Krylov matrices. Preprint no. 1181, Mathematical Institute, Utrecht Univ., 2001, 1–29.

[Q1203] T. M. Ng, B. Farhang-Boroujeny, and H. K. Garg: An accelerated Gauss-Seidel method for inverse modeling, Signal Processing 83 (2003), 517–529.

[**B32**] **M. Křížek**, *Numerical experience with the finite speed of gravitational interaction*, Math. Comput. Simulation **50** (1999), 237–245.

Cited in:

[Q1204] T. Caraballo and G. Kiss: Atractors for differential equations with multiple variable delays, Discrete Contin. Dyn. Syst. Ser. A 33 (2013), 1365–1374.

[Q1205] J. Němec: An alternative proof of Painlevé's theorem. Appl. Math. 45 (2000), 291–299.

[Q1206] M. Wierer: Obyčejné diferenciální rovnice se zpožděním, Mgr. Thesis, MFF UK Praha, 2000, 1–69.

[Q1207] T. Yuan: Gravitational fields and gravitational Waves, Physics Essays 35 (2022), 208–219.

[**B33**] **S. Korotov and M. Křížek**, *Finite element analysis of variational crimes for a quasilinear elliptic problem in 3D*, Numer. Math. **84** (2000), 549–576.

Cited in:

[Q1208] A. Abdulle and G. Vilmart: A priori error estimates for the finite element method with numerical quadrature for nonmonotone nonlinear elliptic problems, Numer. Math. 121 (2012), 397–431.

[Q1209] L. T. Dechevsky: Near-degenerate finite element and lacunary multiresolution methods of approximation, Saint-Malo Proceedings (ed. by L. L. Schumaker), Vanderbit Univ. Press, 2000, 1–19.

[Q1210] L. T. Dechevski and W. L. Wendland: On the Bramble-Hilbert lemma, II: Model applications to quasi-interpolation and linear problems. Internat. J. Pure Appl. Math. 33 (2006), 465–501.

[Q1211] L. T. Dechevsky and W. L. Wendland: On the Bramble-Hilbert lemma, II. Preprint 2007/002, Univ. Stuttgart, Berichte aus dem Inst. für Angewandte Anal. und Numer. Simulation, 2007, 1–67.

[Q1212] R. A. Dello and A. E. Alonso: Mixed finite element analysis of eigenvalue problems on curved domains, Comput. Methods Appl. Math. 14 (2014), no. 1, 1–33.

[Q1213] I. Faragó and J. Karátson: Numerical solution of nonlinear elliptic problems via preconditioning operators: Theory and applications. Nova Science Publisher, New York, 2003.

[Q1214] H. D. Han, Z. Y. Huang, and D. S. Yin: Exact artificial boundary conditions for quasilinear elliptic equations in unbounded domains. Commun. Math. Sci. 6 (2008), 71–83.

[Q1215] M. Kallel, M. Moakher, and A. Theljani: The Cauchy problem for a nonlinear elliptic equation: Nash-game approach and application to image inpainting, Inverse Probl. Imaging 9 (2015), 853–874.

[Q1216] P. Knobloch: Variational crimes in a finite element discretization of 3D Stokes equations with nonstandard boundary conditions. East-West J. Numer. Math. 7 (1999), 133–158.

[Q1217] T. V. Kolev: Least-squares methods for computational electromagnetics, Ph.D. Thesis, Texas A & M University, 2004.

[Q1218] C. Pflaum: Semi-unstructured grids. Computing 67 (2001), 141–166.

[Q1219] A. D. Russo and A. E. Alonso: Mixed finite element analysis of eigenvalue problems on curved domains, Comput. Meth. Appl. Math. 14 (2014), 1–33.

[Q1220] C. H. Yao: Finite element approximation for TV regularization, Internat. J. Numer. Anal. Model. 5 (2008), 516–526.

[B34] **M. Křížek and J. Pradlová**, *Nonobtuse tetrahedral partitions*, Numer. Methods Partial Differential Equations **16** (2000), 327–334.

Cited in:

[Q1221] M. Dymitrowska, M. Bourgeois, and G. Mathieu: High performance FVFE multidomain numerical method to perform radionuclides transport calculations, Joint Internat. Topical Meeting on Math. Comput. and Supercomput. in Nuclear Appl. M and C + SNA 2007.

[Q1222] R. HoĹek: Existence of well-centered simplicial face-to-face tiling of five-dimensional space. Discrete Comput. Geom. 66 (2021), 1168–1189.

[Q1223] H. J. Kim and C. C. Swan: Voxel-based meshing and unit-cell analysis of textile composites Internat. J. Numer. Methods Engrg. 56 (2003), 977–1006.

[Q1224] H. J. Kim and C. C. Swan: Algorithm for automated meshing and unit cell analysis of periodic composites with hierarchical tri-quadratic tetrahedral elements, Internat. J. Numer. Methods Engrg. 58 (2003), 1683–1711.

[Q1225] J. Mackerle: 2D and 3D finite element meshing and remeshing: A bibliography (1990–2001), Engrg. Computations (Swansea) 18 (2001), 1108–1197.

[B35] **S. Korotov, M. Křížek, and P. Neittaanmäki**, *Weakened acute type condition for tetrahedral triangulations and the discrete maximum principle*, Math. Comp. **70** (2001), 107–119.

Cited in:

[Q1226] M. Ackerknecht: Discrete maximum principle for the finite element method for elliptic partial differential equations, Master Thesis, Inst. of Math., Univ. of Zurich, 2008, 1–93.

[Q1227] R. Araiza: The use of interval-related knowledge in processing 2-D and 3-D data, with an emphasis on applications to geosciences and biosciences, Ph.D. Thesis, Dept. of Comput. Sci., Univ. of Texas at El Paso, 2007, 1–157.

[Q1228] M. Artina, M. Fornasier, S. Micheletti, and S. Perotto: Anisotropic mesh adaptation for crack detection in brittle materials, SIAM J. Sci. Comput. 37 (2015), B633–B659.

[Q1229] S. Bauer, D. Drzisga, M. Mohr, U. Rüde, C. Waluga, and B. Wohlmuth: A stencil scaling approach for accelerating matrix-free finite element implementations, SIAM J. Sci. Comput. 40 (2018), C748–C778.

[Q1230] E. Bertolazzi and G. Manzini: A second-order maximum principle preserving finite volume method for steady convection-diffusion problems, SIAM J. Numer. Anal. 43 (2005), 2172–2199.

[Q1231] X. Blanc et al.: Arbitrary-order monotonic finite-volume schemes for 1D elliptic problems, Comput. Appl. Math. 42 (2023), Article nr. 195.

[Q1232] J. Brandts: From binary cube triangulations to acute binary simplices, Proc. Conf. Applications of Mathematics 2012 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 31–42.

[Q1233] O. Burdakov, I. Kapyrin, and Y. Vassilevski: Monotonicity for recovering and accuracy preserving optimization methods for postprocessing finite element solutions, J. Comput. Phys. 231 (2012), 3126–3142.

[Q1234] S. Burke, C. Ortner, and E. Süli: An adaptive finite element approximation of a variational model of brittle fracture, SIAM J. Numer. Anal. 48 (2010), 980–1012.

[Q1235] S. Burke, C. Ortner, and E. Süli: Adaptive finite element approximation of the Francfort-Marigo model of brittle fracture, preprint Univ. of Oxford, 2009, 1–14.

[Q1236] E. Burman and A. Ern: Nonlinear crosswind diffusion and discrete maximum principle for stabilized Galerkin approximations, Preprint 204, CERMINCS, France, 2001.

[Q1237] E. Burman and A. Ern: Nonlinear diffusion and discrete maximum principle for stabilized Galerkin approximations of the convection-diffusion-reaction equation, Comput. Methods Appl. Mech. Engrg. 191 (2002), 3833–3855.

[Q1238] E. Burman and A. Ern: Stabilized Galerkin approximation of convection-diffusion-reaction equations: Discrete maximum principle and convergence, Math. Comp. 74 (2003), 1637–1652.

[Q1239] E. Burman and A. Ern: Discrete maximum principle for Galerkin approximations of the Laplace operator on arbitrary meshes. C. R. Math. Acad. Sci. Paris 338 (2004), 641–646.

[Q1240] A. Caboussat: Analysis and numerical simulation of free surface flows, Ph.D. Thesis, École Polytechnique de Lausanne, Switzerland, 2003.

[Q1241] M. T. Cavalcante et al.: A multipoint flux approximation with a diamond stencil and a non-linear defect correction strategy for the numerical solution of steady state diffusion problems in heterogeneous and anisotropic media satisfying the discrete maximum principle, J. Sci. Comput. 93 (2022), Article no. 42, 15 pp.

[Q1242] E. E. Chukwuemeka and S. W. Walker: Accelerated gradient descent methods for the uniaxially constrained Landau-de Gennes model, Adv. Appl. Math. Mech. 14 (2022), 1–32.

[Q1243] A. Danilov and Y. Vassilevski: A monotone nonlinear finite volume method for diffusion equation on conformal polyhedral meshes, Russian J. Numer. Anal. Math. Model. (2009), 207–227.

[Q1244] O. Davydov: Discrete maximum principles in finite element analysis, Master Thesis, Dept. of Math. Inform. Technology, Uviv. of Jyväskylä, 2003.

[Q1245] A. E. Diegel and S. W. Walker: A finite element method for a phase field model of nematic liquid crystal droplets, Commun. Comput. Phys. 25 (2019), 155–188.

[Q1246] L. Diening, C. Kreuzer, and S. Schwarzacher: Convex hull property and maximum principle for finite element minimisers of general convex functionals, Numer. Math. 124 (2013), 685–700.

[Q1247] A. Drăgănescu, T. F. Dupont, L. R. Scott: Failure of the discrete maximum principle for an elliptic finite element problem, Math. Comp. 74 (2005), 1–23.

[Q1248] I. Faragó: Numerical treatment of linear parabolic problems. MTA Doctor Thesis for the Hungarian Academy of Sciences, Eötvös Loránd University, Budapest, 2008.

[Q1249] I. Faragó and R. Horváth: Discrete maximum principle and adequate discretizations of linear parabolic problems, SIAM J. Sci. Comp. 28 (2006), 2313–2336.

[Q1250] I. Faragó and R. Horváth: A review of reliable numerical models for three-dimensional linear parabolic problems, Internat. J. Numer. Methods Engrg. 70 (2007), 25–45.

[Q1251] I. Faragó and R. Horváth: Continuous and discrete parabolic operators and their qualitative properties, IMA J. Numer. Anal. 29 (2009), 606–631.

[Q1252] H. Gao and W. Qiu: The pointwise stabilities of piecewise linear finite element method on non-obtuse tetrahedral meshes of nonconvex polyhedra, J. Sci. Comput. 87 (2021), no. 2, Paper No. 53, 5 pp.

[Q1253] A. Genty and C. Le Potier: Maximum and minimum principles for radionuclide transport caclulations in geological radioactive waste repository: Comparison between a mixed hybrid finite element method and finite volume element discretization, Transport in Porous Media 88 (2011), 65–85.

[Q1254] V. Gyrya, K. Lipnikov et al.: M-adaptation in the mimetric finite difference method, Math. Mod. Meth. Appl. Sci. 24 (2014), 1621–1663.

[Q1255] A. Hellander and P. Lötstedt: Incomporating active transport of cellular cargo in stochastic mesoscopic models of living cells, Multiscale Mod. Simul. 8 (2010), 1691–1714.

[Q1256] R. Horváth: Sufficient conditions of the discrete maximum-minimum principle for parabolic problems on rectangular meshes, Comput. Math. Appl. 55 (2008), 2306–2317.

[Q1257] J.-I. Itoh and T. Zamfirescu: Acute triangulations of the regular icosahedral surface, Discrete Comput. Geom. 31 (2004), 197–206.

[Q1258] J.-I. Itoh and T. Zamfirescu: Acute triangulations of the regular dodecahedral surface, Europ. J. Combin. 28 (2007), 1072–1086.

[Q1259] A. Jüngel and A. Unterreiter: Discrete maximum and minimum principles for finite element approximations of non-monotone elliptic equations. Numer. Math. 99 (2005), 485–508.

[Q1260] I. Kapyrin, K. Niktin, K. Terekhov, and Y. Vassilevski: Nonlinear monotone FV schemes for radionuclide geomigration and multiphase flow models, Springer Proc. Math. and Stat. 78 (2014), 655–663.

[Q1261] J. Karátson: A discrete maximum principle for nonlinear elliptic systems with interface condtions, Proc. of the 6th Internat. Conf. on Large-Scale Sci. Comput., Sozopol, Bulgaria, 2009, (ed. by I. Lirkov et al.), LNCS 5910, Springer-Verlag, 2010, 580–587.

[Q1262] M. Klejchová: The discrete maximum principle in the first order finite element method, Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2010, 1–59.

[Q1263] A. Kolcun: Nonconformity problem in 3D grid decompositions, J. of WSCG 10 (2002), 249–253.

[Q1264] R. Kornhuber and Q. Zou: Efficient and reliable hierarchical error estimates for the discretization error of elliptic obstacle problem, Math. Comp. 80 (2010), 69–88.

[Q1265] X. Lai, Z. Sheng, and G. Yuan: Monotone finite volume scheme for three-dimensional equation on tetrahedral meshes, Comm. Comput. Phys. 21 (2017), 162–181.

[Q1266] D. Leykekhman and M. Pruitt: On the positivity of discrete harmonic functions and the discrete Harnack inequality for piecewise linear finite elements, Math. Comp. 86 (2017), 1127–1145.

[Q1267] D. Leykekhman and B. Li: Weak discrete maximum principle of finite element methods in convex polyhedra, Math. Comp. 90 (2021), 1–18.

[Q1268] X. Li, D. Svyatskiy, and M. Shashkov: Mesh adaptation and discrete maximum principle for 2D anisotropic diffusion problems, preprint, 2011, 1–14.

[Q1269] K. Liang, X. Lu, and J. Z. Yang: Finite element approximation to the extremal eigenvalue problem for inhomogeneous materials, Numer. Math. 130 (2014), 741–762.

[Q1270] K. Lipnikov, G. Manzini, and D. Svyatskiy: Analysis of the monotonicity conditions in the mimetic finite difference method for elliptic problems, J. Comput. Phys. 230 (2011), 2620–2642.

[Q1271] K. Lipnikov, M. Shashkov, D. Svyatskiy, and Yu. Vassilevski: Monotone finite volume schemes for diffusion equations on unstructured triangular and shape-regular polygonal meshes, J. Comput. Phys. 227 (2007), 492–512.

[Q1272] K. Lipnikov, D. Svyatskiy, and Yu. Vassilevski: Interpolation-free monotone finite volume method for diffusion equations on polygonal meshes, J. Comput. Phys. 228 (2009), 703–716.

[Q1273] K. Lipnikov, D. Svyatskiy, and Yu. Vassilevski: Monotone finite volume method for advection-diffusion equations on unstructured polygonal meshes, J. Comput. Phys. 229 (2010), 4017–4032.

[Q1274] K. Lipnikov, D. Svyatskiy, and Yu. Vassilevski: Minimal scencil finite volume scheme with the discrete maximum principle, Rus. J. Numer. Anal. Math. Model. 27 (2012), 369–385.

[Q1275] K. Lipnikov, D. Svyatskiy, and Yu. Vassilevski: Interpolation-free monotone finite volume method for diffusion equations on polygonal meshes, J. Comput. Phys. 228 (2009), 703–716.

[Q1276] K. Lipnikov, D. Svyatskiy, and Yu. Vassilevski: A monotone finite volume method for advection-diffusion equations on unstructured polygonal meshes, accepted by J. Comput. Phys. in 2009, 15 pp.

[Q1277] P. Lötstedt and L. Meinecke: Simulation of stochastic diffusion via first exit times, J. Comput. Phys. 300 (2015), 862–886.

[Q1278] J. Mackerle: 2D and 3D finite element meshing and remeshing, a bibliography (1990–2001), Engrg. Comput. 18 (2001), 1108–1197.

[Q1279] L. Meinecke, S. Engblom, A. Hellander, and P. Lötstedt: Analysis and design of jump coefficients in discrete stochastic diffusion models, SIAM J. Sci. Comput. 38 (2016), A55–A83.

[Q1280] M. J. Mlacnik and L. J. Durflovsky: Unstructured grid optimization for improved monotonicity of discrete solutions of elliptic equalities with highly anisotropic coefficients, preprint, 2005.

[Q1281] A. Morvant, E. Seal, and S. W. Walker: A coupled Ericksen/Allen-Cahn model for liquid crystal droplets. Comput. Math. Appl. 75 (2018), 4048–4065.

[Q1282] R. Muhanna, V. Kreinovich, P. Šolín, J. Chessa, R. Araiza, and G. Xiang: Interval finite element methods: new directions. Proc. of Reliable Engrg. Conf. (REC-2006), Georgia Tech., Savannah, 2006, 229–245.

[Q1283] H. Nagarajan and K. B. Nakshatrala: Enforcing non-negativity constrain and maximum principles for diffusion with decay on general computational grids, Internat. J. Numer. Methods Fluids 67 (2011), 820–847.

[Q1284] H. T. Nguyen, V. Kreinovich, B. Wu, G. Xiang: Computing statistics under interval and fuzzy uncertainty: Applications to computer science and engineering, Stud. Comput. Intelligence 392 (2012), 1-441.

[Q1285] C. Nie, S. Shu, and M. Liu: A novel monotone finite volume element scheme for diffusion equations, J. Comput. Appl. Math. 414 (2022), Paper No. 114458, 20 pp.

[Q1286] C. Nie and H. Yu: A monotone finite volume element scheme for diffusion equations on triangular grids, Comput. Math. Appl. 105 (2022), 1–12.

[Q1287] K. Nikitin and Yu. Vassilevski: A monotone nonlinear finite volume method for advection-diffusion equations on unstructured polyhedral meshes in 3D, Russian J. Numer. Anal. Math. Model. 25 (2010), 335–358.

[Q1288] R. H. Nochetto, S. W. Walker, and W. Zhang: The Ericksen model of liquid crystals with colloidal and electric effects, J. Comput. Phys. 352 (2018), 568–601.

[Q1289] R. H. Nochetto, S. W. Walker, and W. Zhang: A finite element method for nematic liquid crystals with variable degree of orientation, SIAM J. Numer. Anal. 55 (2017), 1357–1386.

[Q1290] R. H. Nochetto and W. Zhang: Discrete ABP estimate and convergence rates for linear elliptic equations in non-divergence form, Found. Comput. Math. 18 (2018), 537–593.

[Q1291] A. Prohl and M. Schmuck: Convergent discretizations for the Nernst-Planck-Poisson system, Numer. Math. 111 (2009), 591–630.

[Q1292] H.-G. Roos, M. Stynes, and L. Tobiska: Robust numerical methods for singularly perturbed differential equations. Springer Series in Comput. Math. vol. 24, Springer-Verlag, Berlin, Heidelberg, 2008.

[Q1293] M. Ruggeri: Numerical analysis of the Landau-Lifshitz-Gilbert equation with inertial effects, ESAIM Math. Model. Numer. Anal. 56 (2022), 1199–1222.

[Q1294] Z. Q. Sheng and G. W. Yuan: The finite volume scheme preserving extremum principle for diffusion equations on polygonal meshes, J. Comput. Phys. 230 (2011), 2588–2604.

[Q1295] Z. Q. Sheng and G. W. Yuan: An improved monotone finite volume scheme for diffusion equation on polygonal meshes, J. Comput. Phys. 231 (2012), 3739–3754.

[Q1296] Z. Q. Sheng, J. Yue, G. W. Yuan: Monotone finite volume schemes of nonequilibrium radiation diffusion equations in distorted meshes, SIAM J. Sci. Comput. 31 (2009), 2915–2934.

[Q1297] P. Šolín and T. Vejchodský: A weak discrete maximum principle for *hp*-FEM, J. Comput. Appl. Math. 209 (2007), 54–65.

[Q1298] P. Šolín and T. Vejchodský: Discrete maximum principle for higher-order finite elements in 1D, Math. Comp. 76 (2007), 1833–1846.

[Q1299] P. Šolín, T. Vejchodský, and R. Araiza: On a discrete maximum principle for one-dimensional *hp*-FEM, preprint Univ. of Texas at El Paso, 2005, 1–25.

[Q1300] P. Šolín, T. Vejchodský, and R. Araiza: Discrete conservation of nonnegativity for elliptic problems solved by the hp-FEM, Math. Comput. Simulation 76 (2007), 205–210.

[Q1301] J. Stańdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[Q1302] V. Thomée and L. Wahlbin: On the existence of maximum principles in parabolic finite element equations. Math. Comp. 77 (2008), no. 261, 11–19.

[Q1303] T. Vejchodský: Comparison principle for a nonlinear parabolic problem of a nonmonotone type, Appl. Math. (Warsaw) 29 (2002), 65–73.

[Q1304] T. Vejchodský: Finite element approximation of a nonlinear parabolic heat conduction problem and a posteriori error estimators, Ph.D. Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2003.

[Q1305] T. Vejchodský: Method of lines and conservation of nonnegativity. Proc. ECCOMAS-2004, Jyväskylä, Finland (ed. by P. Neittaanmäki et al.), 2004, 1–18.

[Q1306] T. Vejchodský and P. Šolín: Discrete Green's function and maximum principles, Proc. PANM 13 dedicated to the 80th birthday of Professor Ivo Babuška, Math. Inst. Prague (eds. J. Chleboun, K. Segeth, T. Vejchodský), 2006, 247–252.

[Q1307] T. Vejchodský and P. Šolín: Discrete maximum principle for higher-order finite elements in 1D, Math. Comp. 76 (2007), 1833–1846.

[Q1308] T. Vejchodský and P. Šolín: Discrete maximum principle for a 1D problem with piecewise-constant coefficients solved by *hp*-FEM J. Numer. Math. 15 (2007), 233–243.

[Q1309] T. Vejchodský and P. Šolín: Discrete maximum principle for Poisson equation with mixed boundary conditions solved by *hp*-FEM, Adv. Appl. Math. Mech. 1 (2009), 201–214.

[Q1310] S. W. Walker: A finite element method for the generalized Ericksen model of nematic liquid crystals, ESAIM Math. Model. Numer. Anal. 54 (2020), 1181–1220.

[Q1311] J.-P. Wang and R. Zhang: Maximum principles for $P1$-conforming finite element approximation of quasilinear second order elliptic equations, SIAM J. Numer. Anal. 50 (2012), 626–642.

[Q1312] Y. Yu, G. Yuan, Z. Sheng, and Y. Li: The finite volume scheme preserving maximum principle for diffusion equations with discontinuous coefficient, Comput. Math. Appl. 79 (2020), 2168–2188.

[Q1313] G. W. Yuan and Z. Q. Sheng: Monotone finite volume schemes for diffusion equations on polygonal meshes, J. Comput. Phys. 227 (2008), 6288–6312.

[Q1314] L. Yuan: Acute triangulations, Ph.D. Thesis, Dortmund Univ., Germany, 2006, 1–79.

[Q1315] J.-Y. Yue, G.-W. Yuan, and Z.-Q. Sheng: Monotone finite volume schemes for diffusion equations on distorted quadrilateral meshes, LN in Engrg. Comput. Sci. 1 (2015), 413–418.

[Q1316] T. Zamfirescu: Acute triangulations: a short survey. Proc. of the Sixth Nat. Conf. of S.S.M.R, Sibiu, Romania, 2002, 9–17.

[Q1317] Q. Zhang, Z. Sheng, G. A. Yuan: A finite volume scheme preserving extremum principle for convection-diffusion equations on polygonal meshes, Internat. J. Numer. Methods Fluids 84 (2017), 616–632.

[Q1318] M. Zítka: On some aspects of adaptive higher-order finite element method for three-dimensional elliptic problems, Ph.D. Thesis, Faculty of Math. and Phys., Charles Univ., Prague, 2008, 1–119.

[**B37**] **S. Korotov and M. Křížek**, *Acute type refinements of tetrahedral partitions of polyhedral domains*, SIAM J. Numer. Anal. **39** (2001), 724–733.

Cited in:

[Q1319] L. Baňas, M. Klein, and A. Prohl: Control of interface evolution in multiphase fluid flows, SIAM J. Control Optim. 52 (2014), 2284–2318.

[Q1320] L. Baňas and A. Prohl: Convergent finite element discretization of the multi-fluid nonstationary incompressible magnetohydrodynamics equations, Math. Comp. 79 (2010), 1957–1999.

[Q1321] J. W. Barrett, D. J. Knezevic, and E. Süli: Kinetic models of dilute polymers: Analysis, approximation and computation, Lecture Notes, 2009, 1–225.

[Q1322] J. W. Barrett and E. Süli: Finite element approximation of kinetic dilute polymer models with microscopic cut-off, ESAIM Math. Model. Numer. Anal. 45 (2011), 39–89.

[Q1323] J. W. Barrett and E. Süli: Finite element approximation of finitely extensible elastic dumbbell models for dilute polymers, ESAIM Math. Model. Numer. Anal. 46 (2012), 949–978.

[Q1324] S. Bartels: Stability and convergence of finite-element approximation schemes for harmonic maps. SIAM J. Numer. Anal. 43 (2005), 220–238.

[Q1325] S. Bartels: Combination of global and local approximation schemes for harmonic maps into spheres, J. Comput. Math. 27 (2009), 170–183.

[Q1326] S. Bartels: Finite element approximation of harmonic maps between surfaces, Habilitationsschrift, Humbolt Univ., Berlin, 2009, 1–159.

[Q1327] S. Bartels and T. Roubíček: Thermoviscoplasticity at small strains, Z. Angew. Math. Mech. 88 (2008), 735–754.

[Q1328] E. Bertolazzi and G. Manzini: A second-order maximum principle preserving finite volume method for steady convection-diffusion problems, SIAM J. Numer. Anal. 43 (2005), 2172–2199.

[Q1329] A. H. Boschitsch and M. O. Fenley: Hybrid boundary element and finite difference method for solving the nonlinear Poisson-Boltzmann equation, J. Comput. Chemistry 25 (2004), 935–955.

[Q1330] M. Braack and A. Prohl: Stable discretization of a difuse interface model for liquid-vapor flows with surface tension, ESAIM Math. Model. Numer. Anal. 47 (2013), 401–420.

[Q1331] J. Brandts: From binary cube triangulations to acute binary simplices, Proc. Conf. Applications of Mathematics 2012 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 31–42.

[Q1332] A. Cihangir: Nonobtuse simplices and special matrix classes, PhD Thesis, Korteweg-de Vries Institute, Uviv. of Amsterdam, 2015, 1–195.

[Q1333] L. S. Cotter, T. Vejchodský, and R. Erban: Adaptive finite element method by stochastic simulation of chemical systems, SIAM J. Sci. Comput. 35 (2013), B107–B131.

[Q1334] O. Davydov: Discrete maximum principles in finite element analysis, Master Thesis, Dept. of Math. Inform. Technology, Uviv. of Jyväskylä, 2003.

[Q1335] H. Q. Dinh, A. Yezzi, and G. Turk: Texture transfer during shape transformation, ACM Trans. on Graphics 24 (2005), 289–310.

[Q1336] D. Eppstein, J. M. Sullivan, and A. Üngör: Tiling space and slabes with acute tetrahedra, Comput. Geom.: Theory and Appl. 27 (2004), 237–255.

[Q1337] J. Haehnle: Numerical approximation of the mumford-shah functional for unit vector fields, Preprint, Univ. Tuebingen, 2009, 1–36.

[Q1338] J.-I. Itoh and T. Zamfirescu: Acute triangulations of the regular icosahedral surface. Discrete Comput. Geom. 31 (2004), 197–206.

[Q1339] J.-I. Itoh and T. Zamfirescu: Acute triangulations of the regular dodecahedral surface, Europ. J. Combin. 28 (2007), 1072–1086.

[Q1340] J. W. Jerome: A trapping principle and convergence results for finite element approximate solutions of steady reaction/diffusion systems, Numer. Math. 109 (2008), 121–142.

[Q1341] A. Jüngel and A. Unterreiter: Discrete maximum and minimum principles for finite element approximations of non-monotone elliptic equations, Numer. Math. 99 (2005), 485–508.

[Q1342] J. Karátson: A discrete maximum principle for nonlinear elliptic systems with interface condtions, Proc. of the 6th Internat. Conf. on Large-Scale Sci. Comput., Sozopol, Bulgaria, 2009, (ed. by I. Lirkov et al.), LNCS 5910, Springer-Verlag, 2010, 580–587.

[Q1343] R. Kornhuber and Q. Zou: Efficient and reliable hierarchical error estimates for the discretization error of elliptic obstacle problems, to appear in Math. Comp.

[Q1344] D. Leykekhman and B. Li: Weak discrete maximum principle of finite element methods in convex polyhedra, Math. Comp. 90 (2021), no. 327, 1–18.

[Q1345] A. Plaza, M. A. Padrón, J. P. Suárez, and S. Falcón: The 8-tetrahedra longest-edge partition of right-type tetrahedra, Finite Elem. Anal. Des. 41 (2004), 253–265.

[Q1346] J. Stańdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[Q1347] T. D. Todorov: The optimal refinement strategy for 3-D simplicial meshes, Comput. Math. Appl. 66 (2013), 1272–1283.

[Q1348] A. Üngör: Parallel Delaunay refinement and space-time meshing, Ph.D. Thesis, Graduate College, Univ. of Illinois at Urbana-Champaign, 2002.

[Q1349] L. Yuan: Acute triangulations, Ph.D. Thesis, Dortmund Univ., 2006, 1–79.

[Q1350] T. Zamfirescu: Acute triangulations: a short survey. Proc. of the Sixth Nat. Conf. of S.S.M.R, Sibiu, Romania, 2002, 9–17.

[Q1351] M. Zítka: On some aspects of adaptive higher-order finite element method for three-dimensional elliptic problems, Ph.D. Thesis, Faculty of Math. and Phys., Charles Univ., Prague, 2008, 1–119.

[B40] **M. Křížek, F. Luca, and L. Somer**, *On the convergence of series of reciprocals of primes related to the Fermat numbers*, J. Number Theory **97** (2002), 95–112.

Cited in:

[Q1352] K. M. Boubaker: About Diophantine equations, an analytic approach, Internat. J. Contemp. Math. Sciences 5 (2010), 843–857.

[Q1353] A. Chaumont, J. Leicht, T. Müller, and A. Reinhart: The continuing search for large elite primes, Internat. J. Number Theory 5 (2009), 209–218.

[Q1354] A. Chaumont and T. Müller: All elite primes up to 250 billions, J. Integer Seq. 9 (2006), Article 06.3.8, 1–5.

[Q1355] M. Just: On upper bounds for the count of elite primes, Integers 20 (2020), Paper No. A76, 5 pp.

[Q1356] M. Just and P. Pollack: Comparing multiplicative orders mod p, as p varies, New York J. Math. 27 (2021), 600–614.

[Q1357] T. Müller: Searching for large elite primes, Experiment. Math. 15 (2006), 183–186.

[Q1358] T. Müller: On anti-elite prime numbers, J. Integer Seq. 10 (2007), article 07.9.4, 10 pp.

[Q1359] T. Müller: A generalization of a theorem by Křížek, Luca, and Somer on elite primes, Analysis (Munich) 28 (2008), 375–382.

[Q1360] T. Müller: On the fermat periods of natural numbers, J. Integer Seq. 13 (2010), Article 10.9.5, 12 pp.

[Q1361] T. Müller: On the exponents of non-trivial divisors of odd numbers and a generalization of Proth's primality theorem, J. Integer Seq. 20 (2017), article no. 17.2.7.

[Q1362] T. Müller and A. Reinhart: On generalized elite primes, J. Integer Seq. 11 (2008), issue 3, article no. 08.3.1., 15 pp.

[Q1363] A. Witno: Primes modulo which almost all Fermat numbers are primitive roots, Note di Matematica 30 (2010), 133–140.

[Q1364] A. Witno: On ellite primes of period four, Internat. J. Number Theory 30 (2010), 667–671.

[Q1365] A. Witno: Hypothetical elite primes for Mersenne numbers and repunits, J. Integer Seq. 24 (2021), no. 1, Art. 21.1.7, 11 pp.

[Q1366] Wikipedia, the free encyclopedia, `http://en.wikipedia.org/wiki/fermat`$_n$ *umber*

[**B42**] **J. Brandts and M. Křížek**, *Gradient superconvergence on uniform simplicial partitions of polytopes*, IMA J. Numer. Anal. **23** (2003), 489–505.

Cited in:

[Q1367] D. N. Arnold, R. S. Falk, J. Guzmán, and G. Tsogtgerel: On the consistency of the combinatorial codifferential, Trans. Amer. Math. Soc. 366 (2014), 5487–5502.

[Q1368] J. Chen and D. Wang: Three-dimensional finite element superconvergent gradient recovery on Par6 patterns, Numer. Math. Theory Methods Appl. 3 (2010), 178–194.

[Q1369] J. Chen, D. Wang, and Q. Du: Linear finite element superconvergence on simplicial meshes, Math. Comp. 83 (2014), 2161–2185.

[Q1370] L. Chen: Superconvergence of tetrahedral linear finite elements, Internat. J. Numer. Anal. Model. 3 (2006), 273–282.

[Q1371] L. Chen and H. Li: Superconvergence of gradient recovery schemes on graded meshes for corner singularities, J. Comput. Math. 28 (2010), 11–31.

[Q1372] A. Cihangir: Nonobtuse simplices and special matrix classes, PhD Thesis, Korteweg-de Vries Institute, Uviv. of Amsterdam, 2015, 1–195.

[Q1373] E. S. Gawlik and A. J. Lew: Supercloseness of orthogonal projections onto nearby finite element spaces, ESAIM Math. Model. Numer. Anal. 49 (2015), 559–576.

[Q1374] A. Hannukainen and S. Korotov: Techniques for a posteriori error estimation in terms of linear functionals for elliptic type boundary value problems, Far East J. Appl. Math. 21 (2005), 289–304.

[Q1375] A. Hannukainen and S. Korotov: Computational technologies for reliable control of global and local errors for linear elliptic type boundary value problems, J. Numer. Anal., Industrial Appl. Math. 2 (2007), 157–176.

[Q1376] A. Hannukainen, S. Korotov, and M. Rüter: A posteriori error estimates for some problems in linear elasticity, European Soc. Comput. Methods Sci. Engrg. 4 (2008), 61–72.

[Q1377] W. He, X. Liu, and J. Xiao: Local ultraconvergence of high order finite element method by interpolation postprocessing technique for elliptic problems with constant coefficients, Comput. Math. Appl. 79 (2020), 2492–2502.

[Q1378] R. Hošek: Construction and shape optimization of simplicial meshes in d-dimensional space, Discrete Comput. Geom. 59 (2018), 972–989.

[Q1379] J. Karátson and S. Korotov: Sharp upper global a posteriori error estimates for nonlinear elliptic variational problems, Appl. Math. 54 (2009), 297–336.

[Q1380] A. Khademi: Convergence on degenerating finite element meshes, PhD Thesis, Western Norway Univ. of Appl. Sci., Bergen, 2020.

[Q1381] K.-Y. Kim: Guaranteed and asymptotically exact a posteriori error estimator for lowest-order Raviart-Thomas mixed finite element method, Appl. Numer. Math. 165 (2021), 357–375.

[Q1382] K. Kolman: Finite element postprocessing in eigenvalue problems by two-level and superconvergence based methods, Proc. of the Week of Doctoral Students, Vol. 1, Faculty of Mathematics and Physics, Charles Univ., Matfyzpress, Prague, 2003, 48–53.

[Q1383] K. Kolman: Superconvergence by the Steklov averaging in the finite element method, Appl. Math. (Warsaw) 32 (2005), 477–488.

[Q1384] K. Kolman: Higher-order approximations in the finite element method, Ph. D. Thesis, Charles Univ., Prague, 2010.

[Q1385] S. Korotov: A posteriori error estimation of goal-oriented quantities for elliptic type BVPs, J. Comput. Appl. Math. 191 (2006), 216–227.

[Q1386] S. Korotov: Error control in terms of linear functionals based on gradient averaging techniques, Proc. Internat. Conf. ICCMSE 2005, Greece, ed. T. Simos, 1–9.

[Q1387] S. Korotov: A posteriori error estimation for linear elliptic problems with mixed boundary conditions, Preprint A495, Helsinki Univ. of Technology, Espoo 2006, 1–14.

[Q1388] S. Korotov: Two-sided a posteriori error estimates for linear elliptic problems with mixed boundary conditions, Appl. Math. 52 (2007), 235–249.

[Q1389] S. Korotov: Global a posteriori error estimates for convection-reaction-diffusion problems, Appl. Math. Model. 32 (2008), 1579–1586.

[Q1390] S. Korotov, P. Neittaanmäki, and S. Repin: A posteriori error estimation of "quantities of interest" for elliptic-type boundary value problems, Proc. Conf. ECCOMAS, 2004.

[Q1391] S. Korotov and P. Turchyn: A posteriori error estimation of "quantities of interest" on tetrahedral meshes, Proc. Conf. ECCOMAS, 2004.

[Q1392] S. Korotov and P. Turchyn: A posteriori error estimation of goal-oriented quantities for elliptic type BVPs, Internat. Conf. of Comput. Methods in Sci. and Engrg., ICCMSE - 2004, Athens, Lecture Series on Computer and Computational Sciences, vol. 1, (eds. T. Simon and G. Maroulis) VSP, Utrecht, 2004, 269–273.

[Q1393] B. P. Lamichhane: A gradient recovery operator based on an oblique projection, Electron. Trans. Numer. Anal. 37 (2010), 166–172.

[Q1394] B. P. Lamichhane: A finite element method for a biharmonic equation based on gradient recovery operators, BIT Numer. Math. 54 (2014), 469–484.

[Q1395] B. P. Lamichhane and M. Hegland: A stabilized mixed finite element method for thin plane splines based on orthogonal systems, ANZIAM J. 54 (2012), C72–C87.

[Q1396] B. Li: Lagrange interpolation and finite element superconvergence, Numer. Methods Partial Diffrential Equations 20 (2004), 33–59.

[Q1397] Q. Lin, J.-M. Zhou, and H.-T. Chen: Supercloseness and extrapolation of the tetrahedral linear finite elements for elliptic problem (in Chinese), Mathematics in Practice and Theory 39 (2009), 200–208.

[Q1398] J. Liu: Pointwise supercloseness of the displacement for tensor-product quadratic pentahedral finite elements, Appl. Math. Lett. 25 (2012), 1458–1463.

[Q1399] J. Liu: Superconvergence analysis of cubic block finite elements of intermediate families, J. Comput. Anal. Appl. 14 (2012), 173–180.

[Q1400] J. Liu, Y. Deng, and Q. D. Zhu: High accuracy analysis of tensor-product linear pentahedral finite elements of variable coefficient elliptic equation, J. Syst. Sci. Complex. 25 (2012), 410–416.

[Q1401] J. Liu and G. Hu: Maximum norm error estimates for quadratic block finite elements with twenty-six degrees of freedom, Key Engrg. Materials 480–481 (2011), 1388–1392.

[Q1402] J. Liu and G. Hu: An estimate for the discrete derivative Green's function for the 4D variable coefficient elliptic equation J. Comput. Anal. Appl. 14 (2012), 165–172.

[Q1403] J. Liu, G. Hu, and Q. D. Zhu: Superconvergence of tetrahedral quadratic finite elements for a variable coefficient elliptic equation, Numer. Methods Partial Differential Equations 29 (2013), 1043–1055.

[Q1404] J. Liu and X. Huo: Convergence analysis for cubic serendipity finite elements with thirty-two degrees of freedom, Adv. Materials Res. 268–270 (2011), 501–504.

[Q1405] J. Liu, X. Huo, and Q. D. Zhu: Pointwise supercloseness of quadratic serendipity block finite elements for the variable coefficient elliptic equation, Numer. Methods Partial Differential Equations 27 (2011), 1253–1261.

[Q1406] J. Liu, B. Jia, and Q. D. Zhu: An estimate for the three-dimensional discrete Green's function and applications, J. Math. Anal. Appl. 370 (2010), 350–363

[Q1407] J. Liu, Q. Li, Z. Xiong, and Q. D. Zhu: L^{∞}- and L^{2}-norms superconvergence of the displacement of the tetrahedral quadratic finite element, submitted to Comput. Math. Appl. in 2023, 1–9.

[Q1408] J. Liu, W. Liu, and Q. D. Zhu: Locally pointwise superconvergence of the tensor-product finite element in three dimensions, Appl. Math. 64 (2019), 383–396.

[Q1409] J. Liu, H. Sun and Q. D. Zhu: Superconvergence of tricubic block finite elements, Sci. in China, Ser. A 52 (2009), 959–972.

[Q1410] J. Liu and D. Yin: Superconvergence recovery for the gradient of the trilinear finite element, Adv. Materials Res. 268–270 (2011), 1021–1024.

[Q1411] J. Liu, D. Yin, and Q. D. Zhu: A note on superconvergence of recovered gradients of tensor-product linear pentahedral finite element approximations, Proc. Internat. Conf. on Internet Comput. and Information Services, ICICIS 2011, 227–229.

[Q1412] J. Liu and Q. D. Zhu: Pointwise supercloseness of tensor-product block finite elements, Numer. Methods Partial Differential Equations 25 (2009), 990–1008.

[Q1413] J. Liu and Q. D. Zhu: Pointwise supercloseness of pentahedral finite elements, Numer. Methods Partial Differential Equations 2009, 1572–1580.

[Q1414] J. Liu and Q. D. Zhu: The $W^{1,1}$-seminorm estimate for the discrete derivative Green's function for the 5D Poisson equation, J. Comput. Anal. Appl. 13 (2011), 1143–1156.

[Q1415] J. Liu and Q. D. Zhu: Superconvergence of the function value for pentahedral finite elements for an elliptic equation with varying coefficients, submitted to Bound. Value Prob. in 2019, 1–14.

[Q1416] J. Liu and Q. D. Zhu: Local pointwise convergence of the 3D finite element, Appl. Math. J. Chinese Univ. 34 (2019), 1–14.

[Q1417] J. Liu and Q. D. Zhu: Superconvergence of the function value for pentahedral finite elements for an elliptic equation with varying coefficients, Bound. Value Probl. 2020, Paper No. 7, 15 pp.

[Q1418] J.-H. Liu and Q. D. Zhu: Local pointwise convergence of the 3D finite element, Appl. Math. J. Chinese Univ. Ser. B 38 (2023), 210–222.

[Q1419] J. S. Ovall: Function, gradient, and Hessian recovery using quadratic edge-bump functions, SIAM J. Numer. Anal. 45 (2007), 1064–1080.

[Q1420] M. S. Petrov and T. D. Todorov: Stable subdivision of 4D polytopes, Numer. Algorithms 79 (2018), 633–656.

[Q1421] M. S. Petrov and T. D. Todorov: Successive partitions of ideal 4D-domains, C. R. Acad. Bulg. Sci. (2018), 1–8.

[Q1422] M. Picasso: Adaptive finite elements with large aspect ratio based on an anisotropic error estimator involving first order derivatives, Comput. Methods Appl. Mech. Engrg. 196 (2006), 14–23.

[Q1423] M. Picasso, F. Alauzet, H. Borouchaki, and P.-L. George: A numerical study of some Hessian recovery techniques on isotropic and anisotropic meshes, SIAM J. Sci. Comput. 33 (2011), 1058–1076.

[Q1424] L. Shen, J. Xin, and A. Zhou: Finite element computation of KPP front speeds in 3D cellular and ABC flows, Math. Model. Nat. Phenom. 8 (2013), 182–197.

[Q1425] R. Shen, S. Shu, Y. Yang, and M. Fang: Gradient recovery-type a posteriori error estimates for steady-state Poisson-Nernst-Planck equations. Adv. Appl. Math. Mech. 12 (2020), no. 6, 1353–1383.

[Q1426] R. Shen, S. Shu, Y. Yang, and B. Lu: A decoupling two-grid method for the time-dependent Poisson-Nernst-Planck equations, Numer. Algorithms 83 (2020), 1613–1651.

[Q1427] Y. Yang, M. Tang, C. Liu, B. Lu, and L. Zhong: Superconvergent gradient recovery for nonlinear Poisson-Nernst-Planck equations with applications to the ion channel problem, Adv. Comput. Math. 46 (2020), Paper No. 78, 35 pp.

[Q1428] T. Zhang and S. Zhang: The gradient superconvergence of the finite volume method for a nonlinear elliptic problem of nonmonotone type, Appl. Math. 60 (2015), 573–596.

[B43] **M. Křížek and L. Liu**, *On the maximum and comparison principles for a steady-state nonlinear heat conduction problem*, Z. Angew. Math. Mech. **83** (2003), 559–563.

Cited in:

[Q1429] R. Araiza: The use of interval-related knowledge in processing 2-D and 3-D data, with an emphasis on applications to geosciences and biosciences, Ph.D. Thesis, Dept. of Comput. Sci., Univ. of Texas at El Paso, 2007, 1–157.

[Q1430] C. Biswas, S. Das, A. Singh, and H. Altenbach: Solution of variable-order partial integro-differential equation using Legendre wavelet approximation and operational matrices, ZAMM Z. Angew. Math. Mech. 103 (2023), Article Nr. e202200222, 16 pp.

[Q1431] C. Biswas, S. Das, A. Singh, and T. Sadowski: Numerical solution of two-dimensional nonlinear Riesz space-fractional reaction-advection-diffusion equation using fast compact implicit integration factor method, Z. Angew. Math. Mech. 2023, Article Nr. 202200334, 15 pp.

[Q1432] G. Boyadzhiev and N. Kutev: Comparison principle for weakly-coupled non-cooperative elliptic and parabolic systems, Serdica Math. J. 45 (2019), no. 2, 143–166.

[Q1433] E. Casas, M. Mateos, and A. Rösch: Analysis of control problems of nonmontone semilinear elliptic equations. ESAIM Control Optim. Calc. Var. 26 (2020), Paper No. 80, 21 pp.

[Q1434] E. Casas and F. Tröltzsch: First- and second-order optimality conditions for a class of optimal control problems with quasilinear elliptic equations, SIAM J. Control Optim. 48 (2009), 688–718.

[Q1435] R. Horváth, I. Faragó, and J Karátson: Qualitative properties of discrete nonlinear parabolic operators, Numer. Math. 143 (2019), no. 3, 529–554.

[Q1436] J. Karátson and S. Korotov: Discrete maximum principles for finite element solutions of some mixed nonlinear elliptic problems using quadratures, J. Comput. Appl. Math. 192 (2006), 75–88.

[Q1437] J. Karátson and S. Korotov: Discrete maximum principles for finite element solutions of nonlinear elliptic problems with mixed boundary conditions, Numer. Math. 99 (2005), 669–698.

[Q1438] R. Liska and M. Shashkov: Enforcing the discrete maximum principle for linear finite element solutions of elliptic problems, Commun. Comput. Phys. 3 (2008), 852–877.

[Q1439] K. B. Nakshatrala and A. J. Valocchi: Non-negative mixed finite element formulations for a tensorial diffusion equation, J. Comput. Phys. 228 (2009), 6726–6752.

[Q1440] H. T. Nguyen, V. Kreinovich, B. Wu, G. Xiang: Computing statistics under interval and fuzzy uncertainty: Applications to computer science and engineering, Stud. Comput. Intelligence 392 (2012), 1-441.

[Q1441] P. Šolín and T. Vejchodský: On a discrete maximum principle for one-dimensional *hp*-FEM, preprint Univ. of Texas at El Paso, 2005, 1–25.

[Q1442] P. Šolín and T. Vejchodský: A weak discrete maximum principle for *hp*-FEM, J. Comput. Appl. Math. 209 (2007), 54–65.

[Q1443] P. Šolín, T. Vejchodský, and R. Araiza: Discrete conservation of nonnegativity for elliptic problems solved by the hp-FEM, Math. Comput. Simulation 76 (2007), 205–210.

[Q1444] T. Vejchodský and P. Šolín: Discrete maximum principle for Poisson equation with mixed boundary conditions solved by *hp*-FEM, Adv. Appl. Math. Mech. 1 (2009), 201–214.

[B44] **S. Korotov and M. Křížek**, *Local nonobtuse tetrahedral refinements of a cube*, Appl. Math. Lett. **16** (2003), 1101–1104.

Cited in:

[Q1445] S. Bartels: Finite element approximation of harmonic maps between surfaces, Habilitationsschrift, Humbolt Univ., Berlin, 2009, 1–159.

[Q1446] A. Cihangir: Nonobtuse simplices and special matrix classes, PhD Thesis, Korteweg-de Vries Institute, Uviv. of Amsterdam, 2015, 1–195.

[Q1447] O. Davydov: Discrete maximum principles in finite element analysis, Master Thesis, Dept. of Math. Inform. Technology, Uviv. of Jyväskylä, 2003.

[Q1448] J. Stańdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[**B45**] **L. Liu, K. B. Davies, K. Yuan, and M. Křížek**, *On symmetric pyramidal finite elements*, Dyn. Contin. Discrete Impuls. Syst., Ser. B, Appl. Algorithms **11** (2004), 213–227.

Cited in:

[Q1449] M. Ainsworth, O. Davydov, and L. L. Schumaker: Bernstein-Bézier finite elements on tetrahedral-hexahedral-pyramidal partitions, Comput. Methods Appl. Mech. Engrg. 304 (2016), 140–170.

[Q1450] M. Ainsworth and G. Fu: A lowest-order composite finite element exact sequence on pyramids Comput. Methods Appl. Mech. Engrg. 324 (2017), 110–127.

[Q1451] M. Bergot, G. Cohen, and M. Duruflé: Highre-order finite elements for hybrid meshes using new nodal pyramidal elements, J. Sci. Comput. 42 (2010), 345–381.

[Q1452] S. Korotov, L. F. Lund, and J. E. Vatne: Tight bounds for the dihedral angle sums of a pyramid, Appl. Math. 68 (2023), 259–268.

[Q1453] S. Korotov and T. Rahman: On conforming local post-refinement of adjacent tetrahedral and hexahedral meshes, Parallel processing and applied mathematics, Part II, 365–370.

[Q1454] N. Nigam and J. Phillips: Higer-order conforming finite elements on pyramids, IMA J. Numer. Anal. 32 (2012), 448–483.

[**B46**] **M. Křížek and L. Somer**, *Sophie Germain little suns*, Math. Slovaca **54** (2004), 433–442.

Cited in:

[Q1455] U. Ahmad and S. M. Husnine: The power digraphs of safe primes, Bull. Iranian Math. Soc. 42 (2016), no. 3, 749–759.

[Q1456] J. Skowronek-Kaziów: Some digraphs arising from number theory and remarks on the zero-divisor graph of the ring Z_n, Inform. Process. Lett. 108 (2008), 165–169.

[**B47**] **L. Liu, T. Liu, M. Křížek, T. Lin, and S. Zhang**, *Global superconvergence and a posteriori error estimators of finite element methods for a quasilinear elliptic boundary value problem of a nonmonotone type*, SIAM J. Numer. Anal. **42** (2004), 1729–1744.

Cited in:

[Q1457] C. Bi and V. Ginting: A residual-type a posteriori error estimate of finite volume element method for a quasi-linear elliptic problem, Numer. Math. 114 (2009), 107–132.

[Q1458] C. Bi and V. Ginting: Global superconvergence and a posteriori error estimates of finite element method for second-order quasilinear elliptic problems, J. Comput Appl. Math. 260 (2014), 78–90.

[Q1459] C. Bi, C. Wang, and Y. Lin: Two-grid finite element method and its a posteriori error estimates for a nonmonotone quasilinear elliptic problem under minimal regularity of data, Comput. Math. Appl. 76 (2018), 98–112.

[Q1460] C. Bi, C. Wang, and Y. Lin: A posteriori error estimates of two-grid finite element methods for nonlinear elliptic problems, J. Sci. Comput. 74 (2018), 23–48.

[Q1461] V. Dolejší: An adaptive *hp*-discontinuous Galerkin approach for nonlinear convection-diffusion problems, Proc. Conf. Applications of Mathematics 2012 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 72–82.

[Q1462] L. Guo and C. Bi: Adaptive finite element method for nonmonotone quasi-linear elliptic problems. Comput. Math. Appl. 93 (2021), 94–105.

[Q1463] L. Guo and C. Bi: Convergence and quasi-optimality of an adaptive finite element method for nonmonotone quasi-linear elliptic problems on L^2 errors, Comput. Math. Appl. 139 (2023), 38–56.

[Q1464] L. Guo, Z. Huang, and C. Wang: A posteriori error estimates of edge residual type of finite element method for non-monotone quasi-linear elliptic problem, Numer. Methods Partial Differential Equations 30 (2014), 813–837.

[Q1465] K. Kolman: Finite element postprocessing in eigenvalue problems by two-level and superconvergence based methods, Proc. of the Week of Doctoral Students, Vol. 1, Faculty of Mathematics and Physics, Charles Univ., Matfyzpress, Prague, 2003, 48–53.

[Q1466] K. Kolman: Higher-order approximations in the finite element method, Ph. D. Thesis, Charles Univ., Prague, 2010.

[Q1467] T. Vejchodský: Finite element approximation of a nonlinear parabolic heat conduction problem and a posteriori error estimators, Ph.D. Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2003.

[Q1468] T. Vejchodský: On a posteriori error estimation strategies for elliptic problems, Proc. Internat. Conf. Presentation of Mathematics '05, TU Liberec, 2006, 373–386.

[Q1469] N. N. Yan: Superconvergence analysis and a posteriori error estimation in finite element methods, Ser. Inf. Comput. Sci., vol. 40, Science Press, Beijing, 2008.

[Q1470] B. Yang: Global superconvergence estimates of Petrov-Galerkin methods for hyperbolic equations, Second Internat. Workshop on Database Technology and Applications, DBTA2010-Proc. 2010, 5659048.

[Q1471] Y. Yang and A. Zhou: Local averaging based a posteriori finite element error control for quasilinear elliptic problems with applications to electric potential computation, Comput. Methods Appl. Mech. Engrg. 196 (2006), 452–465.

[Q1472] J. Wang: Superconvergence analysis for a semilinear parabolic equation with BDF-3 finite element method, Appl. Anal. 101 (2022), no. 6, 1822–1832.

[**B49**] **J. Brandts and M. Křížek**, *Superconvergence of tetrahedral quadratic finite elements*, J. Comput. Math. **23** (2005), 27–36.

Cited in:

[Q1473] C. Chen and S. Hu: The highest order superconvergence for Bi-k degree rectangular elements at nodes. A proof of $2k$-conjecture, Math. Comp. 82 (2013), 1337–1355.

[Q1474] W. M. He: The local ultraconvergence of high-order finite element method for second-order elliptic problems with constant coefficients over a rectangular partition, Numer. Methods Partial Differential Equations 35 (2019), 2044–2055.

[Q1475] W. M. He: Ultraconvergence of the derivative of high-order finite element method for elliptic problems with constant coefficients, Numer. Methods Partial Differential Equations 36 (2020), 173–184.

[Q1476] W. M. He, W. Q. Chen, and Q. D. Zhu: Local superconvergence for second-degree triangular Galerkin finite element method over special nonuniform partition, submitted to BIT Numer. Math. in 2010, 1–10.

[Q1477] W. M. He, W. Q. Chen, and Q. D. Zhu: Local superconvergence of the derivative for tensor-product block FEM, Numer. Methods Partial Differential Equations, 28 (2012), 457–475.

[Q1478] W. M. He, J. Z. Cui, Q. D. Zhu, and Z. L. Wen: The local superconvergence of linear finite element method for the Poisson problem Numer. Methods Partial Differential Equations 30 (2014), 930–946.

[Q1479] W. M. He, J. Z. Cui, and Q. D. Zhu: The local superconvergence of the quadratic triangular element for the Poisson problem, Numer. Methods Partial Differential Equations 30 (2014), 1854–1876.

[Q1480] W. He, X. Liu, and J. Xiao: Local ultraconvergence of high order finite element method by interpolation postprocessing technique for elliptic problems with constant coefficients. Comput. Math. Appl. 79 (2020), 2492–2502.

[Q1481] W. M. He and Q. D. Zhu: Superconvergence for tensor-product block FEM, submitted to Numer. Methods Partial Differential Equations in 2010, 1–19.

[Q1482] C. Huang and Z. Zhang: Polynomial preserving recovery for quadratic elements on anisotropic meshes, Numer. Methods Partial Differential Equations 28 (2012), 966–983.

[Q1483] K. Kolman: Finite element postprocessing in eigenvalue problems by two-level and superconvergence based methods, Proc. of the Week of Doctoral Students, Vol. 1, Faculty of Mathematics and Physics, Charles Univ., Matfyzpress, Prague, 2003, 48–53.

[Q1484] K. Kolman: Higher-order approximations in the finite element method, Ph. D. Thesis, Charles Univ., Prague, 2010.

[Q1485] S. Korotov: A posteriori error estimation of goal-oriented quantities for elliptic type BVPs, J. Comput. Appl. Math. 191 (2006), 216–227.

[Q1486] S. Korotov: Error control in terms of linear functionals based on gradient averaging techniques, Proc. Internat. Conf. ICCMSE 2005, Greece, ed. T. Simos, 1–9.

[Q1487] Z. C. Li, H. T. Huang, and N. N. Yan: Global superconvergence of finite elements for elliptic equations and its applications, Science Press, Beijing, 2012.

[Q1488] R. Lin: Natural superconvergence in two and three dimensional finite element methods, Dissertation, Wayne State Univ., Detroit, 2005, 1–240.

[Q1489] R. Lin and Z. Zhang: Natural superconvergent points in three-dimensional finite elements, SIAM J. Numer. Anal. 46 (2008), 1281–1297.

[Q1490] J. Liu: Pointwise supercloseness of the displacement for tensor-product quadratic pentahedral finite elements, Appl. Math. Lett. 25 (2012), 1458–1463.

[Q1491] J. Liu: Superconvergence analysis of cubic block finite elements of intermediate families, J. Comput. Anal. Appl. 14 (2012), 173–180.

[Q1492] J. Liu: Superconvergence of tensor-product quadratic pentahedral elements for variable coefficient elliptic equation, J. Comput. Anal. Appl. 14 (2012), 745–751.

[Q1493] J. Liu, Y. Deng, and Q. D. Zhu: High accuracy analysis of tensor-product linear pentahedral finite elements of variable coefficient elliptic equation, J. Syst. Sci. Complex. 25 (2012), 410–416.

[Q1494] J. Liu and G. Hu: Maximum norm error estimates for quadratic block finite elements with twenty-six degrees of freedom, Key Engrg. Materials 480–481 (2011), 1388–1392.

[Q1495] J. Liu, G. Hu, and Q. D. Zhu: Superconvergence of tetrahedral quadratic finite elements for a variable coefficient elliptic equation, Numer. Methods Partial Differential Equations 29 (2013), 1043–1055.

[Q1496] J. Liu and X. Huo: Convergence analysis for cubic serendipity finite elements with thirty-two degrees of freedom, Adv. Materials Res. 268–270 (2011), 501–504.

[Q1497] J. Liu, X. Huo, and Q. D. Zhu: Pointwise supercloseness of quadratic serendipity block finite elements for the variable coefficient elliptic equation, Numer. Methods Partial Differential Equations 27 (2011), 1253–1261.

[Q1498] J. Liu, B. Jia, and Q. D. Zhu: An estimate for the three-dimensional discrete Green's function and applications, J. Math. Anal. Appl. 370 (2010), 350–363.

[Q1499] J. Liu, Q. Li, Z. Xiong, and Q. D. Zhu: L^{∞}- and L^2-norms superconvergence of the displacement of the tetrahedral quadratic finite element, submitted to Comput. Math. Appl. in 2023, 1–9.

[Q1500] J. Liu, W. Liu, and Q. D. Zhu: Locally pointwise superconvergence of the tensor-product finite element in three dimensions, Appl. Math. 64 (2019), 383–396.

[Q1501] J. Liu, H. Sun and Q. D. Zhu: Superconvergence of tricubic block finite elements, Sci. in China, Ser. A 52 (2009), 959–972.

[Q1502] J. Liu and D. Yin: Superconvergence recovery for the gradient of the trilinear finite element, Adv. Materials Res. 268–270 (2011), 1021–1024.

[Q1503] J. Liu, D. Yin, and Q. D. Zhu: A note on superconvergence of recovered gradients of tensor-product linear pentahedral finite element approximations, Proc. Internat. Conf. on Internet Comput. and Information Services, ICICIS 2011, 227–229.

[Q1504] J. Liu and Q. D. Zhu: Uniform superapproximation of the derivative of tetrahedral quadratic finite element approximation, J. Copmut. Math. 23 (2005), 75–82.

[Q1505] J. Liu and Q. D. Zhu: Maximum-norm superapproximation of the gradient for the linear block finite element, Numer. Methods Partial Differential Equations 23 (2007), 1501–1508.

[Q1506] J. Liu and Q. D. Zhu: Pointwise supercloseness of tensor-product block finite elements, Numer. Methods Partial Differential Equations 25 (2009), 990–1008.

[Q1507] J. Liu and Q. D. Zhu: Pointwise supercloseness of pentahedral finite elements, Numer. Methods Partial Differential Equations 26 (2010), 1572–1580.

[Q1508] J. Liu and Q. D. Zhu: Superconvergence of the function value for pentahedral finite elements for an elliptic equation with varying coefficients, Bound. Value Probl. 2020, Paper No. 7, 15 pp.

[Q1509] J. Liu and Q. D. Zhu: Local pointwise convergence of the 3D finite element, Appl. Math. J. Chinese Univ. 34 (2019), 1–14.

[Q1510] J. Liu, Q. D. Zhu, and J. Zeng: Maximum norm superapproximation of the gradient for the tricubic rectangular parallelpiped finite element, submitted to Appl. Numer. Math. in 2005, 1–13.

[Q1511] J.-H. Liu and Q. D. Zhu: Local pointwise convergence of the 3D finite element, Appl. Math. J. Chinese Univ. Ser. B 38 (2023), 210–222.

[Q1512] A. Naga and Z. Zhang: The polynomial-preserving recovery for higher order finite element methods in 2D and 3D, Discrete Contin. Dyn. Syst. Ser. B 5 (2005), 769–798.

[Q1513] P. Yang, Y. Li, and X. Wang: Global L^2 superconvergence of the tetrahedral quadratic finite element, Comput. Math. Appl. 133 (2023), 104–123.

[Q1514] T. Zhang and S. Zhang: The gradient superconvergence of the finite volume method for a nonlinear elliptic problem of nonmonotone type, Appl. Math. 60 (2015), 573–596.

[Q1515] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[B50] **M. Křížek**, *Superconvergence phenomena on three-dimensional meshes*, Internat. J. Numer. Anal. Model. **2** (2005), 43–56.

Cited in:

[Q1516] S. M. N. Alan and Z. J. Haas: Coverage and connectivity in three-dimensional networks, Proc. Annual Internat. Conf. on Mobile Computing and Networking, MOBICOM, 2006, 346–357.

[Q1517] S. M. N. Alan and Z. J. Haas: Coverage and connectivity in three-dimensional underwater sensor networks, Wireless Commun. Mobile Comput. 8 (2008), 995–1009.

[Q1518] I. Babuška, U. Banerjee, and J. E. Osborn: Superconvergence in the generalized finite element method, Numer. Math. 107 (2007), 353–395.

[Q1519] J. Chen, D. Wang, and Q. Du: Linear finite element superconvergence on simplicial meshes, Math. Comp. 83 (2014), 2161–2185.

[Q1520] G. Fairweather, Q. Lin, Y. Lin, J. Wang, and S. Zhang: Asymptotic expansions and Richardson extrapolation of approximate solutions for second order ellipric problems on rectangular domains by mixed finite element methods, SIAM J. Numer. Anal. 44 (2006), 1122–1149.

[Q1521] W. M. He, J. Z. Cui, and Q. D. Zhu: The local superconvergence of linear tensor-product block finite element method for the Poisson problem in n-dimensional space with $n \geq 4$, submitted to Numer. Methods Partial Differential Equations in 2012, 1–17.

[Q1522] K. Kolman: Higher-order approximations in the finite element method, Ph. D. Thesis, Charles Univ., Prague, 2010.

[Q1523] M. Kumar, T. Kvamsdal, and K. A. Johannessen: Superconvergent patch recovery and a posteriori error estimation technique in adaptive isogeometric analysis. Comput. Methods Appl. Mech. Engrg. 316 (2017), 1086–1156.

[Q1524] D. Li, Y. Nie, and C. Wang: Superconvergence of numerical gradient for weak Galerkin finite element methods on nonuniform Cartesian partitions in three dimensions, Comput. Math. Appl. 78 (2019), 905–928.

[Q1525] Z. C. Li, H. T. Huang, and N. N. Yan: Global superconvergence of finite elements for elliptic equations and its applications, Science Press, Beijing, 2012.

[Q1526] J. S. Ovall: Function, gradient, and Hessian recovery using quadratic edge-bump functions, SIAM J. Numer. Anal. 45 (2007), 1064–1080.

[Q1527] M. A. Padrón and Á. Plaza: Similarity classes generated by the 8T-LE partition applied to trirectangular tetrahedra, J. Comput. Appl. Math. 409 (2022), Paper No. 114150, 17 pp.

[Q1528] C. Wang: Superconvergence of Ritz-Galerkin finite element approximations for second order elliptic problems. Numer. Methods Partial Differential Equations 34 (2018), 838–856.

[Q1529] G. Xie, J. Li, L. Xie, and F. Xie: GL method for solving equations in math-physics and engineering, Acta Math. Appl. Sinica 24 (2008), 391–404.

[Q1530] E.-J. Zhong and T.-Z. Huang: Superconvergence of compact difference schemes for Poisson equation, submitted to Numer. Algorithms in 2010, 1–21.

[**B51**] **S. Korotov and M. Křížek**, *Global and local refinement techniques yielding nonobtuse tetrahedral partitions*, Comput. Math. Appl. **50** (2005), 1105–1113.

Cited in:

[Q1531] J. W. Barrett, D. J. Knezevic, and E. Süli: Kinetic models of dilute polymers: Analysis, approximation and computation, Lecture Notes, 2009, 1–225.

[Q1532] J. W. Barrett and E. Süli: Finite element approximation of kinetic dilute polymer models with microscopic cut-off, ESAIM Math. Model. Numer. Anal. 45 (2011), 39–89.

[Q1533] J. W. Barrett and E. Süli: Finite element approximation of finitely extensible nonlinear elastic dumbbell models for dilute polymers, ESAIM Math. Model. Numer. Anal. 46 (2012), 949–978.

[Q1534] L. Diening, C. Kreuzer, and S. Schwarzacher: Convex hull property and maximum principle for finite element minimisers of general convex functionals, Numer. Math. 124 (2013), 685–700.

[Q1535] W.-M. He, X.-F. Guan, and J.-Z. Cui: The local superconvergence of the trilinear element for the three-dimensional Poisson problem, J. Math. Anal. Appl. 388 (2012), 863–872.

[Q1536] W.-M. He and R. Zhao: Local ultraconvergence of quadratic element, Calcolo 58 (2021), no. 3, Paper No. 33, 29 pp.

[Q1537] D. Khan, M.-M. Yan, Y. Wang, K. Hu, J. Ye, and X. Zhang: High-quality 2D mesh generation without obtuse and small angles, Comput. Math. Appl. 75 (2018), 582–595.

[Q1538] R. Kornhuber and Q. Zou: Efficient and reliable hierarchical error estimates for the discretization error of elliptic obstacle problem, Math. Comp. 80 (2010), 69–88.

[Q1539] C. Kreuzer: A note on why enforcing discrete maximum principles by a simple a posteriori cutoff is a good idea, Numer. Methods Partial Differential Equations 30 (2014), 994–1002.

[Q1540] X. Liu: Superconvergence of the high-degree FE method for second-degree elliptic problem with periodic boundary, Mediterr. J. Math. 18 (2021), no. 3, Paper No. 99, 13 pp.

[Q1541] M. Möller: Adaptive high-resolution finite element schemes, Ph.D. Thesis, Dortmund Univ., 2008, 1–249.

[Q1542] R. H. Nochetto, S. W. Walker, and W. Zhang: The Ericksen model of liquid crystals with colloidal and electric effects, J. Comput. Phys. 352 (2018), 568–601.

[Q1543] J. Stańdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[Q1544] J. E. Vatne: Simplices rarely contain their circumcenter in high dimensions, Appl. Math. 62 (2017), 213–223.

[Q1545] M. Zítka: On some aspects of adaptive higher-order finite element method for three-dimensional elliptic problems, Ph.D. Thesis, Faculty of Math. and Phys., Charles Univ., Prague, 2008, 1–119.

[**B53**] **L. Somer and M. Křížek**, *Structure of digraphs associated with quadratic congruences with composite moduli*, Discrete Math. **306** (2006), 2174–2185.

Cited in:

[Q1546] U. Ahmad and S. M. Husnine: The power digraphs of safe primes, Bull. Iranian Math. Soc. 42 (3) (2016), 749–759.

[Q1547] U. Ahmad and M. Moeen: The digraphs arising by the power maps of generalized quaternion groups, J. Algebra Appl. 16(9) (2017), 1750179.

[Q1548] U. Ahmad and H. Syed: Characterization of power digraphs modulo n, Comment. Math. Univ. Carolin. 52,3 (2011), 359–367.

[Q1549] U. Ahmad and H. Syed: On the heights of power digraphs modulo n, Czechoslovak Math. J. 62 (2012), 541–556.

[Q1550] P. Brunetti: Structural properties of the mapping $g^x \to g^{x^2}$, Preprint, 2009, 1–8.

[Q1551] G. Deng and P. Yuan: Symmetric digraphs from powers modulo n, Open J. Discrete Math. 1 (2011), 103–107.

[Q1552] G. Deng and P. Yuan: Isomorphic digraphs from powers modulo p, Czechoslovak Math. J. 61 (2011), 771–779.

[Q1553] G. Deng and P. Yuan: On the symmetric digraphs from powers modulo n, Discrete Math. 312 (2012), 720–728.

[Q1554] S. Fan and L. Liao: Dynamics of the square mapping on the ring of p-ADIC integers, Proc. Amer. Math. Soc. 144 (3) (2016), 1183–1196.

[Q1555] K. Glaeser: The digraph of the square mapping on elliptic curves, Preprint, 2009, 1–10.

[Q1556] T. Ju and M. Wu: On iteration digraph and zero-divisor graph of the ring $\mathbb{Z}_n$, Czechoslovak Math. J. 64 (2014), 611–628.

[Q1557] J. S. Kumar and S. M. Nair: Square congruence graph, to appear in Comm. Korean Math. Soc. in 2022, 1–7.

[Q1558] Y. Meemark and N. Maingan: The digraph of the square mapping on quotient rings over the Gaussian integers, Int. J. Number Theory 7 (2011), 835–852.

[Q1559] Y. Meemark and N. Wiroonsri: The quadratic digraph on polynomial rings over finite fields, Finite Fields Appl. 16 (2010), 334–346.

[Q1560] M. K. Mahmood, M. H. Mateen, H. Alolayan, and S. Ali: A paradigmatic approach to find equal sum partitions of zero divisors via complete graphs, submitted to Discrete Math. in 2020, 1–24.

[Q1561] A. Sawkmie and M. M. Singh: On the uniqueness of the factorization of power digraphs modulo n, Rend. Semin. Mat. Univ. Padova 140 (2018), 185–219.

[Q1562] M. Sha: On the cycle structure of repeated exponentiation modulo a prime power, Fibonacci Quart. 49 (2011), 340–347.

[Q1563] M. Sha: Digraphs from endomorphisms of finite cyclic groups, J. Combin. Math. Combin. Comput. 83 (2012), 105–120.

[Q1564] K. Tsuchiya and Y. Nogami: Periods of sequences generated by the logistic map over finite fields with control parameter four, 7th Internat. Workshop on Signal Design and Its Applications in Communications, IWSDA 2015, 7458394, 155–159.

[Q1565] Y. Wei, J. Nan, and G. Tang: Structure of cubic mapping graphs for the ring of Gaussian integers modulo n, Czechoslovak Math. J. 62 (2012), 527–539.

[Q1566] J. Zhao and G. Deng: Digraph from power mapping on noncommutative goups, J. Algebra Appl. 19 (2020), no. 5, 2050084, 10 pp.

[**B54**] **M. Křížek**, *There is no face-to-face partition of* R^5 *into acute simplices*, Discrete Comput. Geom. **36** (2006), 381–390..

Cited in:

[Q1567] C. J. Bishop: Nonobtuse triangulations of PSLCS, Preprint, 2010, 1–74.

[Q1568] R. Hošek: Construction and shape optimization of simplicial meshes in d-dimensional space, Discrete Comput. Geom. 59 (2018), 972–989.

[Q1569] R. Hošek: Existence of well-centered simplicial face-to-face tiling of five-dimensional space, Discrete Comput. Geom. 66 (2021), 1168–1189.
to appear in Discrete Comput. Geom. 61 (2020), 1–23.

[Q1570] M. Klejchová: The discrete maximum principle in the first order finite element method, Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2010, 1–59.

[Q1571] E. Kopczyński, I. Pak, and P. Przytycki: Acute triangulations of polyhedra and $\mathbb{R}^n$, Proc. of the Annual Sympos. on Comput. Geom., Snowbird, Utah, 2010, 307–313.

[Q1572] E. Kopczyński, I. Pak, and P. Przytycki: Acute triangulations of polyhedra and $\mathbb{R}^n$, Combinatorica 32 (2012), 85–110.

[Q1573] S. Korotov, Á Plaza, J. P. Suárez, and T. Moreno: On Zlámal minimum angle condition for the longest-edge n-section algorithm with $n \geq 4$, Proc. of the 12th European Conf. on Numer. Math. and Advanced Appl., ENUMATH 2017, Voss, Springer-Verlag, Berlin, Heidelberg, 2018.

[Q1574] S. Korotov and T. Vejchodský: A comparison of simplicial and block finite elements, Proc. Internat. Conf. ENUMATH 2009, Uppsala, Springer, 2010, 1–8.

[Q1575] I. Pak: Lectures on discrete and polyhedral geometry, 2008, 1–428.

[Q1576] E. VanderZee, A. N. Hirani, D. Guoy, V. Zharnitsky, and E. A. Ramos: Geometric and combinatorial properties of well-centred triangulations in three and higher dimensions, Comput. Geom. 46 (2013), 700–724.

[Q1577] E. VanderZee, A. N. Hirani, V. Zharnitsky, and D. Guoy: A dihedral acute triangulation of the cube, Comput. Geom. 43 (2010), 445–452.

[Q1578] J. E. Vatne: Simplices rarely contain their circumcenter in high dimensions, Appl. Math. 62 (2017), 213–223.

[Q1579] T. Vejchodský: The discrete maximum principle for Galerkin solutions of elliptic problems, Cent. Eur. J. Math. 10 (2012), 25–43.

[B55] **J. Karátson, S. Korotov, and M. Křížek**, *On discrete maximum principles for nonlinear problems*, Math. Comput. Simulation **76** (2007), 99–108.

Cited in:

[Q1580] A. Abdulle and M. E. Huber: Numerical homogenization method for parabolic advection-diffusion multiscale problems with large compressible flows, Numer. Math. 136 (2017), 603–649.

[Q1581] X. Blanc et al.: Arbitrary-order monotonic finite-volume schemes for 1D elliptic problems, Comput. Appl. Math. 42 (2023), Article nr. 195.

[Q1582] E. Casas and M. Mateos: Numerical approximation of elliptic control problems with finitely many pointwise constraints, Comput. Optim. Appl. 51 (2012), 1319–1343.

[Q1583] E. Casas and M. Mateos: Numerical approximation of elliptic control problems, AIP Conf. Proc., vol. 1168, 1318–1321.

[Q1584] E. Casas and M. Mateos: Numerical approximation of elliptic control problems with finitely many pointwise constraints, Proc. Internat. Conf. Comput. Math. Meth. Sci. Engrg., Gijón, ed. J. Vigo-Aguiar, CMMSE 2009, 241–248.

[Q1585] Q. Du, L. Ju, X. Li, and Z. Qiao: Maximum bound principles for a class of semilinear parabolic equations and exponential time-differencing schemes, SIAM Rev. 63 (2021), 317–359

[Q1586] M. Elshebli: Discrete maximum principle for finite element solution of nonstationary diffusion-reaction problems. Appl. Math. Model. 32 (2008), 1530–1541.

[Q1587] R. Ferrier, M. L. Kadri, and P. Gosselet: The Steklov-Poincaré technique for data completion: preconditioning and filtering, Internat. J. Numer. Methods Engrg. 116 (2018), 270–286.

[Q1588] V. Gyrya, K. Lipnikov et al.: M-adaptation in the mimetric finite difference method, Math. Mod. Meth. Appl. Sci. 24 (2014), 1621–1663.

[Q1589] W. Huang: Discrete maximum principle and a Delaunay-type mesh condition for linear finite element approximations of two-dimensional anisotropic diffusion problem, Numer. Math. 4 (2011), 319–334.

[Q1590] W. Huang: Sign-preserving of principal eigenfunctions in P1 finite element approximation of eigenvalue problems of second-order elliptic operators, J. Comput. Phys. 274 (2014), 230–244.

[Q1591] W. Huang and Y. Wang: Discrete maximum principle for the weak Galerkin method for anisotropic diffusion problems, Commun. Comput. Phys. 18 (2015), 65–90.

[Q1592] X. Li: Anisotropic mesh adaptation for the finite element solution of anisotropic diffusion problems, Thesis, Univ. of Kansas, 2011, pp. viii + 139.

[Q1593] L. Lin et al.: Mesh conditions of the preserving-maximum-principle linear finite volume element method for anisotropic diffusion-convection-reaction equations, Acta Math. Appl. Sinica – Engl. Ser. 39 (2023), 707–732.

[Q1594] C. Lu, W. Huang, and J. Qiu: Maximum principle in linear finite element approximations of anisotropic diffusion-convection-reaction problems, Numer. Math. 127 (2014), 515–537.

[Q1595] C. Lu, W. Huang, and E. S. Van Vleck: The cutoff method for numerical computation of nonnegative solutions of parabolic PDEs with application to anisotropic diffusion and Lubrication-type equations, J. Coput. Phys. 242 (2013), 24–36.

[Q1596] D. Kuzmin: Explicit and implicit FEM-FCT algorithms with flux linearization, J. Comput. Phys. 228 (2009), 2517–2534.

[Q1597] D. Kuzmin, M. J. Shaskov, and D. Svyatskiy: A constrained finite element method satisfying the discrete maximum principle for anisotropic diffusion problems, J. Comput. Phys. 228 (2009), 3448–3463.

[Q1598] X. Li and W. Huang: An anisotropic mesh adaptation method for the finite element solution of heterogeneous anisotropic diffusion problems, J. Comput. Phys. 229 (2010), 8072–8094.

[Q1599] X. Li and W. Huang: Maximum principle for the finite element solution of time-dependent diffusion problems, Numer. Methods Partial Differential Equations 29 (2013), 1963–1985.

[Q1600] X. Li and W. Huang: Anisotropic mesh adaptation for 3D anisotropic diffusion problems with application to fractured reservoir simulation, Numer. Math. Theory Methods Appl. 10 (2017), 913–940.

[Q1601] K. Lipnikov, G. Manzini, and D. Svyatskiy: Analysis of the monotonicity conditions in the mimetic finite difference method for elliptic problems, J. Comput. Phys. 230 (2011), 2620–2642.

[Q1602] C. Lu, W. Huang, and J. Qiu: Maximum principle in linear finite element approximations of anisotropic diffusion-convection-reaction problems, Numer. Math. 127 (2014), 515–537.

[Q1603] C. Lu, W. Huang, and E. S. Van Vleck: The cutoff method for numerical computation of nonnegative solutions of parabolic PDEs with application to anisotropic diffusion and Lubrication-type equations, J. Coput. Phys. 242 (2013), 24–36.

[Q1604] S. Pollock and Y. Zhu: Uniqueness of discrete solutions of nonmonotone PDEs without a globally fine mesh condition, Numer. Math. 139 (2018), 845–865.

S. Pollock amd Y. Zhu: Discrete comparison principles for quasilinear elliptic PDE, Appl. Numer. Math. 156 (2020), 106–124.

[Q1605] P. Skrzypacz: Finite element analysis for flows in chemical reactions, Dissertation, Univ. Wroclaw, 2010, 1–123.

[Q1606] P. Skrzypacz and D. Wei: On the discrete maximum principle for the local projection scheme with shock capturing, J. Comput. Math. 35 (2017), 547–568.

[Q1607] D. Svyatskiy and K. Lipnikov: Second-order accurate finite volume schemes with the discrete maximum principle for solving Richards equation on unstructured meshes, Adv. Water Res. 104 (2017), 114–126.

[Q1608] S. Wang and G. Yuan: Discrete strong extremum principles for finite element solutions of diffusion problems with nonlinear corrections, Appl. Numer. Math. 174 (2022), 1–16.

[Q1609] J. Zhu and D. Liu: Delta-nabla type maximum principles for second-order dynamic equationson time scales and applications, Abstract Appl. Anal. (2014), 165429.

[B56] **J. Brandts, S. Korotov, and M. Křížek**, *Dissection of the path-simplex in R^n into n path-subsimplices*, Linear Algebra Appl. **421** (2007), 382–393.

Cited in:

[Q1610] A. Akopyan and A. Balitskiy: Billiards in convex bodies with acute angles, Israel J. Math. 216 (2016), 833–845.

[Q1611] K. Chemmangat, T. Dhaene, and L. Knockaert: Scalable marcomodelling of microwave system responses using sequential sampling with path-simplices, Electronic Letters 49 (2013), 921–922.

[Q1612] K. Chemmangat, T. Dhaene, and L. Knockaert: Auto-generation of passive scalable macromodels for microwave components using scattered sequential sampling, Internat. J. Microwave Wireless Technol. 6 (2014), 591–602.

[Q1613] A. Cihangir: On 0/1-polytopes with nonobtuse triangulations, Appl. Math. Comput. 267 (2015), 17–27.

[Q1614] A. Cihangir: Nonobtuse simplices and special matrix classes, PhD Thesis, Korteweg-de Vries Institute, Uviv. of Amsterdam, 2015, 1–195.

[Q1615] I. Faragó: Numerical treatment of linear parabolic problems. MTA Doctor Thesis for the Hungarian Academy of Sciences, Eötvös Loránd University, Budapest, 2008.

[Q1616] W. Huang: Discrete maximum principle and a Delaunay-type mesh condition for linear finite element approximations of two-dimensional anisotropic diffusion problem, Numer. Math. 4 (2011), 319–334.

[Q1617] M. Klejchová: The discrete maximum principle in the first order finite element method, Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2010, 1–59.

[Q1618] D. Z. de Kramer: Beschrijving van Simplices met Lineaire Algebra. Bachelor Thesis, KdV Instituut voor wiskunde, Faculteit der Natuurwetenschappen, Wiskunde en Informatica, Universiteit van Amsterdam, (in Dutch), 2008.

[Q1619] X. Li: Anisotropic mesh adaptation for the finite element solution of anisotropic diffusion problems, Thesis, Univ. of Kansas, 2011, pp. viii + 139.

[Q1620] X. Li and W. Huang: An anisotropic mesh adaptation method for the finite element solution of heterogeneous anisotropic diffusion problems, J. Comput. Phys. 229 (2010), 8072–8094.

[Q1621] D. J. T. Liu and Q. Du: Optimization of subdivision invariant tetrahedra, Internat. J. Comput. Geom. Appl. 25 (2015), 37–56.

[Q1622] E. VanderZee, A. N. Hirani, V. Zharnitsky, and D. Guoy: A dihedral acute triangulation of the cube, Comput. Geom. 43 (2010), 445–452.

[Q1623] J. E. Vatne: Simplices rarely contain their circumcenter in high dimensions, Appl. Math. 62 (2017), 213–223.

[Q1624] T. Vejchodský: Angle conditions for discrete maximum principles in higher-order FEM, Proc. Conf. ENUAMTH, Uppsala, 2009, Springer-Verlag, Berlin, Heidelberg, 1–9.

[Q1625] T. Vejchodský: The discrete maximum principle for Galerkin solutions of elliptic problems, Cent. Eur. J. Math. 10 (2012), 25–43.

[B57] **S. Korotov, M. Křížek, and A. Kropáč**, *Strong regularity of a family of face-to-face partitions generated by the longest-edge bisection algorithm*, Comput. Math. Math. Phys. **48** (2008), 1687–1698.

Cited in:

[Q1626] M. Alkämper, F. Gaspoz, and R. Klöfkorn: A weak compatibility condition for newest vertex bisection in any dimension, SIAM J. Sci. Comput. 40 (2018), no. 6, A3853–A3872.

[Q1627] Y. Ma, J. Zheng, and J. Xie: Foldover-free mesh warping for constrained texture mapping, IEEE Trans. Visual. Comput. Graph. 21 (2015), 375–388.

[Q1628] F. Perdomo and Á. Plaza: Properties of the longest-edge bisection of triangles, Cent. Eur. J. Math. 12 (2014), 1796–1810.

[Q1629] F. Perdomo, Á. Plaza, E. Quevedo, and J. P. Suárez: A mathematical proof of how fast the diameters of a triangle mesh tend to zero after repeated trisection, Math. Comput. Simul. 106 (2014), 95–108.

[Q1630] Á. Plaza, S. Falcón, and J. P. Suárez: On the non-degeneracy property of the longest-edge trisection of triangles, Appl. Math. Comput. 216 (2010), 862–869.

[Q1631] Á. Plaza, S. Falcón, J. P. Suárez, and P. Abad: A local refinement algorithm for the longest-edge trisection of triangle meshes, Math. Comput. Simulation 82 (2012), 2971–2981.

[Q1632] J. P. Suárez, Á. Plaza, and T. Moreno: Geometric diagram for representing shape quality in mesh refinement, Proc. Conf. Applications of Mathematics 2015 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 225–235.

[B58] **J. Brandts, S. Korotov, and M. Křížek**, *The discrete maximum principle for linear simplicial finite element approximations of a reaction-diffusion problem*, Linear Algebra Appl. **429** (2008), 2344–2357.

Cited in:

[Q1633] J. P. Agnelli, U. Kaufmann, and J. D. Rossi: Numerical approximation of equations involving minimal/maximal operators by successive solution of obstacle problems. J. Comput. Appl. Math. 342 (2018), 133–146.

[Q1634] D. Aleja and M. Molina-Meyer: Nonlinear finite elements: sub- and supersolutions for the heterogeneous logistic equation, J. Differential Equations 278 (2021), 189–219.

[Q1635] C. Aricò and T. Tucciarelli: Monotonic solutions of heterogeneous anisotropic diffusion problems, J. Comput. Phys. 252 (2013), 219–249.

[Q1636] A. G. Churbanov and P. N. Vabishchevich: Numerical solution of boundary value problems for the eikonal equation in an anisotropic medium, J. Comput. Appl. Math. 362 (2019), 55–67.

[Q1637] A. Cihangir: On 0/1-polytopes with nonobtuse triangulations, Appl. Math. Comput. 267 (2015), 17–27.

[Q1638] A. Cihangir: Nonobtuse simplices and special matrix classes, PhD Thesis, Korteweg-de Vries Institute, Uviv. of Amsterdam, 2015, 1–195.

[Q1639] A. Diegel and S. W. Walker: A finite element method for a phase field model of nematic liquid crystal droplets, Commun. Comput. Phys. 25 (2019), 155–188.

[Q1640] L. Diening, C. Kreuzer, and S. Schwarzacher: Convex hull property and maximum principle for finite element minimisers of general convex functionals, Numer. Math. 124 (2013), 685–700.

[Q1641] Q. Du, L. Ju, X. Li, and Z. Qiao: Maximum bound principles for a class of semilinear parabolic equations and exponential time-differencing schemes, SIAM Rev. 63 (2021), 317–359.

[Q1642] N. Ferro, S. Micheletti, and S. Perotto: Anisotropic mesh adaptation for crack propagation induced by a thermal shock in 2D, Comput. Methods Appl. Mech. Engrg. 331 (2018), 138–158.

[Q1643] V. Gyrya, K. Lipnikov et al.: M-adaptation in the mimetric finite difference method, Math. Mod. Meth. Appl. Sci. 24 (2014), 1621–1663.

[Q1644] Q. Huang, K. Jiang, and J. Li: Exponential time differencing schemes for the Peng-Robinson equation of state with preservation of maximum bound principle, Adv. Appl. Math. Mech. 14 (2022), 494–527.

[Q1645] W. Huang: Discrete maximum principle and a Delaunay-type mesh condition for linear finite element approximations of two-dimensional anisotropic diffusion problem, Numer. Math. 4 (2011), 319–334.

[Q1646] W. Huang: Sign-preserving of principal eigenfunctions in P1 finite element approximation of eigenvalue problems of second-order elliptic operators, J. Comput. Phys. 274 (2014), 230–244.

[Q1647] W. Huang and Y. Wang: Discrete maximum principle for the weak Galerkin method for anisotropic diffusion problems, Comm. Comput. Phys. 18 (2015), 65–90.

[Q1648] J.-L. Guermond, M. Maier, B. Popov, and I. Tomas: Second-order invariant domain preserving approximation of the compressible Navier-Stokes equations, Comput. Methods Appl. Mech. Engrg. 375 (2021), Paper No. 113608, 17 pp.

[Q1649] K. Jiang, L. Ju, X. Li: Unconditionally stable exponential time differencing schemes for the mass-conserving Allen-Cahn equation with nonlocal and local effects, Numer. Methods Partial Differential Equations 38 (2022), 1636–1657.

[Q1650] J. Karátson: A discrete maximum principle for nonlinear elliptic systems with interface condtions, Proc. of the 6th Internat. Conf. on Large-Scale Sci. Comput., Sozopol, Bulgaria, 2009, (ed. by I. Lirkov et al.), LNCS 5910, Springer-Verlag, 2010, 580–587.

[Q1651] M. Klejchová: The discrete maximum principle in the first order finite element method, Thesis, Faculty of Mathematics and Physics, Charles University, Prague, 2010, 1–59.

[Q1652] C. Kreuzer: A note on why enforcing discrete maximum principles by a simple a posteriori cutoff is a good idea, Numer. Methods Partial Differential Equations 30 (2014), 994–1002.

[Q1653] X. Li: Anisotropic mesh adaptation for the finite element solution of anisotropic diffusion problems, Thesis, Univ. of Kansas, 2011, pp. viii + 139.

[Q1654] X. Li: Anisotropic mesh adaptation for finite element solution of anisotropic porous medium equation. Comput. Math. Appl. 75 (2018), 2086–2099.

[Q1655] X. Li and W. Huang: An anisotropic mesh adaptation method for the finite element solution of heterogeneous anisotropic diffusion problems, J. Comput. Phys. 229 (2010), 8072–8094.

[Q1656] X. Li and W. Huang: Maximum principle for the finite element solution of time-dependent anisotropic diffusion problems, Numer. Methods Partial Differential Equations 29 (2013), 1963–1985.

[Q1657] X. Li and W. Huang: Anisotropic mesh adaptation for 3D anisotropic diffusion problems with application to fractured reservoir simulation. Numer. Math. Theory Methods Appl. 10 (2017), 913–940.

[Q1658] L. Lin et al.: Mesh conditions of the preserving-maximum-principle linear finite volume element method for anisotropic diffusion-convection-reaction equations, Acta Math. Appl. Sinica – Engl. Ser. 39 (2023), 707–732.

[Q1659] K. Lipnikov, G. Manzini, and D. Svyatskiy: Analysis of the monotonicity conditions in the mimetic finite difference method for elliptic problems, J. Comput. Phys. 230 (2011), 2620–2642.

[Q1660] C. Lu and W. Huang: Maximum principle in linear finite element approximations of anisotropic diffusion-convectio-reaction problems, Numer. Math. 127 (2014), 515–537.

[Q1661] C. Lu, W. Huang, and E. S. Van Vleck: The cutoff method for numerical computation of nonnegative solutions of parabolic PDEs with application to anisotropic diffusion and Lubrication-type equations, J. Coput. Phys. 242 (2013), 24–36.

[Q1662] A. Morvant, E. Seal, and S. W. Walker: A coupled Ericksen/Allen-Cahn model for liquid crystal droplets. Comput. Math. Appl. 75 (2018), 4048–4065.

[Q1663] S. Nepal, Y. Wondmagegne, and A. Muntean: Error estimates for semi-discrete finite element approximations for a moving boundary problem capturing the penetration of diffusants into rubber, Int. J. Numer. Anal. Model. 19 (2022), 101–125.

[Q1664] R. H. Nochetto, S. W. Walker, and W. Zhang: A finite element method for nematic liquid crystals with variable degree of orientation, SIAM J. Numer. Anal. 55 (2017), 1357–1386.

[Q1665] R. H. Nochetto, S. W. Walker, and W. Zhang: The Ericksen model of liquid crystals with colloidal and electric effects, J. Comput. Phys. 352 (2018), 568–601.

[Q1666] S. Pollock and Y. Zhu: A matrix analysis approach to discrete comparison principles for nonmonotone PDE, Numer. Algorithms 83 (2020), 1007–1027.

[Q1667] S. Pollock and Y. Zhu: Discrete comparison principles for quasilinear elliptic PDE, Appl. Numer. Math. 156 (2020), 106–124.

[Q1668] P. Salinas, C. Rodrigo, J. F. Gaspar, and F. J. Lisbona: Multigrid methods for cell-centered discretization on triangular meshes, Numer. Lin. Alg. Appl. 20 (2013), 626–644.

[Q1669] P. Skrzypacz: Finite element analysis for flows in chemical reactions, Dissertation, Univ. Wroclaw, 2010, 1–123.

[Q1670] P. Skrzypacz and D. Wei: On the discrete maximum principle for the local projection scheme with shock capturing, J. Comput. Math. 35 (2017), 547–568.

[Q1671] E. VanderZee, A. N. Hirani, V. Zharnitsky, and D. Guoy: A dihedral acute triangulation of the cube, Comput. Geom. 43 (2010), 445–452.

[Q1672] T. Vejchodský: Discrete maximum principle for prismatic finite elements, Proc. Algorithms 2009, Prague, 266–275.

[Q1673] T. Vejchodský: Higher-order discrete maximum principle for 1D diffusion-reaction problems, Appl. Numer. Math. 60 (2010), 486–500.

[Q1674] T. Vejchodský: The discrete maximum principle for Galerkin solutions of elliptic problems, Cent. Eur. J. Math. 10 (2012), 25–43.

[B59] **J. Brandts, S. Korotov, and M. Křížek**, *On the equivalence of regularity criteria for triangular and tetrahedral finite element partitions*, Comput. Math. Appl. **55** (2008), 2227–2233.

Cited in:

[Q1675] J. Dalík: Averaging of directional derivatives in vertices of nonobtuse regular triangulations, Numer. Math. 116 (2010), 619–644.

[Q1676] J. Dalík: Reduced averaging of directional derivatives in the vertices of unstructured triangulations, Appl. Numer. Math. 67 (2013), 89–97.

[Q1677] H.-Y. Duan, F. Jia, P. Lin, and R. C. E. Tan: The local L^2 projected C^0 finite element method for Maxwell problem, SIAM J. Numer. Anal. 47 (2009), 1274–1303.

[Q1678] H.-Y. Duan and R. C. E. Tan: On the Poincaré-Friedrichs inequality for piecewise H^1 functions in anisotropic discontinuous Galerkin finite element methods, Math. Comp. 80 (2010), 119–140.

[Q1679] H.-Y. Duan, F. Qiu, R. C. E. Tan, and W. Zheng: An adaptive FEM for a Maxwell interface problem. J. Sci. Comput. 67 (2016), 669–704.

[Q1680] M. Duprez, V. Lleras, and A. Lozinski: Finite element method with local damage of the mesh, ESAIM Math. Model. Numer. Anal. 53 (2019), 1871–1891.

[Q1681] X.-W. Gao, H.-Y. Liu, J. Lv, and M. Cui: A novel element differential method for solid mechanical problems using unstructured triangular and tetrahedral elements, Comput. Math. Appl. 78 (2019), 3563–3585.

[Q1682] A. Hannukainen: Finite element methods for Maxwell's equations, Master Thesis, Helsinki Univ. of Technology, 2007, 1–60.

[Q1683] R. Horváth, I. Faragó, and J. Karátson: Qualitative properties of discrete nonlinear parabolic operators, Numer. Math. 143 (2019), 529–554.

[Q1684] H. Ishizaka: Anisotropic RaviartThomas interpolation error estimates using a new geometric parameter, Calcolo 59 (2022), Article No. 50.

[Q1685] H. Ishizaka, K. Kobayashi, R. Suzuki, and T. Tsuchiya: A new geometric condition equivalent to the maximum angle condition for tetrahedrons, Comput. Math. Appl. 99 (2021), 323–328.

[Q1686] H. Ishizaka, K. Kobayashi, and T. Tsuchiya: General theory of interpolation error estimates on anisotropic meshes, Jpn. J. Ind. Appl. Math. 38 (2021), 163–191.

[Q1687] A. Khademi: Convergence on degenerating finite element meshes, PhD Thesis, Western Norway Univ. of Appl. Sci., Bergen, 2020.

[Q1688] K. Kobayashi and T. Tsuchiya: A priori error estimates for Lagrange interpolation on triangles, Appl. Math. 60 (2015), 485–499.

[Q1689] K. Kobayashi and T. Tsuchiya: Lectures on Error Analysis of Interpolation on Simplicial Triangulations without the Shape-Regularity Assumption Part 1: Two-dimensional Lagrange Interpolation, arXiv:1908.03894v1, Aug 2019, 34 pp.

[Q1690] S. P. Mao and Z. C. Shi: Error estimates of triangular finite elements under a weak angle condition, J. Comput. Appl. Math. 230 (2009), 329–331.

[Q1691] F. Perdomo and Á. Plaza: Properties of triangulations obtained by the longest-edge bisection, Cent. Eur. J. Math. 12 (2014), 1796–1810.

[Q1692] M. S. Petrov and T. D. Todorov: Successive partitions of ideal 4D-domains, C. R. Acad. Bulg. Sci. (2018), 1–8.

[Q1693] Z. Sun and Y. Xing: On generalized Gauss-Radau projections and optimal error estimates of upwind-biased DG methods for the linear advection equation on special simplex meshes, J. Sci. Comput. 95 (2023), Article no. 40, 36 pp.

[**B61**] **M. Křížek**, *Does a gravitational aberration contribute to the accelerated expansion of the Universe?*, Comm. Comput. Phys. **5** (2009), 1030–1044.

Cited in:

[Q1694] V. Vavryčuk: Gravitational orbits in the expanding universe revisited, Frontiers Astron. Space Sci. 10 (2023), Article 1071743, 1–18.

[**B62**] **L. Liu, M. Huang, K. Yuan, and M. Křížek**, *Numerical approximation of a nonlinear 3D heat radiation problem*, Adv. Appl. Math. Mech. 1 (2009), 125–139.

Cited in:

[Q1695] B. Borsos, J. Karátson: Quasi-Newton iterative solution of anisotropic elliptic problems in 3D with boundary nonlinearity, Comput. Methods Appl. Math. 22 (2022), 327–340.

[Q1696] R. Čiegis, G. Jankevičiuté, and N. Tumanova: On efficient numerical algorithms for simulation of high power electrical cables, Math. Model. Anal. 20 (2015), 701–714.

[Q1697] R. Čiegis, G. Jankevičiuté, and O. Suboč: Numerical simulation of the heat conduction in composite materials, Math. Model. Anal. 15 (2010), 9–22.

[**B63**] **J. Brandts, S. Korotov, M. Křížek, and J. Šolc**, *On nonobtuse simplicial partitions*, SIAM Rev. **51** (2009), 317–335.

Cited in:

[Q1698] J. W. Barrett, D. J. Knezevic, and E. Süli: Kinetic models of dilute polymers: Analysis, approximation and computation, Lecture Notes, 2009, 1–225.

[Q1699] J. W. Barrett and E. Süli: Finite element approximation of kinetic dilute polymer models with microscopic cut-off, ESAIM Math. Model. Numer. Anal. 45 (2011), 39–89.

[Q1700] C. J. Bishop: Nonobtuse triangulations of PSLCS, Preprint, 2010, 1–74.

[Q1701] F. Bouchut, D. Doyen, and R. Eymard: Convection and total variation flow, IMA J. Numer. Anal. 34 (2014), 1037–1071.

[Q1702] F. Bouchut, D. Doyen, and R. Eymard: Convection and total variation flowerratum and improvement, IMA J. Numer. Anal. 37 (2017), 2139–2169.

[Q1703] E. Brea: An extension of Nieder-Mead method to nonlinear mixed-integer optimization problems, Revisita Inter. Meth. Numer. Cal. Diser. Ingen. 29 (2013), 163–174.

[Q1704] K. Chemmangat, T. Dhaene, and L. Knockaert: Scalable marcomodelling of microwave system responses using sequential sampling with path-simplices, Electronic Letters 49 (2013), 921–922.

[Q1705] S. H. Christiansen and T. G. Halvorsen: A gauge invariant discretization on simplicial grid of the Schrödinger eigevnvalue problem in an electromagnetic field, SIAM J. Numer. Anal. 49 (2011), 331–345.

[Q1706] A. Cihangir: On 0/1-polytopes with nonobtuse triangulations, Appl. Math. Comput. 267 (2015), 17–27.

[Q1707] A. Cihangir: Nonobtuse simplices and special matrix classes, PhD Thesis, Korteweg-de Vries Institute, Uviv. of Amsterdam, 2015, 1–195.

[Q1708] J. Dalík: Averaging of directional derivatives in vertices of nonobtuse regular triangulations, Numer. Math. 116 (2010), 619–644.

[Q1709] M. Elshebli: Discrete maximum principle for finite element solution of nonstationary diffusion-reaction problems. Appl. Math. Model. 32 (2008), 1530–1541.

[Q1710] S. Engblom, L. Frem, A. Hellander, and P. Lötstedt: Simulation of stochastic reaction-diffusion processes on unstructured meshes, SIAM J. Sci. Comput. 31 (2009), 1774–1797.

[Q1711] R. Frigerio and M. Maraschini: On volumes of truncated tetrahedra with constrained edge lengths. Periodica Math. Hungarica 79 (2019), 32–49.

[Q1712] M. Gonzalez, B. Schmidt, and M. Orliz: Force-stepping integrators in Lagrangian mechanics, Internat. J. Numer. Methods Engrg. 84 (2010), 1407–1450.

[Q1713] M. Hajja and H. Martini: Orthocentric simplices as the true generalizations of triangles, Math. Intel. 35 (2013), 16–28.

[Q1714] J. Hanning, R. C. S. Lai, and T. C. M. Lee: Computational issues of generalized fiducial inference, Comput. Stat. Data Anal. 71 (2014), 849–858.

[Q1715] R. Hošek: Construction and shape optimization of simplicial meshes in d-dimensional space, Discrete Comput. Geom. 59 (2018), 972–989.

[Q1716] R. Hošek: Existence of well-centered simplicial face-to-face tiling of five-dimensional space. Discrete Comput. Geom. 66 (2021), 1168–1189.

[Q1717] X. Hu, C. Rodrigo, F. J. Gaspar, and L. T. Zikatanov: A nonconforming finite element method for the Biot's consolidation model in poroelasticity, J. Comput. Appl. Math. 310 (2017), 143–154.

[Q1718] W. Huang: Sign-preserving of principal eigenfunctions in P1 finite element approximation of eigenvalue problems of second order elliptic operators, J. Comput. Phys. 274 (2014), 230–244.

[Q1719] A. Kharazishvili: Three-colorings of the Euclidean plane and associated triangles of a prescribed type, Georgian Math. J. 22 (2015), 393–396.

[Q1720] S.-h. Kim and G. S. Walsh: Coxeter groups, hyperbolic cubes and acute triangulations, J. Topol. 9 (2016), 117–142.

[Q1721] M. Konvalika and I. Pak: Triangulations of Cayley and Tutte polytops, Adv. Math. 245 (2013), 1–33.

[Q1722] M. Konvalika and I. Pak: Triangulations of Cayley and Tutte polytops, Discrete Math. Theor. Comput. Sci. (2012), 469–480.

[Q1723] E. Kopczyński, I. Pak, and P. Przytycki: Acute triangulations of polyhedra and the Euclidean space, Proc. of the Annual Sympos. on Comput. Geom., Snowbird, Utah, 2010, 307–313.

[Q1724] E. Kopczyński, I. Pak, and P. Przytycki: Acute triangulations of polyhedra and R^N, Combinatorica 32 (2012), 85–110.

[Q1725] D. Z. de Kramer: Beschrijving van Simplices met Lineaire Algebra. Bachelor Thesis, KdV Instituut voor wiskunde, Faculteit der Natuurwetenschappen, Wiskunde en Informatica, Universiteit van Amsterdam, (in Dutch), 2008.

[Q1726] P. Kůs, P. Šolín, and D. Andrs: Arbitrary-level hanging nodes for adaptive hp-FEM approximations in 3D, J. Comput. Appl. Math. 270 (2014), 121–133.

[Q1727] D. Leykekhman and B. Li: Weak discrete maximum principle of finite element methods in convex polyhedra, Math. Comp. 90 (2021), no. 327, 1–18.

[Q1728] X. Li: Anisotropic mesh adaptation for the finite element solution of anisotropic diffusion problems, Thesis, Univ. of Kansas, 2011, pp. viii + 139.

[Q1729] D. J. T. Liu and Q. Du: Optimization of subdivision invariant tetrahedra, Internat. J. Comput. Geom. Appl. 25 (2015), 37–56.

[Q1730] L. Meinecke, S. Engblom, A. Hellander, and P. Lötstedt: Analysis and design of jump coefficients in discrete stochastic diffusion models, SIAM J. Sci. Comput. 38 (2016), A55–A83.

[Q1731] M. A. Padrón and Á. Plaza: Similarity classes generated by the 8T-LE partition applied to trirectangular tetrahedra, J. Comput. Appl. Math. 409 (2022), Paper No. 114150, 17 pp.

[Q1732] M. S. Petrov and T. D. Todorov: Stable subdivision of 4D polytopes, Numer. Algorithms 79 (2018), 633–656.

[Q1733] M. S. Petrov and T. D. Todorov: Successive partitions of ideal 4D-domains, C. R. Acad. Bulg. Sci. (2018), 1–8.

[Q1734] M. S. Petrov and T. D. Todorov: Refinement strategies related to cubic tetrahedral meshes, Appl. Numer. Math. 137 (2019), 169–183.

[Q1735] M. S. Petrov and T. D. Todorov: Lumping of the mass matrix in 4D unstructured hybrid meshes, submitted to Comput. Math. Appl. in 2021, 1–16.

[Q1736] F. Sun, Y.-K. Wang, D.-M. Yan, Y. Liu, B. Livy: Obtuse triangle suppression in anisotropic meshes, Comput. Aided Geom. Design 28 (2011), 537–548.

[Q1737] T. D. Todorov: The optimal refinement strategy for 3-D simplicial meshes, Comput. Math. Appl. 66 (2013), 1272–1283.

[Q1738] J. Vala, P. Jarošová: Optimization approaches to some problems of building design, Appl. Math. 63 (2018), no. 3.

[Q1739] E. VanderZee, A. N. Hirani, D. Guoy, and E. A. Ramos: Well-centered triangulation, SIAM J. Sci. Comput. 31 (2010), 4497–4523.

[Q1740] E. VanderZee, A. N. Hirani, V. Zharnitsky, and D. Guoy: A dihedral acute triangulation of the cube, Comput. Geom. 43 (2010), 445–452.

[Q1741] E. VanderZee, A. N. Hirani, D. Guoy, V. Zharnitsky, and E. A. Ramos: Geometric nad combinatorial properties of well-centered triangulations in three and higher dimensions, Comput. Geom. 46 (2013), 700–724.

[Q1742] T. Vejchodský: The discrete maximum principle for Galerkin solutions of elliptic problems, Cent. Eur. J. Math. 10 (2012), 25–43.

[Q1743] C. T. Zamfirescu: Survey of two-dimesional acute triangulations, Discrete Math. 313 (2013), 35–49.

[B64] **J. Brandts, S. Korotov, and M. Křížek**, *On the equivalence of ball conditions for simplicial finite elements in R^d*, Appl. Math. Lett. **22** (2009), 1210–1212.

Cited in:

[Q1744] R. Hošek: Strongly regular family of boundary-fitted tetrahedral meshes of bounded C^2 domains, Appl. Math. 61 (2016), 233–251.

[Q1745] R. Hošek: Construction and shape optimization of simplicial meshes in d-dimensional space, Discrete Comput. Geom. 59 (2018), 972–989.

[Q1746] A. Khademi: Convergence on degenerating finite element meshes, PhD Thesis, Western Norway Univ. of Appl. Sci., Bergen, 2020.

[Q1747] M. S. Petrov and T. D. Todorov: Stable subdivision of 4D polytopes, Numer. Algorithms 79 (2018), 633–656.

[Q1748] M. S. Petrov and T. D. Todorov: Successive partitions of ideal 4D-domains, C. R. Acad. Bulg. Sci. (2018), 1–8.

[Q1749] M. S. Petrov and T. D. Todorov: Properties of the multidimensional finite elements, accepted by Appl. Math. Comput. (2020), 1–30.

[Q1750] M. S. Petrov and T. D. Todorov: The rate of divergence of hypercubic pyramidal elements, submitted in 2021, 1–5.

[B65] **L. Somer and M. Křížek**, *On symmetric digraphs of the congruence $x^k \equiv y \pmod{n}$*, Discrete Math. **309** (2009), 1999–2009.

Cited in:

[Q1751] U. Ahmad and S. M. Husnine: The power digraphs of safe primes, Bull. Iranian Math. Soc. 42 (3) (2016), 749–759.

[Q1752] U. Ahmad and M. Moeen: The classification of finite groups by using iteration digraphs, Czechoslovak Math. J. 66 (2016), 1103–1117.

[Q1753] U. Ahmad and M. Moeen: The digraphs arising by the power maps of generalized quaternion groups, J. Algebra Appl. 16(9) (2017), 1750179.

[Q1754] U. Ahmad and H. Syed: Characterization of power digraphs modulo n, Comment. Math. Univ. Carolin. 52,3 (2011), 359–367.

[Q1755] U. Ahmad and H. Syed: On the heights of power digraphs modulo n, Czechoslovak Math. J. 62 (2012), 541–556.

[Q1756] U. Ahmad and M. Moeen: The digraphs arising by the power maps of generalized quaternion groups, J. Algebra Appl. 16 (2017), 1750179, 12 pp.

[Q1757] A. D. Christopher: A class of graphs based on a set of moduli, Integers 22 (2022), Article no. A89, 15 pp.

[Q1758] G. Deng and P. Yuan: Isomorphic digraphs from powers modulo p, Czechoslovak Math. J. 61 (2011), 771–779.

[Q1759] G. Deng and P. Yuan: On the symmetric digraphs from powers modulo n, Discrete Math. 312 (2012), 720–728.

[Q1760] G. Dresden and W. Tu: Finding cycles in the k-th power digraphs over the integers modulo a prime. Involve 11 (2018), 181–194.

[Q1761] M. Khalid Mahmood and F. Ahmad: A classification of cyclic nodes and enumeration of components of a class of discrete graphs, Appl. Math. Inform. Sci. 9 (2015), 103–112.

[Q1762] J. Kramer-Miller: Structural properties of power digraphs modulo n, Preprint, Institute of Technology, 2009, 1–19.

[Q1763] Y. Meemark and N. Wiroonsri: The digraph of the kth power mapping of the quotient ring of polynomials over finite fields, Finite Fields Appl. 18 (2012), 179–191.

[Q1764] A. Sawkmie and M. M. Singh: On the tree structure of the power digraphs modulo n, Czechoslovak Math. J. 65 (2015), 923–945.

[Q1765] A. Sawkmie and M. M. Singh: On the uniqueness of the factorization of power digraphs modulo n, Rend. Semin. Mat. Univ. Padova 140 (2018), 185–219.

[Q1766] A. Sawkmie and M. M. Singh: Digraphs associated with the kth power map on the quotient ring of polynomilas over finite fields, J. Algebra Appl. 18 (2019), no. 11, 1950218, 18 pp.

[Q1767] M. Sha: On the cycle structure of repeated exponentiation modulo a prime power, Fibonacci Quart. 49 (2011), 340–347.

[Q1768] M. Sha: Digraphs from endomorphisms of finite cyclic groups, J. Combin. Math. Combin. Comput. 83 (2012), 105–120.

[Q1769] I. Tocharoenirattisai and Y. Meemark: Exponent of local ring extensions of Galois rings and digraphs of the kth power mapping, Turkish J. Math. 41 (2) (2017), 223–234.

[Q1770] Y. Wei, J. Nan, and G. Tang: The digraphs from finite fields, Ars Combin. 102 (2011), 297–304.

[Q1771] Y. Wei, J. Nan, and G. Tang: Structure of cubic mapping graphs for the ring of Gaussian integers modulo n, Czechoslovak Math. J. 62 (2012), 527–539.

[Q1772] Y. Wei and G. Tang: The digraphs from finite fields, Ars Combinatorica 102 (2011), 297–304.

[Q1773] Y. Wei and G. Tang: The iteration digraphs of finite commutative rings, Turkish J. Math. 39 (2015), 872–883.

[Q1774] J. Zhao and G. Deng: Digraph from power mapping on noncommutative groups, J. Algebra Appl. 19 (2020), no. 5, 2050084, 10 pp.

[B67] **A. Hannukainen, S. Korotov, and M. Křížek**, *Nodal $\mathcal{O}(h^4)$-superconveregence in 3D by averaging piecewise linear, bilinear, and trilinear FE approximations*, J. Comput. Math. **28** (2010), 1–10.

Cited in:

[Q1775] X. Feng, R. He, and Z. Chen: H^1-superconvergence of finite difference method based on Q_1-conforming element on quasi-uniform mesh for 3D Poisson equation, Numer. Methods Partial Differential Equations 36 (2020), 29–48.

[Q1776] R. He, X. Feng, and Z. Chen: H^1-superconvergence of a difference finite element method based on the $P_1 - P_1$-conforming element on non-uniform meshes for the 3D Poisson equations, Math. Comp. 87 (2018), 1659–1688.

[Q1777] W.-M. He, J.-Z. Cui, Q.-D. Zhu, and Z.-L. Wen: The local superconvergence of the linear finite element method for the Poisson problem, Numer. Methods Partial Differential Equations 30 (2014), 930–946.

[Q1778] T. L. Horváth and F. Izsák: Implicit a posteriori error estimation using path recovery technique, Cent. Eur. J. Math. 10 (2012), 55–72.

[Q1779] J. Liu: Superconvergence of tensor-product quadratic pentahedral elements fro variable coefficient elliptic equations, J. Comput. Anal. Appl. 745–751.

[Q1780] J. Liu: Pointwise supercloseness of the displacement for tensor-product quadratic pentahedral finite elements, Appl. Math. Lett. 25 (2012), 1458–1463.

[Q1781] J. Liu, G. Hu, and Q. D. Zhu: Superconvergence of tetrahedral quadratic finite elements for a variable coefficient elliptic equation, Numer. Methods Partial Differential Equations 29 (2013), 1043–1055.

[Q1782] J. Liu, W. Liu, and Q. D. Zhu: Locally pointwise superconvergence of the tensor-product finite element in three dimensions, Appl. Math. 64 (2019), 383–396.

[Q1783] J. Liu and Q. D. Zhu: Superconvergence of the function value for pentahedral finite elements for an elliptic equation with varying coefficients, Bound. Value Probl. 2020, Paper No. 7, 15 pp.

[Q1784] J. Liu and Q. D. Zhu: Local pointwise convergence of the 3D finite element, Appl. Math. J. Chinese Univ. 34 (2019), 1–14.

[Q1785] J.-H. Liu and Q. D. Zhu: Local pointwise convergence of the 3D finite element, Appl. Math. J. Chinese Univ. Ser. B 38 (2023), 210–222.

[Q1786] L. Meng and Z. Zhang: Ultraconvergence of eigenvalues for bi-quadratic finite elements, J. Comput. Math. 30 (2012), 555–564.

[Q1787] M. Pani and F. Taddei: The cell method: Quadratic interpolation with tetrahedra for 3D scalar fields, Comput. Mod. Engrg. Sci. 94 (2013), 279–300.

[Q1788] E. C. Romao, J. A. Martins, and L. F. M de Moura: Three-dimensional heat conduction in multi-connected domains using GFEM with hexaedrals of 27 nodes, Internat. J. Math. Comput. Simul. 6 (2012), 248–256.

[Q1789] E. C. Romo, M. D. Campos, and L. F. M. Moura: Application of the Galerkin and least-squares finite element methods in the solution of 3D Poisson and Helmholtz equations, Comput. Math. Appl. 62 (2011), 4288–4299.

[B69] **A. Hannukainen, S. Korotov, and M. Křížek**, *On global and local mesh refinements by a generalized conforming bisection algorithm*, J. Comput. Appl. Math. **235** (2010), 419–436.

Cited in:

[Q1790] M. Alkämper, F. Gaspoz, and R. Klöfkorn: A weak compatibility condition for newest vertex bisection in any dimension, SIAM J. Sci. Comput. 40 (2018), A3853–A3872.

[Q1791] R. Falla et al.: Mesh adaption for two-dimensional bounded and free-surface flows with the particle finite element method, Comput. Particle Mech. (2023).

[Q1792] F. Perdomo and Á. Plaza: Properties of the longest-edge bisection of triangles, Cent. Eur. J. Math. 12 (2014), 1796–1810.

[Q1793] F. Perdomo, Á. Plaza, E. Quevedo, and J. P. Suárez: A mathematical proof of how fast the diameters of a triangle mesh tend to zero after repeated trisection, Math. Comput. Simul. 106 (2014), 95–108.

[Q1794] J. P. Suárez, T. Moreno, P. Abad, and Á. Plaza: Convergence speed of generalized longest-edge based refinement, LN in Electrical Engrg. 229 (2013), 511–522.

[Q1795] J. P. Suárez, Á. Plaza, and T. Moreno: Geometric diagram for representing shape quality in mesh refinement, Proc. Conf. Applications of Mathematics 2015 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 225–235.

[B71] **S. Korotov and M. Křížek**, *Nonobtuse local tetrahedral refinements towards a polygonal face/interface*, Appl. Math. Lett. **24** (2011), 817–821.

Cited in:

[Q1796] L. Diening, C. Kreuzer, and S. Schwarzacher: Convex hull property and maximum principle for finite element minimisers of general convex functionals, Numer. Math. 124 (2013), 685–700.

[Q1797] C. Kreuzer: A note on why enforcing discrete maximum principles by a simple a posteriori cutoff is a good idea, Numer. Methods Partial Differential Equations 30 (2014), 994–1002.

[**B72**] **L. Liu, K. B. Davies, M. Křížek, and L. Guang**, *On higher order pyramidal finite elements*, Adv. Appl. Math. Mech. **3** (2011), 131–140.

Cited in:

[Q1798] M. Ainsworth, O. Davydov, and L. L. Schumaker: Bernstein-Bézier finite elements on tetrahedral-hexahedral-pyramidal partitions, Comput. Methods Appl. Mech. Engrg. 304 (2016), 140–170.

[Q1799] M. Ainsworth and G. Fu: A lowest-order composite finite element exact sequence on pyramids, Comput. Methods Appl. Mech. Engrg. 324 (2017), 110–127.

[**B73**] **M. Křížek, F. Luca, I. Shparlinski, and L. Somer**, *On the complexity of testing elite primes*, J. Integer Seq. **14** (2011), article 11.1.2.

Cited in:

[Q1800] M. Just: On upper bounds for the count of elite primes, Integers 20 (2020), Paper No. A76, 5 pp.

[Q1801] T. Müller: On the exponents of non-trivial divisors of odd numbers and a generalization of Proth's primality theorem J. Integer Seq. 20 (2016), article no. 17.2.7.

[**B75**] **M. Křížek, H.-G. Roos, and W. Chen**, *Two-sided bounds of the discretization error for finite elements*, ESAIM Math. Model. Numer. Anal. **45** (2011), 915–924.

Cited in:

[Q1802] H. Guo and X. Yang: Gradient recovery for elliptic interface problem: I. Body-fitted mesh, Commun. Comput. Phys. 23 (2018), 1488–1511.

[Q1803] J. Hu, Y. Huang, and Q. Lin: Lower bound for eigenvalues of elliptic operators: by nonconforming finite element methods, J. Sci. Comput. 61 (2014), 196–221.

[Q1804] J. Hu and C.-Z. Shi: The best L^2 norm error estimate of lower order finite element methods for the fourth order problem, J. Comput. Math. 30 (2012), 449–460.

[Q1805] Z. C. Li, H. T. Huang, and N. N. Yan: Global superconvergence of finite elements for elliptic equations and its applications, Science Press, Beijing, 2012.

[Q1806] Q. Li, Q. Lin, and H. Xie: Nonconforming finite element approximations of the Steklov eigenvalue problem and its lower bound approximation, Appl. Math. 58 (2013), 129–151.

[Q1807] Q. Lin, H. Xie, and J. Xu: Lower bounds of the discretization for piecewise polynomials, Math. Comp. 83 (2014), 1–13.

[**B76**] **J. Brandts, A. Hannukainen, S. Korotov, and M. Křížek**, *On angle conditions in the finite element method*, Soc. Esp. Mat. Apl. J. **56** (2011), 81–95..

Cited in:

[Q1808] N. V. Baidakova: A triangular finite element with new approximate properties (Russian), Tr. Inst. Mat. Mekh. 21 (2015), 67–77; translation in Proc. Steklov Inst. Math. 296 (2017), suppl. 1, S74–S84.

[Q1809] N. V. Baidakova: On P. Jamet's estimates for finite elements with interpolation at uniform nodes of a simplex (Russian), Mat. Tr. 20 (2017), 43–74; translation in Siberian Adv. Math. 28 (2018), 1–22.

[Q1810] X. Feng, Y. Li, and Y. Zhang: Strong convergence of a fully discrete finite element method for a class of semilinear stochastic partial differential equations with multiplicative noise, J. Comput. Math. 39 (2021), no. 4, 574–598.

[Q1811] R. Herzog, J. Obermeier, and G. Wachsmuth: Annular and sectorial sparsity in optimal control of elliptic equations, Comput. Optim. Appl. 62 (2015), 157–180.

[Q1812] H. Ishizaka, K. Kobayashi, R. Suzuki, and T. Tsuchiya: A new geometric condition equivalent to the maximum angle condition for tetrahedrons, Comput. Math. Appl. 99 (2021), 323–328.

[Q1813] A. Rand: Average interpolation under the maximum angle condition, SIAM J. Numer. Anal. 50 (2012), 2538–2559.

[Q1814] M. Skopenkov: The boundary value problem for discrete analytic functions. Adv. Math. 240 (2013), 61–87.

[**B78**] **M. Křížek**, *Dark energy and the anthropic principle*, New Astronomy **17** (2012), 1–7.

Cited in:

[Q1815] Y. V. Dumin: The faint young Sun paradox in the context of modern cosmology, Astronom. Tsirkulyar 16 (2015), 1–5 pp., arXiv: 1505.03572v1

[Q1816] Y. V. Dumin: Local Hubble expansion: Current state of the problem, Proc. Conf. Cosmology on Small Scales 2016: Local Hubble Expansion and Selected Controversies in Cosmology, M. Křížek, Y. V. Dumin (eds.), Inst. of Math., Czech Acad. Sci., Prague, 2016, 23–40.

[Q1817] L. Iorio: A closer Earth and the Faint Young Sun Paradox: Modification of the laws of gravitation, or Sun/Earth mass losses? Galaxies 1 (2013), 192–209.

[Q1818] A. Maeder: Scale invariant cosmology: Cosmological models and small scale effects, Proc. Conf. Cosmology on Small Scales 2016: Local Hubble Expansion and Selected Controversies in Cosmology, M. Křížek, Y. V. Dumin (eds.), Inst. of Math., Czech Acad. Sci., Prague, 2016, 41–64.

[Q1819] Y. Pi skur and B. Medolin: Felinic principle and measurements of the Hubble parameter, 2013, arXiv: 1303.7382v1.

[Q1820] L. M. Tsang: The spring of the Earth, the Sun and the universe, J. Modern Phys. 4 (2013), 1205–1212.

[Q1821] V. Vavryčuk: Gravitational orbits in the expanding universe revisited, Frontiers Astron. Space Sci. 10 (2022), Article 1071743, 1–18.

[**B79**] **A. Hannukainen, S. Korotov, and M. Křížek**, *The maximum angle condition is not necessary for convergence of the finite element method*, Numer. Math. **120** (2012), 79–88.

Cited in:

[Q1822] F. Auricchio, F. Brezzi, A. Lefieux, and A. Reali: An "immeresed" finite element method based on locally anisotropic remeshing for the incompressible Stokes problem, Comput. Methods Appl. Mech. Engrg. 294 (2015), 428–448.

[Q1823] F. Auricchio, A. Lefieux, A. Reali, and A. Veneziani: A locally anisotropic fluid-structure interaction remeshing strategy for thin structures with applications to a hinged rigid leaflet, Internat. J. Numer. Methods Engrg. 107 (2016), 155–180.

[Q1824] P. R. Brune, M. G. Knepley, and L. R. Scott: Unstructured geometric multigrid in two and three dimensions on complex and graded meshes, SIAM J. Sci. Comput. 35 (2013), A173–A191.

[Q1825] S. Cao and L. Chen: Anisotropic error estimates of the linear virtual element method on polygonal meshes, SIAM J. Numer. Anal. 56 (2018), 2913–2939.

[Q1826] F. J. Domínguez-Mota, P. M. Fernández-Valdez, E. Ruiz-Diaz, G. Tinoco-Guerro, and J. G. Tinoco-Ruiz: An heuristic finite difference scheme on irregular plane regions, Appl. Math. Sci. 8 (2014), 671–683.

[Q1827] M. Duprez, V. Lleras, and A. Lozinski: Finite element method with local damage of the mesh, ESAIM Math. Model. Numer. Anal. 53 (2019), 1871–1891.

[Q1828] A. Gillette and A. Rand: Interpolation error estimates for harmonic coordinates on polytopes, ESAIM Math. Model. Numer. Anal. 50 (2016), 651–676.

[Q1829] H. Ishizaka, K. Kobayashi, and T. Tsuchiya: General theory of interpolation error estimates on anisotropic meshes, Jpn. J. Ind. Appl. Math. 38 (2021), 163–191.

[Q1830] K. Kobayashi and T. Tsuchiya: A Babuška–Aziz type proof of the circumradius condition, Japan J. Indust. Appl. Math. 31 (2014), 193–210.

[Q1831] K. Kobayashi and T. Tsuchiya: On the circumradius condition for piecewise linear triangular elements, Japan J. Indust. Appl. Math. 32 (2015), 65–76.

[Q1832] K. Kobayashi and T. Tsuchiya: A priori error estimates for Lagrange interpolation on triangles, Appl. Math. 60 (2015), 485–499.

[Q1833] K. Kobayashi and T. Tsuchiya: Lectures on Error Analysis of Interpolation on Simplicial Triangulations without the Shape-Regularity Assumption Part 1: Two-dimensional Lagrange Interpolation, arXiv:1908.03894v1, Aug 2019, 34 pp.

[Q1834] V. Kučera: A note on necessary and sufficient conditions for convergence of the finite elelment method, Proc. Conf. Applications of Mathematics 2015 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 132–139.

[Q1835] V. Kučera: Several notes on the circumradius condition, Appl. Math. 61 (2016), 287–298.

[Q1836] V. Kučera: On necessary and sufficient conditions for finite element convergence, ArXiv 1601.02942v1, 2016, 1–42.

[Q1837] M. Li and S. Mao: Anisotropic interpolation error estimates via orthogonal expansions, Cent. Eur. J. Math. 11 (2013), 621–629.

[Q1838] N. Moes et al.: The eXtreme Mesh deformation approach (X-MESH) for the Stefan phase change model, J. Comput. Phys. 477 (2023), Article nr. 111878.

[Q1839] P. Oswald: Divergence of FEM: Babuška-Aziz triangulations revisited, Appl. Math. 60 (2015), 473–484.

[Q1840] P. Oswald: Nonconforming $P1$ elements on distorted triangulations: Lower bounds for the discrete energy norm, to appear in Appl. Math. 62 (2017), 1–23.

[Q1841] A. Rand: Average interpolation under the maximum angle condition, SIAM J. Numer. Anal. 50 (2012), 2538–2559.

[Q1842] J. P. Suárez, T. Moreno, Á. Plaza, and P. Abad: Two-sided estimation of diameters reduction rate for the longest edge n-section of triangles with $n \geq 4$, Appl. Math. Comput. 224 (2013), 492–500.

[Q1843] Y. Wei et al.: The microscopic mechanisms of nonlinear rectification on Si-MOSFETs terahertz detector, Sensors 23 (2023), Article no. 5367.

[**B80**] **M. Křížek and P. Křížek**, *Why has nature invented three stop codons of DNA and only one start codon?*, J. Theor. Biol. **304** (2012), 183–187.

Cited in:

[Q1844] L. Arias, F. Martínez, D. González et al.: Modification of transfer RNA levels affects cyclin aggregation and the correct duplication of yeast cells, Front. Microbiol. (2021), Jan. 15, 11:607693.

[Q1845] R. L. Bertrand, M. Abdel-Hameed, and J. L. Sorensen: Limitations of the 'ambush hypothesis' at the single gene scale: what codon biases are to blame? Melecular Genetics and Genomics 290 (2015), 493–504.

[Q1846] B. Cuevas-Zuviría et al.: Informatic capabilities of translation and its implications for the origins of life, J, Molecular Evol., August (2023).

[Q1847] J. D. Demongeot and H. Seligmann: Spontaneous evolution of circular code in theoretical minimal RNA rings, Gene 705 (2019), 95–102.

[Q1848] J. Demongeot and H. Seligmann: Pentamers with non-redundant frames: Bias for natural circular code codons, J. Molecular Evolution, 88 (2020), 194–201.

[Q1849] N. El Houmami, H. Seligmann: Evolution of nucleotide punctuation marks: From structural to linear signals, Front. Genet. (2017), Mar. 27, 8:36.

[Q1850] S. Kak: Self-similarity and the maximum entropy principle in the genetic code, Theor. Biosci. (2023), July.

[Q1851] H. Seligmann: Polymerization of non-complementary RNA: Systematic symmetric nucleotide exchanges mainly involving uracil produce mitochondrial RNA transcripts coding for cryptic overlapping genes, BioSystems 111 (2013), 156–174.

[Q1852] H. Seligmann: Reviewing evidence for systematic transcriptional deletions, nucleotide exchanges, and expanded codons, and peptide clusters in human mitochondria, Biosystems 160 (2017), 10–24.

[Q1853] H. Seligmann: Alignment-based and alignment-free methods converge with experimental data on amino acids coded by stop codons at split between nuclear and mitochondrial genetic codes, Biosystems 167 (2018), 33–46.

[Q1854] H. Seligmann: Localized context-dependent effects of the "ambush" hypothesis: More off-frame stop codons downstream of shifty codons, DNA and Cell Biology 38 (2019), 786–795.

[Q1855] H. Seligmann, G. Warthi: Genetic code optimization for cotranslational protein folding: Codon directional asymmetry correlates with antiparallel betasheets, tRNA synthetase slasses. Comput. Struct. Biotechnol. J. (2017), Aug. 12, 15:412–424.

[Q1856] N. R. Sexton, G. D. Ebel: Pentamers with non-redundant frames: Bias for natural circular code codons. Effects of arbovirus multi-host life cycles on dinucleotide and codon usage patterns, Viruses (2019), Jul. 12, 11(7) : 643.

[Q1857] T.-Y. Wong and S. D. Schwartzbach: Protein mis-terminations initiates genetic diseases, cancers, and restricts bacterial genom expansion, J. Environ. Sci. Heath C 33 (2015), 255–285.

[B82] **S. Korotov and M. Křížek**, *Local nonobtuse tetrahedral refinement around an edge*, Appl. Math. Comput. **219** (2013), 7236–7240.

Cited in:

[Q1858] A. Cihangir: Nonobtuse simplices and special matrix classes, PhD Thesis, Korteweg-de Vries Institute, Uviv. of Amsterdam, 2015, 1–195.

[Q1859] M. A. Padrón and Á. Plaza: Similarity classes generated by the 8T-LE partition applied to trirectangular tetrahedra, J. Comput. Appl. Math. 409 (2022), Paper No. 114150, 17 pp.

[B83] **J. Brandts, S. Dijkhuis, V. de Haan, and M. Křížek**, *There exist only two nonobtuse binary triangulations of the unit n-cube*, Comput. Geom. **46** (2013), 286–297.

Cited in:

[Q1860] A. Cihangir: Nonobtuse simplices and special matrix classes, PhD Thesis, Korteweg-de Vries Institute, Uviv. of Amsterdam, 2015, 1–195.

[B85] **C. M. Chen, M. Křížek, and L. Liu**, *Numerical integration over pyramids*, Adv. Appl. Math. Mech. **5** (2013), 309–320.

Cited in:

[Q1861] J. Jaśkowiec and N. Sukumar: High-order symmetric cubature rules for tetrahedra and pyramids, Internat. J. Numer. Methods Engrg. 122 (2021), no. 1, 148–171.

[Q1862] S. Korotov and T. Rahman: On conforming local post-refinement of adjacent tetrahedral and hexahedral meshes. Parallel Processing and Applied Mathematics, Part II, Lecture Notes in Comput. Sci. 9574, Springer 2016, 365–370.

[B86] **M. Křížek and L. Somer**, *Antigravity – its manifestations and origin*, Internat. J. Astron. Astrophys. **3** (2013), 227–235.

Cited in:

[Q1863] Y. V. Dumin: The faint young Sun paradox in the context of modern cosmology, Astronom. Tsirkulyar 16 (2015), 1–5 pp., arXiv: 1505.03572v1

[Q1864] M. A. Helal, L. Marek-Crnjac, and J. He: The three page guide to the most important results of M. S. El Naschies research in E-infinity quantum physics and cosmology, Open J. Microphys. 3 (2013), 141–145.

[Q1865] H. Traunmüller: Towards a more well-founded cosmology. Preprints 2017, 2017030115 (doi: 10.20944/preprints201703.0115.v1)

[Q1866] V. Vavryčuk: Cosmological redshift and cosmic time dilation in the FLRW metric, Frontiers in Phys. 10 (2022), Article 826188, 1–11.

[B88] **L. Somer and M. Křížek**, *Fixed points and upper bounds for the rank of appearance in Lucas sequences*, Fibonacci Quart. **51** (2013), 291–306.

Cited in:

[Q1867] A. Fatehizadeh and D. Yaqubi: Average of the Fibonacci numbers, J. Integer Seq. 25 (2022), no. 2, Art. 22.2.6, 10 pp.

[Q1868] M. Jaidee and P. Pongsriiam: Arithmetic functions of Fibonacci and Lucas numbers, Fibonacci Quart. 57 (2019), 246–254.

[Q1869] P. Pongsriiam: The order of appearance of factorials in the Fibonacci sequence and certain Diophantine equations, Period. Math. Hungar. 79 (2019), 141–156.

[**B89**] **A. Hannukainen, S. Korotov, and M. Křížek**, *On numerical regularity of the face-to-face longest-edge bisection algorithm for tetrahedral partitions*, Sci. Comput. Programming **90** (2014), 34–41.

Cited in:

[Q1870] G. Aparicio, L. G. G. Casado, E. M. T. Hendrix, I. García, and B. Tóth: On computational aspects of a regular n-simplex bisection, Eight Internat. Conf. on P2P, Parallel, Grid, Cloud and Internet Computing, 2013, 513–518.

[Q1871] G. Aparicio, L. G. G. Casado, B. Tóth, E. M. T. Hendrix, and I. García: Heuristics to reduce the number of simplices in the longest edge bisection refinement of a regular n-simplex, LN in Comput. Sci. 8580 (2014), 115–125.

[Q1872] G. Aparicio, L. G. G. Casado, E. M. T. Hendrix, B. Tóth, and I. García: On the minimum number of simplex shapes in the longest edge bisection refinement of a regular n-simplex, Informatica 26 (2015), 17–32.

[Q1873] J. F. R. Herrera, L. G. Casado, E. M. T. Hendrix, and I. García: On sipmlicial longest edge bisection in Lipschitz global optimization, LN in Comput. Sci. 8580 (2014), 104–114.

[Q1874] M. A. Padrón and Á. Plaza: Similarity classes generated by the 8T-LE partition applied to trirectangular tetrahedra, submitted to J. Comput. Appl. Math. 2021, 1–30.

[Q1875] J. P. Suárez, Á. Plaza, and T. Moreno: Geometric diagram for representing shape quality in mesh refinement, Proc. Conf. Applications of Mathematics 2015 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 225–235.

[**B90**] **S. Korotov and M. Křížek**, *Red refinements of simplices into congruent subsimplices*, Comput. Math. Appl. **67** (2014), 2199–2204.

Cited in:

[Q1876] R. Hošek: Construction and shape optimization of simplicial meshes in d-dimensional space, Discrete Comput. Geom. 59 (2018), 972–989.

[Q1877] M. S. Petrov and T. D. Todorov: Stable subdivision of 4D polytopes, Numer. Algorithms 79 (2018), 633–656.

[Q1878] M. S. Petrov and T. D. Todorov: Successive partitions of ideal 4D-domains, C. R. Acad. Bulg. Sci. (2018), 1–8.

[Q1879] M. S. Petrov and T. D. Todorov: Refinement strategies related to cubic tetrahedral meshes, Appl. Numer. Math. 137 (2019), 169–183.

[Q1880] M. S. Petrov and T. D. Todorov: Properties of the multidimensional finite elements, accepted by Appl. Math. Comput. (2020), 1–30.

[Q1881] M. S. Petrov and T. D. Todorov: Isoparametric numerical integration on enriched 4D simplicial elements, Appl. Numer. Math. 183 (2023), 221–235.

[Q1882] M. S. Petrov et al.: Enabling four-dimensional conformal hybrid meshing with cubic pyramids, Numer. Algorithms 91 (2022), 671–709.

[**B91**] **M. Křížek, F. Křížek, L. Somer**, *Which effects of galaxy clusters can reduce the amount of dark matter*, Bulg. Astron. J. **21** (2014), 43–65.

Cited in:

[Q1883] M. López-Corredoira: Fundamental ideas in Cosmology. Scientific, philosophical and sociological critical perspectives, IOP Publishing, Bristol, UK, 2022.

[Q1884] M. López-Corredoira et al.: Virial theorem in clusters of galaxies with MOND, accepted by Mon. Not. Roy. Astron. Soc., arXiv 2210.13961.

[Q1885] K. Vankov and A. Vankov: Dark matter in galaxies, 2023, 1–18, HAL Id: hal-04055449.

[B92] **M. Křížek and L. Somer**, *A critique of the standard cosmological model*, Neural Netw. World **24** (2014), 435–461.

Cited in:

[Q1886] P. Kroupa: The observed spatial distribution of matter on scales ranging from 100 kpc to 1Gpc is inconsistent with the standard dark-matter-based cosmological models, Proc. Conf. Cosmology on Small Scales 2016: Local Hubble Expansion and Selected Controversies in Cosmology, M. Křížek, Y. V. Dumin (eds.), Inst. of Math., Czech Acad. Sci., Prague, 2016, 145–158.

[Q1887] A. M. Öztas and M. L. Smith: Evaluation of the Ω_k of the Friedmann-Lemaître-Robertson-Walker model. The importance of understanding Ω_k, Grav. Cosmol. 26 (2020), 23 pp.

[B95] **M. Křížek and L. Somer**, *Manifestations of dark energy in the Solar system*, Grav. Cosmol. **21** (2015), 59–72.

Cited in:

[Q1888] Y. V. Dumin: The faint young Sun paradox in the context of modern cosmology, Astronom. Tsirkulyar 16 (2015), 1–5 pp., arXiv: 1505.03572v1

[Q1889] Y. V. Dumin: Local Hubble expansion: Current state of the problem, Proc. Conf. Cosmology on Small Scales 2016: Local Hubble Expansion and Selected Controversies in Cosmology, M. Křížek, Y. V. Dumin (eds.), Inst. of Math., Czech Acad. Sci., Prague, 2016, 23–40.

[Q1890] A. Maeder: Scale invariant cosmology: Cosmological models and small scale effects, Proc. Conf. Cosmology on Small Scales 2016: Local Hubble Expansion and Selected Controversies in Cosmology, M. Křížek, Y. V. Dumin (eds.), Inst. of Math., Czech Acad. Sci., Prague, 2016, 41–64.

[Q1891] A. K. M. Masood-ul-Alam: A note on the theory of variable Planck's constant, www.researchgate.net/publications/299638258, 2016, 1–4.

[Q1892] V. Vavryčuk: Gravitational orbits in the expanding universe revisited, Frontiers Astron. Space Sci. 10 (2023), Article 1071743, 1–18.

[B96] **J. Brandts, A. Cihangir, and M. Křížek**, *Tight bounds on angle sums of nonobtuse simplices*, Appl. Math. Comput. **267** (2015), 397–408.

Cited in:

[Q1893] S. Korotov, L. F. Lund, and J. E. Vatne: Tight bounds for the dihedral angle sums of a pyramid, Appl. Math. 68 (2023), 259–268.

[B99] **L. Somer and M. Křížek**, *Identically distributed second-order linear recurrences modulo p*, Fibonacci Quart. **53** (2015), 290–312.

Cited in:

[Q1894] P. Pongsriiam: Longest arithmetic progressions of palindromes, J. Number Theory 222 (2021), 362–375.

[B100] **M. Křížek and L. Somer**, *Excessive extrapolations in cosmology*, Gravit. Cosmol. **22** (2016), 270–280.

Cited in:

[Q1895] Y. V. Dumin: Is the Hubble constant scale-dependent?, Gravit. Cosmol. 24 (2017), 171–172.

[Q1896] A. M. Öztas and M. L. Smith: Evaluation of the Ω_k of the Friedmann-Lemaître-Robertson-Walker model. The importance of understanding Ω_k, Grav. Cosmol. 26 (2020), 23 pp.

[Q1897] K. Vankov and A. Vankov: Dark matter in galaxies, 2023, 1–18, HAL Id: hal-04055449.

[Q1898] V. Vavryčuk: Cosmological redshift and cosmic time dilation in the FLRW metric, Frontiers in Phys. 10 (2022), Article 826188, 1–11.

[B102] **M. Křížek, F. Křížek, and L. Somer**, *Dark matter and rotation curves of spiral galaxies*, Bulg. Astron. J. **25** (2016), 64–77.

Cited in:

[Q1899] B. Quintero-Leyva: On the characteristic acceleration of MOND, Open Access Lib. J. 4 (2017), e3576, 1–9.

[Q1900] K. Vankov and A. Vankov: Dark matter in galaxies, 2023, 1–18, HAL Id: hal-04055449.

[**B104**] **L. Somer, M. Křížek**, *On moduli for which certain second-order linear recurrences contain a complete system of residues modulo m*, Fibonacci Quart. **55** (2017), 209–228.

Cited in:

[Q1901] A. Dubickas and A. Novikas: Recurrence with prescribed number of residues, J. Number Theory 215 (2020), 120–137.

[Q1902] C. Sanna: On the number of residues of linear recurrences, Res. Number Theory 8 (2022), Paper No. 7, 10 pp.

[**B105**] **M. Křížek**, *Influence of celestial parameters on Mercury's perihelion shift*, Bulg. Astron. J. **27** (2017), 41–56.

Cited in:

[Q1903] D. S. Hajdukovic: Concerning impact of the quantum vacuum on orbits of planets, Astrophys. Space Sci. 2019, 1–3.

[Q1904] A. Yahalom: The weak field approximation of general relativity, retardation, and the problem of precession of the perihelion for Mercury. Proc. Conf. Cosmology on Small Scales 2022, M. Křížek, Y. V. Dumin (eds.), Inst. of Math., Czech Acad. Sci., Prague, 2022, 43–65.

[Q1905] A. Yahalom: The weak field approximation of general relativity and the problem of precession of the perihelion for Mercury, Symmetry 15 (2022), doi.org/10.3390/sym15010039

[**B106**] **L. Somer, M. Křížek**, *Nondefective integers with respect to certain Lucas sequences of the second kind*, Integers **18** (2018), Article A35, pp. 1–13.

Cited in:

[Q1906] P. Pongsriiam: Longest arithmetic progressions of palindromes. J. Number Theory 222 (2021), 362–375.

[**B108**] **M. Křížek**, *Ten arguments against the proclaimed amount of dark matter*, Gravit. Cosmol. **24** (2018), 350–359.

Cited in:

[Q1907] A. M. Öztas and M. L. Smith: Evaluation of the Ω_k of the Friedmann-Lemaître-Robertson-Walker model. The importance of understanding Ω_k, Grav. Cosmol. 26 (2020), 23 pp.

[Q1908] K. Vankov and A. Vankov: Dark matter in galaxies, 2023, 1–18, HAL Id: hal-04055449.

[**B109**] **J. Brandts, M. Křížek**, *Duality of isosceles tetrahedra*, J. Geom. **110** (2019), Article 49, 1–11.

Cited in:

[Q1909] Q. H. Tran: Morley's trisector theorem for isosceles tetrahedron, Acta Math. Hungar. 165 (2021), 308–315.

[**B119**] **M. Křížek, V. G. Gueorguiev, A. Maeder**, *An alternative explanation of the orbital expansion of Titan and other bodies in the Solar system*, Gravit. Cosmol. **28** (2022), 1–23.

Cited in:

[Q1910] L. A. King and H. Siplilä: Cosmological expansion in the Solar System, Phys. Essays 2022, 1–19.

[**B123**] **M. Křížek**, *Relavivistic perihelion shift of Mercury revisited*, Astron. Nachr. **343** (2022), e20220016, 1–7.

Cited in:

[Q1911] A. Yahalom: The weak field approximation of general relativity, retardation, and the problem of precession of the perihelion for Mercury. Proc. Conf. Cosmology on Small Scales 2022, M. Křížek, Y. V. Dumin (eds.), Inst. of Math., Czech Acad. Sci., Prague, 2022, 43–65.

[Q1912] A. Yahalom: The weak field approximation of general relativity and the problem of precession of the perihelion for Mercury, Symmetry 15 (2023), /doi.org/10.3390/sym15010039

[**B124**] **M. Křížek, L. Somer**, *Anthropic principle and the Hubble-Lemaître constant*, Galaxies **10** (2022), Article 71, 1–11.

Cited in:

[Q1913] V. Vavryčuk: Gravitational orbits in the expanding universe revisited, Frontiers Astron. Space Sci. 10 (2023), Article 1071743, 1–18.

[**C1**] **M. Křížek**, *An equilibrium finite element method in three-dimensional elasticity*, Apl. Mat. **27** (1982), 46–75.

Cited in:

[Q1914] C. Bernardi, V. Girault, and P. A. Raviart: Finite element methods for Navier-Stokes equations (a new version of the book by Girault-Raviart), in preparation.

[Q1915] P. Burda: A posteriori error estimates for the Stokes flow in 2D and 3D domains. Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 34–44.

[Q1916] J. Haslinger, I. Hlaváček, and J. Nečas: Numerical methods for unilateral problems in solid mechanics, Handbook of Numer. Anal., vol. IV (eds. P. G. Ciarlet, J. L. Lions), North-Holland, Amsterdam, 1996 (see p. 454, 457, 476).

[Q1917] I. Hlaváček: A finite element solution for plasticity with strain-hardening, RAIRO Anal. Numér. 14 (1980), 347–368.

[Q1918] I. Hlaváček: A finite element analysis for elasto-plastic bodies obeying Hencky's law, Apl. Mat. 26 (1981), 449–461.

[Q1919] I. Hlaváček: Řešení variačních nerovnic metodou konečných prvků na základě duálních variačních formulací (doktorská disertační práce), MÚ ČSAV, Praha, 1983, 1–34.

[Q1920] I. Hlaváček: Dual finite element analysis for some elliptic variational equations and inequalities, Acta Appl. Math. 1 (1983), 121–150.

[Q1921] I. Hlaváček, J. Haslinger, J. Nečas, and J. Lovíšek: Solution of variational inequalities in mechanics, Springer-Verlag, New York, 1988, (see p. 238, 261, 265); translation from Slovak publication: Riešenie variačných nerovností v mechanike, Alfa, Bratislava, 1982; Russian translation: Mir, Moscow, 1986.

[Q1922] R. Hošek: Strongly regular family of boundary-fitted tetrahedral meshes of bounded C^2 domains, Appl. Math. 61 (2016), 233–251.

[Q1923] R. Hošek: Numerical schemes for equations of viscous compressible flows: Analysis and geometry, Ph.D. Thesis, Faculty of Applied Sciences, Univ. of West Bohemia, Pilsen, 2017.

[Q1924] R. Hošek: The role of Sommerville tetrahedra in numerical mathematics, Proc. Seminar Programs and Algorithms of Numerical Mathematics 18 (eds. J. Chleboun, P. Kůs, P. Přikryl, K. Segeth, J. Šístek, and T. Vejchodský), Janov nad Nisou, Mathematical Institute, Prague, 2017, 46–54.

[Q1925] R. Hošek: Existence of well-centered simplicial face-to-face tiling of five-dimensional space, Discrete Comput. Geom. 66 (2021), 1168–1189.

[Q1926] Z. Kestřánek: Řešení evoluční variační nerovnice teorie plasticity s isotropním zpevněním deformací metodou konečných prvků (kandidátská disertační práce), Praha, 1982, 1–72.

[Q1927] Z. Kestřánek: Variational inequalities in plasticity with strain-hardening – equilibrium finite element approach, Apl. Mat. 31 (1986), 270–281.

[Q1928] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q1929] S. Korotov: A posteriori estimates for error control in terms of linear functionals for linear elasticity, submitted to Appl. Math. in 2005, 1–18.

[Q1930] S. Korotov: Some geometric results for tetrahedral finite elements, Proc. Conf. NUMGRID 2010, Moscow, 2011, 1–6.

[Q1931] S. Korotov, Á Plaza, and J. P. Suárez: Longest-edge n-section algorithms: Properties and open problems, J. Comput. Appl. Math. 293 (2016), 139–146.

[Q1932] S. Korotov, Á Plaza, J. P. Suárez, and T. Moreno: On Zlámal minimum angle condition for the longest-edge n-section algorithm with $n \geq 4$, Proc. of the 12th European Conf. on Numer. Math. and Advanced Appl., ENUMATH 2017, Voss, Springer-Verlag, Berlin, Heidelberg, 2018.

[Q1933] S. Korotov and J. E. Vatne: On regularity of tetrahedral meshes produced by some red-type refinements, to appear in Springer-Verlag, Berlin, 2020, 1–7.

[Q1934] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[Q1935] K. Rektorys and E. Vitásek (eds.): Survey of applicable mathematics II, Kluwer, Amsterdam, 1994.

[Q1936] K. Rektorys a kol.: Přehled užité matematiky II, Prometheus, Praha, 1995.

[Q1937] J. E. Roberts and J. M. Thomas: Mixed and hybrid methods, Handbook of Numer. Anal., vol. II, (ed. P. G. Ciarlet, J. L. Lions), North-Holland, Amsterdam, 1991, (see p. 620).

[Q1938] J. Stańdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[Q1939] M. Vondrák: Slab analogy in theory and practice of conforming equilibrium stress models for finite element analysis of plane elastostatics, Apl. Mat. 30 (1985), 187–217.

[Q1940] M. Vondrák: Několik poznámek k matematickým a fyzikálním aspektům metody konečných prvků a variační formulaci okrajových eliptických problémů, Zpravodaj VZLÚ 2 (1991), 69–85.

[Q1941] A. Ženíšek: Nonlinear elliptic and evolution problems and their finite element approximations, Academic Press, London, 1990, (see p. 385).

[Q1942] A. Ženíšek: Křivkový a plošný integrál (viz kap. 7). Učební text FS VUT, Nakladatelství PC-DIR, Brno, 1993, 1–90.

[Q1943] A. Ženíšek: Green's theorem from the viewpoint of applications, Appl. Math. 44 (1999), 55–80.

[Q1944] A. Ženíšek: Surface integral and Gauss-Ostrogradskij theorem from the viewpoint of applications, Appl. Math. 44 (1999), 169–241.

[Q1945] A. Ženíšek: Sobolevovy prostory, VUTIUM Brno, 2001, 1–234.

[Q1946] A. Ženíšek: Sobolev spaces and their applications in the finite element method. VUTIUM Brno, 2005.

[Q1947] A. Ženíšek: On Křížek's decomposition of a polyhedron into convex components and its applications in the proof of a general Ostrogradskij's theorem, Proc. Conf. Applications of Mathematics 2012 (eds. J. Brandts et al.), Inst. of Math., Czech Acad. Sci., Prague, 309–316.

[C2] **I. Hlaváček and M. Křížek**, *Internal finite element approximations in the dual variational method for second order elliptic problems with curved boundaries*, Apl. Mat. **29** (1984), 52–69.

Cited in:

[Q1948] S. Korotov: On equilibrium finite elements in three-dimensional case, Appl. Math. 42 (1997), 233–242.

[Q1949] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q1950] J. E. Roberts and J. M. Thomas: Mixed and hybrid methods, Handbook of Numer. Anal., vol. II, (ed. P. G. Ciarlet, J. L. Lions), North-Holland, Amsterdam, 1991, (see p. 617).

[Q1951] T. Vejchodský: Complementarity – the way towards guaranteed error estimates Proc. Programs and Algorithms of Numer. Math. 15 (eds. T. Vejchodský et al.), Inst. of Math., Prague, 2010, 205–220.

[Q1952] T. Vejchodský: Flux reconstructions in the Lehmann-Goerisch method for lower bounds on eigenvalues, J. Comput. Appl. Math. 340 (2018), 676–690. eview PDF Clipboard Journal Article

[Q1953] T. Vejchodský: Three methods for two-sided bounds of eigenvaluesa comparison. Numer. Methods Partial Differential Equations 34 (2018), 1188–1208.

[Q1954] J. Weisz: Aposteriórny odhad chyby približného riešenia okrajových úloh pre niektoré typy nelineárnych eliptických parciálnych diferenciálnych rovníc (kandidátska dizertačná práca), MFF UK, Bratislava, 1990, 1–64.

[Q1955] J. Wiesz: A posteriori error estimate of approximate solutions to a mildly nonlinear elliptic boundary value problem, Comment. Math. Univ. Carolin. 31 (1990), 315–322.

[Q1956] J. Weisz: A posteriori error estimate of approximate solutions to a special nonlinear elliptic boundary value problem, Z. Angew. Math. Mech. 75 (1995), 79–81.

[**C3**] **M. Křížek and P. Neittaanmäki**, *Finite element approximation for a div-rot system with mixed boundary conditions in non-smooth plane domains*, Apl. Mat. **29** (1984), 272–285.

Cited in:

[Q1957] D. S. Butyugin and V. P. Il'lin: Solution of problems on harmonic electromagnetic field simulation in regularized and mixed formulations, Rus. J. Numer. Anal. Math. Model. 29 (2014), 1–12.

[Q1958] J.-L. Guermond, L. Quartapelle, and J. Zhu: On a 2D vector Poisson problem with apparently mutually exclusive scalar boundary conditions, Math. Model. Numer. Anal. 34 (2000), 183–200.

[Q1959] X. L. Jiang: A streamline-upwinding Petrov-Galerkin method for the hydrodynamic semiconductor device model. Math. Models Methods Appl. Sci. 5 (1995), 659–681.

[Q1960] S. Lohrengel and S. Nicaise: Analysis of eddy current formulations in two-dimensional domains with cracks, ESAIM Math. Model. Numer. Anal., 49 (2015), 141–170.

[Q1961] M. Picasso: An anisotropic error indicator based on Zienkiewicz-Zhu error estimator: Application to elliptic and parabolic problems, SIAM J. Sci. Comput. 24 (2003), 1328–1355.

[Q1962] M. Vanmaele, K. W. Morton, and E. Süli, A. Borzì: Analysis of the cell vertex finite volume method for the Cauchy-Riemann equations. SIAM J. Numer. Anal. 34 (1997), 2043–2062.

[**C4**] **V. Preiningerová and M. Křížek**, *Tepelný výpočet magnetického obvodu velkých olejových transformátorů*, Elektrotechnický obzor **73** (1984), 487–492.

Cited in:

[Q1963] J. Mlýnek: Matematické modely vedení tepla v elektrických strojích. Habilitační práce, Tech. Univ. Liberec, 2007.

[**C5**] **I. Hlaváček and M. Křížek**, *Internal finite element approximation in the dual variational method for the biharmonic problem*, Apl. Mat. **30** (1985), 255–273.

Cited in:

[Q1964] J. Weisz: Aposteriórny odhad chyby približného riešenia okrajových úloh pre niektoré typy nelineárnych eliptických parciálnych diferenciálnych rovníc (kandidátska dizertačná práca), MFF UK, Bratislava, 1990, 1–64.

[**C6**] **M. Křížek and P. Neittaanmäki**, *Solvability of a first order system in three-dimensional non-smooth domains*, Apl. Mat. **30** (1985), 307–315.

Cited in:

[Q1965] B. Delourme: High-order asymptotics for the electromagnetic scattering by thin periodic layers, Math. Methods Appl. Sci. 38 (2015), 811–833.

[Q1966] C. Matyska: Some problems of contemporary geodynamics (DrSc. Thesis), MFF UK, Prague, 1996.

[Q1967] C. Matyska: Variational principles for the momentum equation of mantle convection with Newtonian and power-law rheologies, Geophys. J. Int. 126 (1996), 281–286.

[Q1968] P. Monk and S. Y. Zhang: Multigrid computation of vector potentials. J. Comput. Appl. Math. 62 (1995), 301–320.

[Q1969] M. Vanmaele, K. W. Morton, E. Süli, and A. Borzì: Analysis of the cell vertex finite volume method for the Cauchy-Riemann equations, SIAM J. Numer. Anal. 34 (1997), 2043–2062.

[**C7**] **I. Hlaváček and M. Křížek**, *On a superconvergent finite element scheme for elliptic systems, I. Dirichlet boundary condition*, Apl. Mat. **32** (1987), 131–154.

Cited in:

[Q1970] I. Babuška, T. Strouboulis, S. K. Gangaraj, and C. S. Upadhyay: Validation of recipes for the roceovery of stresses and derivatives by a computer-based approach, Math. Comput. Model. 20 (1994), 45–89.

[Q1971] I. Babuška, T. Strouboulis, and C. S. Upadhyay: η%-superconvergence of finite element approximations in the interior of general meshes of triangles, Comput. Methods Appl. Mech. Engrg. 122 (1995), 273–305.

[Q1972] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient in finite element solutions of Laplace's and Poisson's equations, CMC Report No. 93-07, Texas A&M Univ., 1993, 1–59.

[Q1973] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient of the displacement, the strain and stress in finite element solutions for plane elasticity. Technical Note BN-1166, Univ. of Maryland, 1994, 1–41.

[Q1974] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Computer-based proof of the existence of superconvergence points in the finite element method; superconvergence of the derivatives in finite element solutions of Laplace's, Poisson's, and elasticity equations. Numer. Methods Partial Differential Equations 12 (1996), 347–392.

[Q1975] R. E. Bank and X. U. Jinchao: Asymptotically exact a posteriori error estimators, Part I: Grid with superconvergence, SIAM J. Numer. Anal. 41 (2003), 2294–2312.

[Q1976] S. Barbeiro and J. A. Ferreira: A superconvergent linear FE approximation for the solution of an elliptic system of PDE's, J. Comput. Appl. Math. 177 (2005), 287–300.

[Q1977] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q1978] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[Q1979] Y. Chen: Superconvergent recovery of gradients of piecewise linear finite element approximations on non-uniform mesh partitions. Numer. Methods Partial Differential Equations 14 (1998), 169–192.

[Q1980] J. Chleboun: An application of the averaged gradient technique, In Programs and Algorithms of Numer. Math. 14, Inst. of Math., Prague, 2008, 65–70.

[Q1981] J. A. Ferreira and R. D. Grigorieff: Supraconvergence and supercloseness of a scheme for elliptic equations on nonuniform grids, Numer. Funct. Anal. Optim. 27 (2006), 539–564.

[Q1982] G. Goodsell and J. R. Whiteman: Superconvergent recovered gradient functions for piecewise linear finite element approximations, with extensions to subdomains, In: The Mathematics of Finite Elements and Applications VI (ed. J. R. Whiteman), 1987, Academic Press, London, 1988, 582–583.

[Q1983] G. Goodsell and J. R. Whiteman: A unified treatment of superconvergent recovered gradient functions for piecewise linear finite element approximations, Internat. J. Numer. Methods Engrg. 27 (1989), 469–481.

[Q1984] G. Goodsell and J. R. Whiteman: Superconvergence of recovered gradients of piecewise quadratic finite element approximations, Part I: L_2-error estimates, Numer. Methods Partial Differential Equations 7 (1991), 61–83.

[Q1985] A. Hannukainen and S. Korotov: Techniques for a posteriori error estimation in terms of linear functionals for elliptic type boundary value problems, Far East J. Appl. Math. 21 (2005), 289–304.

[Q1986] A. Hannukainen and S. Korotov: Computational technologies for reliable control of global and local errors for linear elliptic type boundary value problems, J. Numer. Anal., Industrial Appl. Math. 2 (2007), 157–176.

[Q1987] A. Hannukainen, S. Korotov, and M. Rüter: A posteriori error estimates for some problems in linear elasticity, European Soc. Comput. Methods Sci. Engrg. 4 (2008), 61–72.

[Q1988] J. Karátson and S. Korotov: Sharp upper global a posteriori error estimates for nonlinear elliptic variational problems, Appl. Math. 54 (2009), 297–336.

[Q1989] K. Kolman: Higher-order approximations in the finite element method, Ph. D. Thesis, Charles Univ., Prague, 2010.

[Q1990] S. Korotov: A posteriori error estimation of goal-oriented quantities for elliptic type BVPs, J. Comput. Appl. Math. 191 (2006), 216–227.

[Q1991] S. Korotov: Error control in terms of linear functionals based on gradient averaging techniques, Proc. Internat. Conf. ICCMSE 2005, Greece, ed. T. Simos, 1–9.

[Q1992] S. Korotov: A posteriori estimates for error control in terms of linear functionals for linear elasticity, submitted to Appl. Math. in 2005, 1–18.

[Q1993] S. Korotov: A posteriori error estimation for linear elliptic problems with mixed boundary conditions, Preprint A495, Helsinki Univ. of Technology, Espoo 2006, 1–14.

[Q1994] S. Korotov: Two-sided a posteriori error estimates for linear elliptic problems with mixed boundary conditions, Appl. Math. 52 (2007), 235–249.

[Q1995] S. Korotov, S. Repin, P. Neittaanmäki: A posteriori error estimation of goal-oriented quantities by the superconvergence path recovery, J. Numer. Math. 11 (2003), 33–59.

[Q1996] S. Korotov, P. Neittaanmäki, and S. Repin: A posteriori error estimation in terms of linear functionals for boundary value problems of elliptic type, Proc. Conf. ENUMATH 2003, Prague, Springer-Verlag, Berlin, 2004, 587–595.

[Q1997] S. Korotov, P. Neittaanmäki, and S. Repin: A posteriori error estimation of "quantities of interest" for elliptic-type boundary value problems, Proc. Conf. ECCOMAS, 2004.

[Q1998] S. Korotov and P. Turchyn: A posteriori error estimation of "quantities of interest" on tetrahedral meshes, Proc. Conf. ECCOMAS, 2004.

[Q1999] S. Korotov and P. Turchyn: A posteriori error estimation of goal-oriented quantities for elliptic type BVPs, Internat. Conf. of Comput. Methods in Sci. and Engrg., ICCMSE - 2004, Athens, Lecture Series on Computer and Computational Sciences, vol. 1, (eds. T. Simon and G. Maroulis) VSP, Utrecht, 2004, 269–273.

[Q2000] B. Kovács: On the numerical performance of a sharp a posteriori error estimator for some nonlinear elliptic problems, Appl. Math. 59 (2014), 489–508.

[Q2001] A. M. Lakhany, I. Marek, and J. R. Whiteman: Superconvergence results on mildly stuctured triangulations, Comput. Methods Appl. Mech. Engrg. 189 (2000), 1–75.

[Q2002] A. M. Lakhany and J. R. Whiteman: Superconvergent recovery operators: derivative recovery techniques, In: Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 195–215.

[Q2003] P. Neittaanmäki, S. Korotov, and J. Martikainen: A posteriori error estimation of "quantities of interest" on "quantity-adapted" meshes. Conjugate Gradient Algorithms and Finite Element Methods, Springer-Verlag, Berlin, 2004.

[Q2004] P. Neittaanmäki and S. Repin: Reliable methods for computer simulation. Error control and a posteriori estimates, Elsevier, Amsterdam, 2004.

[Q2005] P. Neittaanmäki, S. Repin, and P. Turchyn: New a posteriori error indicator in terms of linear functionals for linear elliptic problems, Russian J. Numer. Anal. Math. Model. 23 (2008), 77–87.

[Q2006] S. Repin: A posteriori estimates for partial differential equations, Radon Ser. Comput. Appl. Math., vol. 4, Walter de Gruyter, Berlin, New York, 2008.

[Q2007] M. Rüter, S. Korotov, and C. Steenbock: Goal-oriented error estimates based on different FE-spaces for the primal and the dual problem with applications to fracture mechanics, Comput. Mech. 39 (2007), 787–797.

[Q2008] V. Thomée, J. Xu, and N. Zhang: Superconvergence of the gradient in piecewise linear finite element approximation to a parabolic problem, SIAM J. Numer. Anal. 26 (1989), 553–573.

[Q2009] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q2010] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q2011] J. R. Whiteman and G. Goodsell: Superconvergent recovery for stresses from finite element approximations on subdomains for planar problems of linear elasticity, In: The Mathematics of Finite Elements and Applications VI (ed. J. R. Whiteman), 1987, Academic Press, London, 1988, 29–53.

[Q2012] J. R. Whiteman and G. Goodsell: A survey of gradient superconvergence for finite element approximations to second order elliptic problems on triangular and tetrahedral meshes, In: The Mathematics of Finite Elements and Applications VII (ed. J. R. Whiteman), 1990, Academic Press, London, 55–74.

[**C8**] **I. Hlaváček and M. Křížek**, *On a superconvergent finite element scheme for elliptic systems, II. Boundary conditions of Newton's or Neumann's type*, Apl. Mat. **32** (1987), 200–213.

Cited in:

[Q2013] I. Babuška, T. Strouboulis, S. K. Gangaraj, and C. S. Upadhyay: Validation of recipes for the roceovery of stresses and derivatives by a computer-based approach, Math. Comput. Model. 20 (1994), 45–89.

[Q2014] I. Babuška, T. Strouboulis, and C. S. Upadhyay: η%-superconvergence of finite element approximations in the interior of general meshes of triangles, Comput. Methods Appl. Mech. Engrg. 122 (1995), 273–305.

[Q2015] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient in finite element solutions of Laplace's and Poisson's equations, CMC Report No. 93-07, Texas A&M Univ., 1993, 1–59.

[Q2016] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient of the displacement, the strain and stress in finite element solutions for plane elasticity. Technical Note BN-1166, Univ. of Maryland, 1994, 1–41.

[Q2017] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Computer-based proof of the existence of superconvergence points in the finite element method; superconvergence of the derivatives in finite element solutions of Laplace's, Poisson's, and elasticity equations. Numer. Methods Partial Differential Equations 12 (1996), 347–392.

[Q2018] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q2019] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[Q2020] Y. Chen: Superconvergent recovery of gradients of piecewise linear finite element approximations on non-uniform mesh partitions. Numer. Methods Partial Differential Equations 14 (1998), 169–192.

[Q2021] J. Chleboun: An application of the averaged gradient technique, In Programs and Algorithms of Numer. Math. 14, Inst. of Math., Prague, 2008, 65–70.

[Q2022] G. Goodsell and J. R. Whiteman: A unified treatment of superconvergent recovered gradient functions for piecewise linear finite element approximations, Internat. J. Numer. Methods Engrg. 27 (1989), 469–481.

[Q2023] G. Goodsell and J. R. Whiteman: Superconvergence of recovered gradients of piecewise quadratic finite element approximations, Part I: L_2-error estimates, Numer. Methods Partial Differential Equations 7 (1991), 61–83.

[Q2024] A. Hannukainen and S. Korotov: Computational technologies for reliable control of global and local errors for linear elliptic type boundary value problems, J. Numer. Anal., Industrial Appl. Math. 2 (2007), 157–176.

[Q2025] A. Hannukainen, S. Korotov, and M. Rüter: A posteriori error estimates for some problems in linear elasticity, European Soc. Comput. Methods Sci. Engrg. 4 (2008), 61–72.

[Q2026] J. Karátson and S. Korotov: Sharp upper global a posteriori error estimates for nonlinear elliptic variational problems, Appl. Math. 54 (2009), 297–336.

[Q2027] S. Korotov: A posteriori estimates for error control in terms of linear functionals for linear elasticity, preprint, submitted to Appl. Math. in 2005, 1–18.

[Q2028] S. Korotov: A posteriori error estimation for linear elliptic problems with mixed boundary conditions, Preprint A495, Helsinki Univ. of Technology, Espoo 2006, 1–14.

[Q2029] S. Korotov: Two-sided a posteriori error estimates for linear elliptic problems with mixed boundary conditions, Appl. Math. 52 (2007), 235–249.

[Q2030] A. M. Lakhany, I. Marek, and J. R. Whiteman: Superconvergence results on mildly stuctured triangulations, Comput. Methods Appl. Mech. Engrg. 189 (2000), 1–75.

[Q2031] A. M. Lakhany and J. R. Whiteman: Superconvergent recovery operators: derivative recovery techniques, In: Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 195–215.

[Q2032] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q2033] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q2034] J. R. Whiteman and G. Goodsell: A survey of gradient superconvergence for finite element approximations to second order elliptic problems on triangular and tetrahedral meshes, In: The Mathematics of Finite Elements and Applications VII (ed. J. R. Whiteman), 1990, Academic Press, London, 55–74.

[Q2035] R. Wohlgemuth: Superkonvergenz des Gradienten im Postprocessing von Finite-Elemente-Methoden, Preprint Nr. 94, Tech. Univ. Chemnitz, 1989, 1–15.

[**C9**] **I. Hlaváček and M. Křížek**, *On a superconvergent finite element scheme for elliptic systems, III. Optimal interior estimates*, Apl. Mat. **32** (1987), 276–289.

Cited in:

[Q2036] I. Babuška, T. Strouboulis, S. K. Gangaraj, and C. S. Upadhyay: Validation of recipes for the roceovery of stresses and derivatives by a computer-based approach, Math. Comput. Model. 20 (1994), 45–89.

[Q2037] I. Babuška, T. Strouboulis, and C. S. Upadhyay: η%-superconvergence of finite element approximations in the interior of general meshes of triangles. Comput. Methods Appl. Mech. Engrg. 122 (1995), 273–305.

[Q2038] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient in finite element solutions of Laplace's and Poisson's equations, CMC Report No. 93-07, Texas A&M Univ., 1993, 1–59.

[Q2039] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Study of superconvergence by a computer-based approach. Superconvergence of the gradient of the displacement, the strain and stress in finite element solutions for plane elasticity. Technical Note BN-1166, Univ. of Maryland, 1994, 1–41.

[Q2040] I. Babuška, T. Strouboulis, C. S. Upadhyay, and S. K. Gangaraj: Computer-based proof of the existence of superconvergence points in the finite element method; superconvergence of the derivatives in finite element solutions of Laplace's, Poisson's, and elasticity equations. Numer. Methods Partial Differential Equations 12 (1996), 347–392.

[Q2041] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q2042] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[Q2043] J. Chleboun: An application of the averaged gradient technique, In Programs and Algorithms of Numer. Math. 14, Inst. of Math., Prague, 2008, 65–70.

[Q2044] G. Goodsell and J. R. Whiteman: A unified treatment of superconvergent recovered gradient functions for piecewise linear finite element approximations, Internat. J. Numer. Methods Engrg. 27 (1989), 469–481.

[Q2045] G. Goodsell and J. R. Whiteman: Superconvergence of recovered gradients of piecewise quadratic finite element approximations, Part I: L_2-error estimates, Numer. Methods Partial Differential Equations 7 (1991), 61–83.

[Q2046] A. Hannukainen and S. Korotov: Computational technologies for reliable control of global and local errors for linear elliptic type boundary value problems, J. Numer. Anal., Industrial Appl. Math. 2 (2007), 157–176.

[Q2047] A. Hannukainen, S. Korotov, and M. Rüter: A posteriori error estimates for some problems in linear elasticity, European Soc. Comput. Methods Sci. Engrg. 4 (2008), 61–72.

[Q2048] J. Karátson and S. Korotov: Sharp upper global a posteriori error estimates for nonlinear elliptic variational problems, Appl. Math. 54 (2009), 297–336.

[Q2049] S. Korotov: A posteriori estimates for error control in terms of linear functionals for linear elasticity, submitted to Appl. Math. in 2005, 1–18.

[Q2050] S. Korotov: A posteriori error estimation for linear elliptic problems with mixed boundary conditions, Preprint A495, Helsinki Univ. of Technology, Espoo 2006, 1–14.

[Q2051] S. Korotov: Error control in terms of linear functionals based on gradient averaging techniques, Proc. Internat. Conf. ICCMSE 2005, Greece, ed. T. Simos, 1–9.

[Q2052] S. Korotov: Two-sided a posteriori error estimates for linear elliptic problems with mixed boundary conditions, Appl. Math. 52 (2007), 235–249.

[Q2053] A. M. Lakhany, I. Marek, and J. R. Whiteman: Superconvergence results on mildly stuctured triangulations, Comput. Methods Appl. Mech. Engrg. 189 (2000), 1–75.

[Q2054] A. M. Lakhany and J. R. Whiteman: Superconvergent recovery operators: derivative recovery techniques, In: Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, LN in Pure and Appl. Math. vol. 196, Marcel Dekker, New York, 1998, 195–215.

[Q2055] A. I. Pehlivanov: Interior estimates of type superconvergence of the gradient in the finite element method, C. R. Acad. Bulgare Sci. 42 (1989), 29–32.

[Q2056] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q2057] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q2058] J. R. Whiteman and G. Goodsell: A survey of gradient superconvergence for finite element approximations to second order elliptic problems on triangular and tetrahedral meshes, In: The Mathematics of Finite Elements and Applications VII (ed. J. R. Whiteman), 1990, Academic Press, London, 55–74.

[C10] **M. Křížek and V. Preiningerová**, *Třírozměrné řešení teplotního pole v magnetickém obvodu velkých transformátorů*, Elektrotechnický obzor **76** (1987), 646–652.

Cited in:

[Q2059] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q2060] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[C11] **M. Křížek and P. Neittaanmäki**, *On time-harmonic Maxwell equations with nonhomogeneous conductivities: solvability and FE-approximation*, Apl. Mat. **34** (1989), 480–499.

Cited in:

[Q2061] A. Alonso: A domain decomposition approach for heterogeneous time-harmonic Maxwel equations. Comput. Methods Appl. Mech. Engrg. 143 (1997), 97–112.

[Q2062] A. Alonso: A mathematical justification of the low-frequency heterogeneous time-harmonic Maxwell equations. Math. Models Methods Appl. Sci. 9 (1999), 475–489.

[Q2063] A. Alonso and A. Valli: An domain decomposition approach for heterogeneous time-harmonic Maxwell equations. Comput. Methods Appl. Mech. Engrg. 143 (1997), 97–112.

[Q2064] A. Alonso and A. Valli: An optimal domain decomposition preconditioner for low-frequency time-harmonic Maxwell equations. Math. Comp. 68 (1999), 607–631.

[Q2065] C. G. Makridakis and P. Monk: Time-discrete finite element schemes for Maxwell's equations. RAIRO Modèl. Math. Anal. Numér. 29 (1995), 171-197.

[Q2066] J. Mlýnek: Metoda bikonjugovaných gradientů a její modifikace pro řešení soustav s komplexními koeficienty (kandidátská disertační práce), MÚ ČSAV, Praha, 1992, 1–75.

[Q2067] P. Monk: On the p and $h-p$ extension of Nédélecs curl conforming elements. J. Comput. Appl. Math. 53 (1994), 117-137.

[Q2068] P. Monk: Superconvergence of finite element approximations to Maxwell's equations, Numer. Methods Partial Differential Equations 10 (1994), 793–812.

[Q2069] P. Monk: Finite element methods for Maxwell's equations. Preprint Univ. of Delawere, 1996, 1–13.

[Q2070] P. Monk: A posteriori error indicator for Maxwell's equations. J. Comput. Appl. Math. 100 (1998), 173–190.

[C12] **M. Křížek**, *On semiregular families of triangulations and linear interpolation*, Appl. Math. **36** (1991), 223–232.

Cited in:

[Q2071] G. A. Acosta and R. G. Durán: Error estimates for $\mathcal{Q}_1$ isoparametric elements satisfying a weak angle condition, SIAM J. Numer. Anal. 38 (2000), 1073–1088.

[Q2072] T. Apel: A note on anisotropic interpolation error estimates for isoparametric quadrilateral finite elements, Preprint SFB 393/96-10, TU Chemnitz-Zwickau, 1996, 1–14.

[Q2073] T. Apel: Anisotropic interpolation error-estimates for isoparametric quadrilateral finite-elements. Computing 60 (1998), 157–174.

[Q2074] T. Apel: Anisotropic finite elements: Local estimates and applications. Advances in Numerical Mathematics, B. G. Teubner, Stuttgart, Leipzig, 1999.

[Q2075] T. Apel and M. Dobrowolski: Anisotropic interpolation with applications to the finite element method, Computing 47 (1992), 277–293.

[Q2076] T. Apel and G. Lube: Anisotropic mesh refinement for singularly perturbed reaction diffusion problems, Preprint SFB 393/96-11, TU Chemnitz-Zwickau, 1996, 1–25.

[Q2077] T. Apel and G. Lube: Anisotropic mesh refinement in stabilized Galerkin methods. Numer. Math. 74 (1996), 261–282.

[Q2078] T. Apel and G. Lube: Anisotropic mesh refinement for singularly perturbed reaction diffusion model problem. Appl. Numer. Math. 26 (1998), 415–433.

[Q2079] T. Apel, S. Nicaise, and J. Schöberl: Crouzeix-Raviart type finite elements on anisotropic meshes. Numer. Math. 89 (2001), 193–223.

[Q2080] F. Auricchio, A. Lefieux, A. Reali, and A. Veneziani: A locally anisotropic fluid-structure interaction remeshing strategy for thin structures with applications to a hinged rigid leaflet, Internat. J. Numer. Methods Engrg. 107 (2016), 155–180.

[Q2081] R. Blaheta, R. Kohut, A. Kolcun, and O. Jakl: Regular grids and local grid refinement, Proc. Conf. Geomechanics 93, ed. Z. Rakowski, Brookfield, Rotterdam, 1994, 181–184.

[Q2082] G. C. Buscaglia and A. E. Dari: Anisotropic mesh optimization and its application in adaptivity. Internat. J. Numer. Methods Engrg. 40 (1997), 4119–4136.

[Q2083] S. Cao and L. Chen: Anisotropic error estimates of the linear virtual element method on polygonal meshes, SIAM J. Numer. Anal. 56 (2018), 2913–2939.

[Q2084] L. T. Dechevsky: Near-degenerate finite element and lacunary multiresolution methods of approximation, Saint-Malo Proceedings (ed. by L. L. Schumaker), Vanderbit Univ. Press, 2000, 1–19.

[Q2085] L. T. Dechevsky: Nearly degenerating multigrid finite and boundary element methods versus lacunary wavelet-based methods of approximation, Proc of SPIE, Internat. Soc. Opt. Engrg., 2007, article 67630Y.

[Q2086] L. T. Dechevski and W. L. Wendland: On the Bramble-Hilbert lemma, II: Model applications to quasi-interpolation and linear problems. Internat. J. Pure Appl. Math. 33 (2006), 465–501.

[Q2087] L. T. Dechevsky and W. L. Wendland: On the Bramble-Hilbert lemma, II. Preprint 2007/002, Univ. Stuttgart, Berichte aus dem Inst. für Angewandte Anal. und Numer. Simulation, 2007, 1–67.

[Q2088] R. G. Durán: Error estimates for 3-D narrow finite elements. Math. Comp. 68 (1999), 187–199.

[Q2089] H. Elman, D. Silvester, and A. Wathen: Finite elements and fast iterative solvers with applications in incompressible fluid dynamics. Numer. Math. Sci. Comput., Oxford Univ. Press, Oxford, 2005.

[Q2090] M. Feistauer: Mathematical Methods in Fluid Dynamics, Pitman Monographs and Surveys in Pure and Applied Mathematics, vol. 67, Longman Scientific & Technical, Harlow, 1993 (see p. 185).

[Q2091] M. Feistauer, J. Felcman, and I. Straškraba: Mathematical and Computational Methods for Compressible Flow, Oxford Univ. Press, Oxford, 2003.

[Q2092] M. Floater, A. Gillete, and N. Sukumar: Gradient bounds for Wachspress coordinates on polytopes, SIAM J. Numer. Anal. 52 (2014), 515–532.

[Q2093] A. Gillette and A. Rand: Interpolation error estimates for harmonic coordinates on polytopes, ESAIM Math. Model. Numer. Anal. 50 (2016), 651–676.

[Q2094] A. Gillette, A. Rand, and C. Bajaj: Error estimates for generalized barycentric interpolation, Adv. Comput. Math. 37 (2012), 417–439.

[Q2095] C. Grossmann and H.-G. Roos: Numerik partiellen Differentialgleichungen, Teubner Studienbücher, Mathematik, Stuttgart, 1994.

[Q2096] W. Guo and M. Stynes: Pointwise error estimates for a streamline diffusion scheme on a Shiskin mesh for a convection-diffusion problem. IMA J. Numer. Anal. 17 (1997), 29–59.

[Q2097] W.-M. He, X.-F. Guan, and J.-Z. Cui: The local superconvergence of the trilinear element for the three-dimensional Poisson problem, J. Math. Anal. Appl. 388 (2012), 863–872.

[Q2098] C. Huang and Z. Zhang: Polynomial preserving recovery for quadratic elements on anisotropic meshes, Numer. Methods Partial Differential Equations 28 (2012), 966–983.

[Q2099] H. Ishizaka: Anisotropic RaviartThomas interpolation error estimates using a new geometric parameter, Calcolo 59 (2022), Article No. 50.

[Q2100] H. Ishizaka, K. Kobayashi, R. Suzuki, and T. Tsuchiya: A new geometric condition equivalent to the maximum angle condition for tetrahedrons, Comput. Math. Appl. 99 (2021), 323–328.

[Q2101] H. Ishizaka, K. Kobayashi, and T. Tsuchiya: General theory of interpolation error estimates on anisotropic meshes, Jpn. J. Ind. Appl. Math. 38 (2021), 163–191.

[Q2102] A. Khademi: Convergence on degenerating finite element meshes, PhD Thesis, Western Norway Univ. of Appl. Sci., Bergen, 2020.

[Q2103] A. Khademi, S. Korotov, and J. E. Vatne: On interpolation error on degenerating prismatic elements, Appl. Math. 63 (2018), 237–257.

[Q2104] K. Kobayashi and T. Tsuchiya: A priori error estimates for Lagrange interpolation on triangles, Appl. Math. 60 (2015), 485–499.

[Q2105] K. Kobayashi and T. Tsuchiya: Extending Babuška-Aziz's theorem to higher-order Lagrange interpolation, Appl. Math. 61 (2016), 121–133.

[Q2106] K. Kobayashi and T. Tsuchiya: Lectures on Error Analysis of Interpolation on Simplicial Triangulations without the Shape-Regularity Assumption Part 1: Two-dimensional Lagrange Interpolation, arXiv:1908.03894v1, Aug 2019, 34 pp.

[Q2107] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q2108] S. Korotov: Some geometric results for tetrahedral finite elements, Proc. Conf. NUMGRID 2010, Moscow, 2011, 1–6.

[Q2109] S. Korotov, L. F. Lund, and J. E. Vatne: Improved maximum angle estimate for longest-edge bisection, submitted to Internat. J. Comput. Geom. Appl. in 2021, 1–9.

[Q2110] S. Korotov, Á Plaza, and J. P. Suárez: On the maximum angle condition for the conforming longest-edge n-section algorithm for large values of n, Comput. Aided Geom. Design 32 (2015), 69–73.

[Q2111] S. Korotov, Á Plaza, and J. P. Suárez: Longest-edge n-section algorithms: Properties and open problems, J. Comput. Appl. Math. 293 (2016), 139–146.

[Q2112] V. Kučera: Several notes on the circumradius condition, Appl. Math. 61 (2016), 287–298.

[Q2113] V. Kučera: On necessary and sufficient conditions for finite element convergence, ArXiv 1601.02942v1, 2016, 1–42.

[Q2114] M. Li, X. Guan, and S. Mao: Convergence and superconvergence analysis of Lagrange rectangular elements with any order on arbitary rectangular meshes, J. Comput. Math. 32 (2014), 169–182.

[Q2115] M. Li and S. Mao: Anisotropic interpolation error estimates via orthogonal expansions, Cent. Eur. J. Math. 11 (2013), 621–629.

[Q2116] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[Q2117] S. P. Mao, S. Nicaise, and Z. C. Shi: Error estimates of Morley triangular element satisfying the maximum angle condition, Internat. J. Numer. Anal. Model. 7 (2010), 639–655.

[Q2118] S. P. Mao and Z. C. Shi: Nonconforming rotated Q1 element on non-tensor product anisotropic meshes, Science in China, Ser. A: Math. 49 (2006), 1363–1375.

[Q2119] Z. Milka: Numerické řešení stacionární úlohy vedení tepla s nelineární podmínkou sálání. Sborník kurzu: Programy a algoritmy numerické matematiky 6, Bratříkov, MÚ ČSAV, Praha, 1992, 111–120.

[Q2120] Z. Milka: Řešení stacionární úlohy vedení tepla s nelineární Newtonovou okrajovou podmínkou metodou konečných prvků, (kandidátská disertační práce), MÚ ČSAV, Praha, 1992, 1–49.

[Q2121] Z. Milka: Finite element solution of a stationary heat conduction equation with the radiation boundary condition, Appl. Math. 38 (1993), 67–79.

[Q2122] P. Oswald: Divergence of FEM: Babuška-Aziz triangulations revisited, Appl. Math. 60 (2015), 473–484.

[Q2123] F. Perdomo and Á. Plaza: Properties of triangulations obtained by the longest-edge bisection, Cent. Eur. J. Math. 12 (2014), 1796–1810.

[Q2124] A. Prachař: Analysis of the discountinuous Galerkin methods for elliptic problems, Ph.D. Thesis, Faculty of Mathematics and Physics, Prague, 2006, 1–118.

[Q2125] A. Prachař: On discountinuous Galerkin methods and semiregular triangulations, Appl. Math. 51 (2006), 605–618.

[Q2126] A. Rand: Average interpolation under the maximum angle condition, SIAM J. Numer. Anal. 50 (2012), 2538–2559.

[Q2127] A. Rand, A. Gillete, and C. Bajaj: Interpolation error estimates for mean value coordinates over convex polygons, Adv. Comp. Math. 39 (2013), 327–347.

[Q2128] J. R. Shewchuk: What is a good linear finite element? Interpolation, conditioning, anisotropy, and quality measures, Preprint Dept. of Eletrical Engrg. and Comput. Sci., Univ. of California at Berkeley, 2002, 1–66.

[Q2129] D. Y. Shi, Z. C Shi, and J, Wu: A note on the quadrilateral mesh condition $RDP(N, \phi)$, J. Comput. Math. 25 (2007), 27–30.

[Q2130] P. D. Zavattieri, G. C. Buscaglia, and E. A. Dari: Finite element mesh optimization in three-dimensions, Latin Amer. Appl. Res. 26 (1996), 233–236.

[Q2131] A. Ženíšek: Nonlinear elliptic and evolution problems and their finite element approximations, Academic Press, London, 1990, (see p. ix, 396).

[Q2132] A. Ženíšek: The maximum angle condition in the finite element method. Proc. Conf. Finite Element Methods: Fifty Years of the Courant Element, Marcel Dekker, Inc., New York, 1994, 477–489.

[Q2133] A. Ženíšek: Maximum-angle condition and triangular finite elements of the Hermite type, Math. Comp. 64 (1995), 929–941.

[Q2134] A. Ženíšek: The maximum angle condition in the finite element method for monotone problems with applications in magnetostatics, Numer. Math. 71 (1995), 399–417.

[Q2135] A. Ženíšek: Finite element variational crimes in the case of semiregular elements, Appl. Math. 41 (1996), 367–398.

[Q2136] A. Ženíšek: Convergence in the case of semiregular triangular finite elements. Prague Math. Conf., ICARIS, Prague, 1996, 365–370.

[Q2137] A. Ženíšek: Finite element variational crimes in the case of semiregular elements. Z. Angew. Math. Mech. 76 (1996), Suppl. 1, 591–592.

[Q2138] A. Ženíšek: Finite element approximations of the Hermite type on triangles and tetrahedrons, Proc. Conf. Finite Element Methods: Three-dimensional Problems, Jyäskyla, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 322–340.

[Q2139] A. Ženíšek: Variational problems in domains with cusp-points and the finite element method, Numer. Funct. Anal. Optim. 26 (2005), 577–611.

[Q2140] A. Ženíšek: Sobolev spaces and their applications in the finite element method. VUTIUM Brno, 2005.

[Q2141] A. Ženíšek: Variational problems in domain with cusp points and the finite element method, submitted in 2005, 1–28.

[Q2142] A. Ženíšek: Byl jsem u toho! aneb 50 let matematické teorie metody konečných prvků, Kvaternion 1–2/2019, 3–21.

[Q2143] A. Ženíšek and M. Vanmaele: Finite element variational crimes in the case of semiregular elements, preprint VUT Brno, 1–21.

[Q2144] A. Ženíšek and M. Vanmaele: The interpolation theorem for narrow quadrilateral isoparametric finite elements, Numer. Math. 72 (1995), 123–141.

[Q2145] A. Ženíšek and M. Vanmaele: Maximum-angle condition and triangular finite elements of Hermite type, Math. Comp. 64 (1995), 929–941.

[Q2146] A. Ženíšek and M. Vanmaele: Applicability of the Bramble-Hilbert lemma in interpolation problems of narrow quadrilateral isoparametric finite elements, J. Comput. Appl. Math. 63 (1995), 109–122.

[Q2147] A. Ženíšek and J. Hoderová-Zlámalová: Semiregular Hermite tetrahedral finite elemets. Appl. Math. 46 (2001), 295–315.

[Q2148] J. Zlámalová: Semiregular finite elements in solving some nonlinear problems, Appl. Math. 46 (2001), 53–77.

[C13] **M. Křížek and V. Preiningerová**, *Výpočet třírozměrného teplotního pole ve statoru synchronních a asynchronních strojů metodou konečných prvků*, Elektrotechnický obzor **80** (1991), 78–84.

Cited in:

[Q2149] I. Faragó, S. Korotov, and P. Neittaanmäki: Galerkin approximations for the linear parabolic equation with the third boundary condition (submitted in 2001), 1–16.

[Q2150] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q2151] L. Liu: Finite element analysis of nonlinear heat conduction problems, Univ. of Jyväskylä, Dept. of Math., Report 75, 1997, 1–95.

[C14] **I. Hlaváček and M. Křížek**, *Weight minimization of elastic bodies weakly supporting tension. I. Domains with one curved side*, Appl. Math. **37** (1992), 201–240.

Cited in:

[Q2152] J. Chleboun and L. S. Xanthis: The method of arbitrary lines in optimal shape design: An efficient coupling with boundary design sensitivity formulae, submitted in 1996, 1–14.

[Q2153] J. Haslinger and P. Neittaanmäki: Finite element approximation for optimal shape, material and topology design, John Wiley & Sons, Chichester, 1996.

[Q2154] P. Kočandrle: Optimalizace tvaru rovinných elastických těles (disertační práce), FAV, Západočeská universita, Plzeň, 1994, 1–154.

[Q2155] P. Kočandrle and P. Rybníček: On the numerical solution of weight minimization of elastic bodies weakly supporting tensions, Appl. Math. 40 (1995), 21–31.

[Q2156] M. Kočvara and J. Outrata: A numerical approach to the design of masonry structures. Proc. 16th IFIP Conf. on Systems, Modelling and Optimization, Compiegne, 1993, 1–12.

[Q2157] J. Outrata, M. Kočvara, and J. Zowe: Nonsmooth approach to optimization problems with equilibrium constraints, Kluwer Academic Publishers, Amsterdam, 1998.

[**C15**] **I. Hlaváček and M. Křížek**, *Weight minimization of elastic bodies weakly supporting tension. II. Domains with two curved sides*, Appl. Math. **37** (1992), 289–312.

Cited in:

[Q2158] J. Chleboun and L. S. Xanthis: The method of arbitrary lines in optimal shape design: An efficient coupling with boundary design sensitivity formulae, submitted in 1996, 1–14.

[Q2159] J. Haslinger and P. Neittaanmäki: Finite element approximation for optimal shape, material and topology design, John Wiley & Sons, Chichester, 1996.

[Q2160] P. Kočandrle and P. Rybníček: On the numerical solution of weight minimization of elastic bodies weakly supporting tensions, Appl. Math. 40 (1995), 21–31.

[**C16**] M. Křížek, *On approximation of the Neumann problem by the penalty method*, Appl. Math. **38** (1993), 459–469.

Cited in:

[Q2161] M. I. Ivanov, I. A. Kremer, and Y. M. Laevsky: On non-uniqueness of pressures in problems of fluid filtration in fractured-porous media, J. Comput. Appl. Math. 425 (2023), Paper No. 115052, 15 pp.

[**C18**] **I. Hlaváček, M. Křížek, and V. Pištora**, *How to recover the gradient of linear elements on nonuniform triangulations*, Appl. Math. **41** (1996), 241–267.

Cited in:

[Q2162] R. E. Bank, J. Xu, and B. Zheng: Superconvergent derivative recovery for Lagrange triangular elements of degree p on unstructured grids, SIAM J. Numer. Anal. 45 (2007), 2032–2046.

[Q2163] M. Berzins: Mesh quality: a function of geometry, error estimates or both? Engineering with Computers 15 (1999), 236–247.

[Q2164] M. Berzins: Solution-based mesh quality indicators for triangular and tetrahedral meshes, Internat. J. Comput. Geom. Appl. 10 (2000), 333–346.

[Q2165] W. Cao: Superconvergence of a quadratic finite element method on adaptively refined anisotropic meshes, Int. J. Numer. Anal. Model. 15 (2018), 288–306.

[Q2166] Y. Chen: Superconvergent recovery of gradients of piecewise linear finite element approximations on non-uniform mesh partitions. Numer. Methods Partial Differential Equations 14 (1998), 169–192.

[Q2167] J. Chleboun: An application of the averaged gradient technique, In Programs and Algorithms of Numer. Math. 14, Inst. of Math., Prague, 2008, 65–70.

[Q2168] J. Dalík: Quadratic interpolation in vertices of planar triangulations and an application, preprint, VUT Brno, 2004, 1–31.

[Q2169] J. Dalík: Averaging of directional derivatives in vertices of nonobtuse regular triangulations, Numer. Math. 116 (2010), 619–644.

[Q2170] J. Dalík: Operators approximating partial derivatives at vertices of triangulations by averaging, Math. Bohem. 135 (2010), 363–372.

[Q2171] J. Dalík: Complexity of the method of averaging, Proc. Programs and Algorithms of Numer. Math. 15 (eds. T. Vejchodský et al.), Inst. of Math., Prague, 2010, 65–77.

[Q2172] J. Dalík: Averaging of gradients in vertices of triangulations, AIP Conf. Proc. 1389 (2011), 1832–1835.

[Q2173] J. Dalík: Approximations of the partial derivatives by averaging, Cent. Eur. J. Math. 10 (2012), 44–54.

[Q2174] J. Dalík and V. Valenta: Averaging of gradient in the space of linear triangular and bilinear rectangular finite elements, Cent. Eur. J. Math. 11 (2013), 597–608.

[Q2175] J. A. Ferreira and R. D. Grigorieff: Supraconvergence and supercloseness of a scheme for elliptic equations on nonuniform grids, Numer. Funct. Anal. Optim. 27 (2006), 539–564.

[Q2176] Q. Huang, K. Jiang, and N. Yi: Some weighted averaging methods for gradient recovery, Adv. Appl. Math. Mech. 4 (2012), 131–155.

[Q2177] A. Kliková: Finite volume–finite element solution of compressible flow, Ph.D. Thesis, Charles Univ., Prague, 2000, 1–188.

[Q2178] A. M. Lakhany, I. Marek, and J. R. Whiteman: Superconvergence results on mildly stuctured triangulations, Comput. Methods Appl. Mech. Engrg. 189 (2000), 1–75.

[Q2179] M. Picasso, F. Alauzet, H. Borouchaki, and P.-L. George: A numerical study of some Hessian recovery techniques on isotropic and anisotropic meshes, SIAM J. Sci. Comput. 33 (2011), 1058–1076.

[C19] **L. Liu, M. Křížek, and P. Neittaanmäki**, *Higher order finite element approximation of a quasilinear elliptic boundary value problem of a non-monotone type*, Appl. Math. **41** (1996), 467–478.

Cited in:

[Q2180] C. Bi and V. Ginting: A residual-type a posteriori error estimate of finite volume element method for a quasi-linear elliptic problem, Numer. Math. 114 (2009), 107–132.

[Q2181] C. Bi and V. Ginting: Global superconvergence and a posteriori error estimates of finite element method for second-order quasilinear elliptic problems, J. Comput Appl. Math. 2013, 1–26.

[Q2182] C. Bi, C. Wang, and Y. Lin: Two-grid finite element method and its a posteriori error estimates for a nonmonotone quasilinear elliptic problem under minimal regularity of data, Comput. Math. Appl. 76 (2018), 98–112.

[Q2183] C. Bi, C. Wang, and Y. Lin: A posteriori error estimates of two-grid finite element methods for nonlinear elliptic problems, J. Sci. Comput. 74 (2018), 23–48.

[Q2184] E. Casas and V. Dhamo: Error estimates for the numerical approximation of a quasilinear Neumann problem under minimal regularity on data, Numer. Math. 117 (2011), 115–145.

[Q2185] E. Casas and K. Chrysafinos: Numerical analysis of quasilinear parabolic equations under low regularity assumptions, Numer. Math. 143 (2019), 749–780.

[Q2186] E. Casas and F. Tröltzsch: Numerical analysis of some optimal control problems governed by a class of quasilinear elliptic equations, ESAIM Control Optim. Calc. Var. 17 (2011), 771–800.

[Q2187] Y. Du, Y. Li, Yonghai, and Z. Sheng: Quadratic finite volume method for a nonlinear elliptic problem, Adv. Appl. Math. Mech. 11 (2019), 838–869.

[Q2188] T. Gudi, G. Mallik, and T. Pramanick: A hybrid high-order method for quasilinear elliptic problems of nonmonotone type, SIAM J. Numer. Anal. 60 (2022), 2318–2344.

[Q2189] L. Guo and C. Bi: Adaptive finite element method for nonmonotone quasi-linear elliptic problems, Comput. Math. Appl. 93 (2021), 94–105.

[Q2190] L. Guo, Z. Huang, and C. Wang: A posteriori error estimates of edge residual type of finite element method for nonmonotone quasi-linear problem, Numer. Methods Partial Differential Equations 30 (2014), 813–837.

[Q2191] L. Guo, Q. Sheng, C. Wang, and Z. Huang: A modified weak Galerkin finite element method for nonmonotone quasilinear elliptic problems. J. Comput. Appl. Math. 406 (2022), Paper No. 113928, 19 pp.

[Q2192] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q2193] J. Malík: Generalized G-convergence for quasilinear elliptic differential operators, Nonlinear Anal., Theory, Methods and Appl. 68 (2008), 304–314.

[C20] **L. Liu and M. Křížek**, *The second order optimality conditions for nonlinear mathematical programming with $C^{1,1}$ data*, Appl. Math. **42** (1997), 311–320.

Cited in:

[Q2194] D. Bednařík and K. Pastor: On relations of vector optimization results with $C^{1,1}$-data, Acta Math. Sinica 26 (2010), 2031–2040.

[Q2195] I. Ginchev: On scalar and vector ℓ-stable functions, Nonlinear Anal. Theory Methods Appl. 74 (2011), 182–194.

[Q2196] I. Ginchev and A. Guerraggio: Second-order conditions for constrained vector optimization problems with ℓ-stable data, Optimization 60 (2011), 179–199.

[Q2197] I. Ginchev, A. Guerraggio, and M. Rocca: From scalar to vector optimization, Appl. Math. 51 (2006), 5–36.

[Q2198] I. Ginchev, A. Guerraggio, and M. Rocca: Second-order conditions in $C^{1,1}$ constrained vector optimization, Math. Programming, Ser. B, 2004, 1–24. 104 (2005), 389–405.

[Q2199] I. Ginchev, A. Guerraggio, and M. Rocca: Second-order Dini set-valued directional derivative in $C^{1,1}$ vector optimization, Optim. Methods Softw. 25 (2010), 75–87.

[Q2200] C. Gutiérrez, B. Jiménez, and V. Novo: On second-order Fritz John type optimality conditions in nonsmooth multiobjective programming, Math. Programming 123 (2010), 199–223.

[Q2201] S. J. Li and S. Xu: Sufficient conditions of isolated minimizers for constrained programming problems, Numer. Funct. Anal. Optim. 31 (2010), 715–727.

[Q2202] K. M. Miettinen: Nonlinear multiobjective optimization, Kluwer Academic Publishers, Dordrecht, 1999.

[Q2203] N. Ovcharova and J. Gwinner: Stability in generalized differentiability based on a set convergence principle, Set-Valued Anal. 15 (2007), 317–329.

[Q2204] K. Pastor: Derivatives of Hadamard type in scalar constrained optimization, submitted to Kybernetika (2017), 1–15.

[Q2205] K. Pastor: Derivatives of Hadamard type in vector optimization, Math. Slovaca 68 (2018), 421–430.

[Q2206] D. La Torre, M. Rocca: On $C^{1,1}$ optimization problem, J. Comput. Anal. Appl. 7 (2005), 383–395.

[C21] **S. Korotov, M. Křížek, and P. Neittaanmäki**, *On the existence of strongly regular families of triangulations for domains with a piecewise smooth boundary*, Appl. Math. **44** (1999), 33–42.

Cited in:

[Q2207] R. Hošek: Strongly regular family of boundary-fitted tetrahedral meshes of bounded C^2 domains, Appl. Math. 61 (2016), 233–251.

[Q2208] R. Hošek: Numerical schemes for equations of viscous compressible flows: Analysis and geometry, Ph.D. Thesis, Faculty of Applied Sciences, Univ. of West Bohemia, Pilsen, 2017.

[Q2209] R. Hošek: The role of Sommerville tetrahedra in numerical mathematics, Proc. Seminar Programs and Algorithms of Numerical Mathematics 18 (eds. J. Chleboun, P. Kůs, P. Přikryl, K. Segeth, J. Šístek, and T. Vejchodský), Janov nad Nisou, Mathematical Institute, Prague, 2017, 46–54.

[Q2210] M. S. Petrov and T. D. Todorov: Successive partitions of ideal 4D-domains, C. R. Acad. Bulg. Sci. (2018), 1–8.

[Q2211] M. S. Petrov and T. D. Todorov: Refinement strategies related to cubic tetrahedral meshes, Appl. Numer. Math. 137 (2019), 169–183.

[Q2212] T. D. Todorov et al.: The optimal refinement strategy for 3-D simplicial meshes, submitted to Comput. Math. Appl. in 2012, 1–17.

[C22] **L. Liu, P. Neittaanmäki, and M. Křížek**, *Second-order optimality conditions for nondominated solutions of multiobjective programming with $C^{1,1}$-data*, Appl. Math. **45** (2000), 381–397.

Cited in:

[Q2213] D. Bednařík and K. Pastor: On relations of vector optimization results with $C^{1,1}$-data, Acta Math. Sinica 26 (2010), 2031–2040.

[Q2214] M. Davodi Monfared, A. Mohades, and J. Rezaei: Convex hull ranking algorithm for multi-objective evolutionary algorithms, Scientia Iranica 18 (2011), 1435–1442.

[Q2215] I. Ginchev: On scalar and vector ℓ-stable functions, Nonlinear Anal. Theory Methods Appl. 74 (2011), 182–194.

[Q2216] I. Ginchev and A. Guerraggio: Second-order conditions for constrained vector optimization problems with ℓ-stable data, Optimization 60 (2011), 179–199.

[Q2217] I. Ginchev, A. Guerraggio, and M. Rocca: From scalar to vector optimization, Appl. Math. 51 (2006), 5–36.

[Q2218] I. Ginchev, A. Guerraggio, and M. Rocca: Isolated minimizers and proper efficiency in $C^{0,1}$ constrained vector optimization problems, J. Math. Anal. Appl. 309 (2005), 353–368.

[Q2219] I. Ginchev, A. Guerraggio, and M. Rocca: Second-order conditions in $C^{1,1}$ constrained vector optimization, Math. Programming, Ser. B, 2004, 1–24. 104 (2005), 389–405.

[Q2220] I. Ginchev, A. Guerraggio, and M. Rocca: Second-order conditions in $C^{1,1}$ vector optimization with inequality and equality constaints, LN in Economics and Math. Systems 563 (2006), 29–44.

[Q2221] I. Ginchev, A. Guerraggio, and M. Rocca: Locally Lipschitz vector optimization with inequality and equality constaints, Appl. Math. 55 (2010), 77–88.

[Q2222] I. Ginchev, A. Guerraggio, and M. Rocca: Second-order Dini set-valued directional derivative in $C^{1,1}$ vector optimization, Optim. Methods Softw. 25 (2010), 75–87.

[Q2223] C. Gutiérrez, B. Jiménez, and V. Novo: On second-order Fritz John type optimality conditions in nonsmooth multiobjective programming, Math. Programming 123 (2010), 199–223.

[Q2224] V. I. Ivanov: Characterizations of nonsmooth generalized polarly cone-monotone maps, Studia Sci. Math. Hungar. 42 (2005), 445–458.

[Q2225] B. Jiménez and V. Novo: First order optimality conditions in vector optimization involving stable functions Optimization 57 (2008), 449–471.

[Q2226] P. Q. Khanh and N. D. Tuan: Second-order optimality conditions with the envelope-like effect in nonsmooth multipbjective mathematical programming I: ℓ-stability and set-valued directional derivatives. J. Math. Anal. Appl. 403 (2013), 695–702.

[Q2227] K. Pastor: Derivatives of Hadamard type in scalar constrained optimization, to appear in Kybernetika (2017), 1–15.

[Q2228] K. Pastor: Derivatives of Hadamard type in vector optimization, Math. Slovaca 68 (2018), 421–430.

[Q2229] D. La Torre: On generalized derivatives for $C^{1,1}$ vector optimization problems, J. Appl. Math. 7 (2003), 365–376.

[Q2230] D. La Torre, M. Rocca: Remarks on second order generalizaed derivatives, Appl. Math. E - Notes (2003), 130–137.

[Q2231] D. La Torre, M. Rocca: On $C^{1,1}$ optimization problem, J. Comput. Anal. Appl. 7 (2005), 383–395.

[Q2232] N. D. Tuan: On necessary optimality conditions for nonsmooth vector optimization problems with mixed constraints in infinite dimensions, Appl. Math. Optim. 77 (2018), 515–539.

[Q2233] N. D. Tuan: Second-order sequence-based necessary optimality conditions in constrained nonsmooth vector optimization and applications, Positivity 22 (2018), 159–190.

[C23] **M. Křížek and L. Somer**, *A necessary and sufficient condition for the primality of Fermat numbers*, Math. Bohem. **126** (2001), 541–549.

Cited in:

[Q2234] S. Gun, B. Ramakrishnan, B. Sahu, and R. Thangadurai: Distribution of quadratic non-residues which are not primitive roots, Math. Bohem. 130 (2005), 387—396.

[Q2235] K. R. Guy: Unsolved problems in number theory, the third edition, Springer, Berlin, 2004.

[Q2236] P. R. Longhas, A. Abdul, A. Rosal: Factors of composite $4n^2 + 1$ using Fermats factorization method, Internat. J. Math. Trends Technol. 68 (2022), 53–60.

[C24] **I. Hlaváček and M. Křížek**, *On exact results in the finite element method*, Appl. Math. **46** (2001), 467–478.

Cited in:

[Q2237] I. Faragó, S. Korotov, and T. Szabó: On modification of continuous and discrete maximum principles for reaction-diffusion problems, Adv. Appl. Math. Mech. 3 (2011), 109–120.

[Q2238] Q. Lin: Free calculus. A liberation from concepts and proofs, World Scientific, Singapore, 2008.

[Q2239] Q. Lin and J. Lin: Finite elements methods: Accuracy and improvement, Science Press, Beijing, 2006.

[Q2240] E. M. López, J. L. Romero, M. A. Ortega, and O. Rió: Simplified finite element assessment of beams with and without shear deformation, Civil-Comp. Proc. 102 (2013).

[Q2241] L. Meng and Q. D. Zhu: The ultraconvergence of derivative for bicubic finite element, Comput. Methods Appl. Mech. Engrg. 196 (2007), 3771–3778.

[Q2242] Q. D. Zhu and Q. Zhao: SPR technique and finite element correction, Numer. Math. 96 (2003), 185–196.

[C25] **M. Křížek**, *Colouring polytopic partitions in R^d*, Math. Bohem. **127** (2002), 251–264.

Cited in:

[Q2243] T. Dokchitser and V. Dokchitser: On the 6-colour conjecture in $\mathbb{R}^3$, Preprint Univ. Cambridge, 2003, 1–6.

[C27] **L. Somer and M. Křížek**, *On a connection of number theory with graph theory*, Czechoslovak Math. J. **54** (2004), 465–485.

Cited in:

[Q2244] U. Ahmad and S. Husnine: Characterization of power digraphs modulo n, Comment. Math. Univ. Carolin. 52,3 (2011), 359–367.

[Q2245] U. Ahmad and S. M. Husnine: The power digraphs of safe primes, Bull. Iranian Math. Soc. 42 (3) (2016), 749–759.

[Q2246] U. Ahmad and M. Moeen: The classification of finite groups by using iteration digraphs, Czechoslovak Math. J. 66 (2016), 1103–1117.

[Q2247] U. Ahmad and M. Moeen: The digraphs arising by the power maps of generalized quaternion groups, J. Algebra Appl. 16(9) (2017), 1750179.

[Q2248] U. Ahmad and H. Syed: On the heights of power digraphs modulo n, Czechoslovak Math. J. 62 (2012), 541–556.

[Q2249] W. Carlip and M. Mincheva: Symmetry of iteration graphs, Czechoslovak Math. J. 58 (2008), 131–145.

[Q2250] G. Deng and P. Yuan: Symmetric digraphs from powers modulo n, Open J. Discrete Math. 1 (2011), 103–107.

[Q2251] G. Deng and P. Yuan: Isomorphic digraphs from powers modulo p, Czechoslovak Math. J. 61 (2011), 771–779.

[Q2252] G. Deng and P. Yuan: On the symmetric digraphs from powers modulo n, Discrete Math. 312 (2012), 720–728.

[Q2253] G. Deng and P. Yuan: On the structure of $G(H, k)$, Algebra Colloq. 21 (2014), 317–330.

[Q2254] G. Dresden and W. Tu: Finding cycles in the kth power digraphs over integer modulo a prime, Involve 11 (2018), 181–194.

[Q2255] P. Goswami, S. K. Thakur, and G. C. Ray: The structure of power digraph connected with the congruence $a^{11} \equiv b$ (mod n), submitted to Ind. J. Pure Appl. Math. in 2021, 1-12.

[Q2256] T. Ju and M. Wu: On iteration digraph and zero-divisor graph of the ring $\mathbb{Z}_n$, Czechoslovak Math. J. 64 (2014), 611–628.

[Q2257] M. Khalid Mahmood and F. Ahmad: A classification of cyclic nodes and enumeration of components of a class of discrete graphs, Appl. Math. Inform. Sci. 9 (2015), 103–112.

[Q2258] J. S. Kumar and S. M. Nair: Square congruence graph, to appear in Comm. Korean Math. Soc. in 2022, 1–7.

[Q2259] M. A. Malik and M. K. Mahmood: On simple graphs arising from exponential congruences, J. Appl. Math. 2012 (2012), Article Number 292895.

[Q2260] Y. Meemark and N. Maingam: The digraph of the square mapping on quotient rings over Gaussian integers, Int. J. Number Theory 7 (2011), 835–852.

[Q2261] Y. Meemark and N. Wiroonsri: The quadratic digraph on polynomial rings over finite fields, Finite Fields Appl. 16 (2010), 334–346.

[Q2262] M. K. Mahmood and L. Anwar: The iteration digraphs of Lambert map over the local ring $Z/p(k)Z$: Structures and enumerations, Iranian J. Math. Sci. Inf. 17 (2022), 307–314.

[Q2263] J. Skowronek-Kaziów: Properties of digraphs connected with some congruences relations, Czechoslovak Math. J. 59 (2009), 39–49.

[Q2264] J. Skowronek-Kaziów: Some digraphs arising from number theory and remarks on the zero-divisor graph of the ring Z_n, Inform. Process. Lett. 108 (2008), 165–169.

[Q2265] I. Tocharoenirattisai and Y. Meemark: Exponent of local ring extensions of Galois rings and digraphs of the kth power mapping, Turkish J. Math. 41 (2) (2017), 223–234.

[Q2266] T. M. J. Vasiga: Error detection in number-theoretic and algebraic algorithms, Thesis, Univ. of Waterloo, Canada, 2008, 1–176.

[Q2267] Y. Wei, J. Nan, G. Tang, and H. Su: The cubic mapping graph of the residue classes of integers, Ars Combinatorica 97 (2010), 101–110.

[Q2268] Y. Wei, J. Nan, and G. Tang: The cubic mapping graph for the ring of Gaussian integers modulo n, Czechoslovak Math. J. 61 (2011), 1023–1036.

[Q2269] Y. Wei, J. Nan, and G. Tang: The digraphs from finite fields, Ars Combin. 102 (2011), 297–304.

[Q2270] Y. Wei and G. Tang: The digraphs from finite fields, Ars Combinatorica 102 (2011), 297–304.

[Q2271] Y. Wei, G. Tang, and H. Su: The square mapping graphs of finite commutative rings, Algebra Colloq. 19 (2012), 569–580.

[Q2272] J. Zhao and G. Deng: Digraph from power mapping on noncommutative goups, J. Algebra Appl. 19 (2020), no. 5, 2050084, 10 pp.

[C28] **L. Beilina, S. Korotov, and M. Křížek**, *Local nonobtuse tetrahedral partitions near Fichera-like corners*, Appl. Math. **50** (2005), 569–581.

Cited in:

[Q2273] R. Cier, S. Rojas, and V. M. Calo: Automatically adaptive, stabilized finite element method via residual minimization for heterogeneous, anisotropic advection-diffusion-reaction problems, Comput. Methods Appl. Mech. Engrg. 385 (2021), Paper No. 114027, 22 pp.

[Q2274] S. Congreve and P. Houston: Two-grid *hp*-version discontinuous Galerkin finite element methods for quasilinear elliptic PDEs on agglomerated coarse meshes, Adv. Comput. Math. 48 (2022), Paper No. 54, 31 pp.

[Q2275] S. Congreve, P. Houston, and T. P. Wihler: Two-grid *hp*-version discontinuous Galerin finite element method for second-order quasilinear PDEs, J. Sci. Comput. 55 (2013), 471–497.

[Q2276] L. S. Cotter, T. Vejchodský, and R. Erban: Adaptive finite element method by stochastic simulation of chemical systems, SIAM J. Sci. Comput. 35 (2013), B107–B131.

[Q2277] N. Zander, T. Bog, M. Elhaddad, F. Frischmann, S. Kollmannsberger, and E. Rank: The multi-level *hp*-method for three-dimensional problems: dynamically changing high-order mesh refinement with arbitrary hanging nodes, Comput. Methods Appl. Mech. Engrg. 310 (2016), 252–277.

[Q2278] L. Zhu, S. Giani, P. Houston, and D. Schötzau: Energy norm a-posteriori error estimation for *hp*-adaptive discontinuous Galerkin method for elliptic problems in three dimensions, Math. Mod. Meth. Appl. Sci. 21 (2011), 267–306.

[Q2279] M. Zítka: On some aspects of adaptive higher-order finite element method for three-dimensional elliptic problems, Ph.D. Thesis, Faculty of Math. and Phys., Charles Univ., Prague, 2008, 1–119.

[C29] **W. Chen, M. Křížek**, *What is the smallest possible constant in Céa's lemma?*, Appl. Math. **51** (2006), 129–144.

Cited in:

[Q2280] D. Aleja and M. Molina-Meyer: Nonlinear finite elements: sub- and supersolutions for the heterogeneous logistic equation, J. Differential Equations 278 (2021), 189–219.

[C30] **L. Somer and M. Křížek**, *On semiregular digraphs of the congruence* $x^k \equiv y \pmod{n}$, Comment. Math. Univ. Carolin. **48** (2007), 41–58.

Cited in:

[Q2281] U. Ahmad and S. M. Husnine: The power digraphs of safe primes, Bull. Iranian Math. Soc. 42 (3) (2016), 749–759.

[Q2282] U. Ahmad and M. Moeen: The classification of finite groups by using iteration digraphs, Czechoslovak Math. J. 66 (2016), 1103–1117.

[Q2283] U. Ahmad and M. Moeen: The digraphs arising by the power maps of generalized quaternion groups, J. Algebra Appl. 16(9) (2017), 1750179.

[Q2284] U. Ahmad and H. Syed: Characterization of power digraphs modulo n, Comment. Math. Univ. Carolin. 52,3 (2011), 359–367.

[Q2285] U. Ahmad and H. Syed: On the heights of power digraphs modulo n, Czechoslovak Math. J. 62 (2012), 541–556.

[Q2286] G. Deng and P. Yuan: Symmetric digraphs from powers modulo n, Open J. Discrete Math. 1 (2011), 103–107.

[Q2287] G. Deng and P. Yuan: Isomorphic digraphs from powers modulo p, Czechoslovak Math. J. 61 (2011), 771–779.

[Q2288] G. Deng and P. Yuan: On the symmetric digraphs from powers modulo n, Discrete Math. 312 (2012), 720–728.

[Q2289] J. Nan, Y. Wei, and G. Tang: The fundamental constituents of iteration digraphs of finite commutative rings, Czechoslovak Math. J. 64 (2014), 199–208.

[Q2290] A. Sawkmie and M. M. Singh: On the tree structure of the power digraphs modulo n, Czechoslovak Math. J. 65 (2015), 923–945.

[Q2291] A. Sawkmie and M. M. Singh: On the uniqueness of the factorization of power digraphs modulo n, Rend. Semin. Mat. Univ. Padova 140 (2018), 185–219.

[Q2292] A. Sawkmie and M. M. Singh: Digraphs associated with the kth power map on the quotient ring of polynomilas over finite fields, J. Algebra Appl. 18 (2019), no. 11, 1950218, 18 pp.

[Q2293] M. Sha: On the cycle structure of repeated exponentiation modulo a prime power, Fibonacci Quart. 49 (2011), 340–347.

[Q2294] M. Sha: Digraphs from endomorphisms of finite cyclic groups, J. Combin. Math. Combin. Comput. 83 (2012), 105–120.

[Q2295] G. Tang, H. Zhang, Y. Wei: The square mapping graph of 2×2 matrix rings over prime fields, Ars Combin. 143 (2019), 59–75.

[Q2296] Y. Wei, J. Nan, and G. Tang: The digraphs from finite fields, submitted in 2010, 1–10.

[Q2297] Y. Wei and G. Tang: The iteration digraphs of finite commutative rings, Turkish J. Math. 39 (2015), 872–883.

[Q2298] J. Zhao, G. Deng, and T. Liu: The structure of isomorphic digraph from powers modulo p^e, submitted to J. Math. in 2018.

[C31] **J. Brandts, S. Korotov, and M. Křížek**, *Simplicial finite elements in higher dimensions*, Appl. Math. **52** (2007), 251–265.

Cited in:

[Q2299] I. Faragó: Discrete maximum principle for finite element parabolic models in higher dimensions, Math. Comput. Simulation 80 (2010), 1601–1611.

[Q2300] R. Hošek: Construction and shape optimization of simplicial meshes in d-dimensional space, Discrete Comput. Geom. 59 (2018), 972–989.

[Q2301] M. E. Mincsovics: Discrete maximum principle for finite element parabolic operators, Proc. of the 6th Internat. Conf. on Large-Scale Sci. Comput., Sozopol, Bulgaria, 2009, (ed. by I. Lirkov et al.), LNCS 5910, Springer-Verlag, 2010, 604–612.

[Q2302] M. S. Petrov and T. D. Todorov: Stable subdivision of 4D polytopes, Numer. Algorithms 79 (2018), 633–656.

[Q2303] M. S. Petrov and T. D. Todorov: Successive partitions of ideal 4D-domains, C. R. Acad. Bulg. Sci. (2018), 1–8.

[Q2304] M. S. Petrov and T. D. Todorov: The rate of divergence of hypercubic pyramidal elements, submitted in 2021, 1–5.

[Q2305] M. S. Petrov and T. D. Todorov: Properties of the multidimensional finite elements, accepted by Appl. Math. Comput. (2020), 1–30.

[Q2306] M. S. Petrov and T. D. Todorov: Lumping of the mass matrix in 4D unstructured hybrid meshes, submitted to Comput. Math. Appl. in 2021, 1–16.

[Q2307] M. S. Petrov et al.: Enabling four-dimensional conformal hybrid meshing with cubic pyramids, Numer. Algorithms 91 (2022), 671–709.

[Q2308] Á. Plaza, S. Falcón, J. P. Suárez, and P. Abad: A local refinement algorithm for the longest-edge trisection of triangle meshes, Math. Comput. Simulation 82 (2012), 2971–2981.

[Q2309] T. Vejchodský: The discrete maximum principle for Galerkin solutions of elliptic problems, Cent. Eur. J. Math. 10 (2012), 25–43.

[C32] **M. Křížek, A. Šolcová, and L. Somer**, *Construction of Šindel sequences*, Comment. Math. Univ. Carolin. **48** (2007), 373–388.

Cited in:

[Q2310] N. J. A. Sloane: The on-line encyclopaedia of integer sequences, 2007, A028355, A028356, published eletronically at `http://www.research.att.com/~njas/sequences/`

[C33] **L. Somer and M. Křížek**, *The structure of digraphs associated with the congruence* $x^k \equiv y \pmod{n}$, Czechoslovak Math. J. **61** (2011), 337–358
Cited in:.

[Q2311] P. Goswami, S. K. Thakur, and G. C. Ray: The structure of power digraph connected with the congruence $a^{11} \equiv b \pmod{n}$, submitted to Ind. J. Pure Appl. Math. in 2021, 1-12.

[Q2312] T. Ju and M. Wu: On iteration digraph and zero-divisor graph of the ring $\mathbb{Z}_n$, Czechoslovak Math. J. 64 (2014), 611–628.

[Q2313] S. Konyagin, F. Luca, B. Mans, L. Mathieson, M. Sha, and I. Shparlinski: Functional graphs of polynomials over finite fields, J. Combin. Theory Ser. B 116 (2016), 87–122.

[Q2314] B. Mans, M. Sha, I. Shparlinski, and D. Sutantyo: Functional graphs of families of quadratic polynomials, Math. Comp. 92 (2023), 2307–2331.

[Q2315] J. Nan, Y. Wei, and G. Tang: The fundamental constituents of iteration digraphs of finite commutative rings, Czechoslovak Math. J. 64 (2014), 199–208.

[Q2316] A. Ostafe and M. Sha: Counting dynamical systems over finite fields, Dynamics and numbers, Contemp. Math. 669, Amer. Math. Soc., Providence, RI, 2016, 187–203.

[Q2317] A. Sawkmie and M. M. Singh: On the tree structure of the power digraphs modulo n, Czechoslovak Math. J. 65 (2015), 923–945.

[Q2318] A. Sawkmie and M. M. Singh: On the uniqueness of the factorization of power digraphs modulo n, Rend. Sem. Mat. Univ. Padova 140 (2018), 185–219.

[Q2319] G. Tang, H. Zhang, Y. Wei: The square mapping graph of 2×2 matrix rings over prime fields, Ars Combin. 143 (2019), 59–75.

[C34] **J. Brandts, S. Korotov, and M. Křížek**, *Generalization of the Zlámal condition for simplicial finite elements in* $\mathbb{R}^d$, Appl. Math. **56** (2011), 417–424.

Cited in:

[Q2320] M. Duprez, V. Lleras, and A. Lozinski: Finite element method with local damage of the mesh, ESAIM Math. Model. Numer. Anal. 53 (2019), 1871–1891.

[Q2321] A. Khademi: Convergence on degenerating finite element meshes, PhD Thesis, Western Norway Univ. of Appl. Sci., Bergen, 2020.

[Q2322] M. S. Petrov and T. D. Todorov: Properties of the multidimensional finite elements, accepted by Appl. Math. Comput. (2020), 1–30.

[C36] **A. Hannukainen, S. Korotov, M. Křížek**, *On Synge-type angle conditions for d-simplices*, Appl. Math. **62** (2017), 1–13.

Cited in:

[Q2323] N. V. Baidakova: Linear interpolation on a tetrahedron. (Russian) Tr. Inst. Mat. Mekh. 24 (2018), no. 4, 80–84; translation in Proc. Steklov Inst. Math. 308 (2020), suppl. 1, 31–34.

[D1] **M. Křížek**, *Ravnovesnye elementy v zadačach linějnoj uprugosti*, Variational -Difference Methods in Mathematical Physics V, ed. N.S.Bachvalov and Ju. A. Kuzněcov, Moscow, 1983, Viniti, Moscow, 1984, 81–92.

Cited in:

[Q2324] M. Vondrák: Slab analogy in theory and practice of conforming equilibrium stress models for finite element analysis of plane elastostatics, Apl. Mat. 30 (1985), 187–217.

[D2] **P. Neittaanmäki and M. Křížek**, *Conforming FE-method for obtaining the gradient of a solution to the Poisson equation*, Efficient Solutions of Elliptic Systems, Proc. of a GAMM-Seminar, ed. W.Hackbusch, Kiel, 1984, Vieweg & Sohn, Wiesbaden, 1984, 74–86.

Cited in:

[Q2325] J.-L. Guermond, L. Quartapelle, and J. Zhu: On a 2D vector Poisson problem with apparently mutually exclusive scalar boundary conditions, Math. Model. Numer. Anal. 34 (2000), 183–200.

[Q2326] W. Hackbush: Multi-grid methods and applications, Springer-Verlag, Berlin, 1985, (see p. 236).

[Q2327] C. Matyska: Some problems of contemporary geodynamics (DrSc. Thesis), MFF UK, Prague, 1996.

[Q2328] C. Matyska: Variational principles for the momentum equation of mantle convection with Newtonian and power-law rheologies, Geophys. J. Int. 126 (1996), 281–286.

[Q2329] A. I. Pehlivanov and G. F. Carey: Interior error estimates for least-squares mixed finite element methods, TICAM Report 98-05, Univ. of Texas at Austin, 1998, 1–15.

[Q2330] M. Vanmaele, K. W. Morton, E. Süli, and A. Borzì: Analysis of the cell vertex finite volume method for the Cauchy-Riemann equations, SIAM J. Numer. Anal. 34 (1997), 2043–2062.

[Q2331] J. Zhu, A. F. D. Loula, and L. Quartapelle: Finite element solution of vector Poisson equation with a coupling boundary condition, Numer. Methods Partial Differential Equations 16 (2000), 71–83.

[D3] **P. Neittaanmäki and M. Křížek**, *Superconvergence of the finite element schemes arising from the use of averaged gradients*, Accuracy Estimates and Adaptive Refinements in Finite Element Computations, Lisbon, 1984, 169–178.

Cited in:

[Q2332] Y. Chen: Superconvergent recovery of gradients of piecewise linear finite element approximations on non-uniform mesh partitions. Numer. Methods Partial Differential Equations 14 (1998), 169–192.

[Q2333] A. M. Lakhany, I. Marek, and J. R. Whiteman: Superconvergence results on mildly stuctured triangulations, Comput. Methods Appl. Mech. Engrg. 189 (2000), 1–75.

[Q2334] Q. Lin: High accuracy from linear elements, Proc. of the Beijing Sympos. on Differential Geometry and Differential Equations (ed. Feng Kang), Science Press, Beijing, 1984, 258–262.

[Q2335] Q. Lin and J. C. Xu: Linear finite elements with high accuracy, J. Comput. Math. 3 (1985), 115–133.

[Q2336] Q. Lin and Q. Zhu: Asymptotic expansion for the derivative of finite elements, J. Comput. Math. 2 (1984), 361–363.

[Q2337] Q. Lin and Q. Zhu: Local asymptotic expansion and extrapolation for finite elements, J. Comput. Math. 4 (1986), 263–265.

[Q2338] J. R. Whiteman and G. M. Thompson: Finite element calculations of parameters for singularities in problems of fracture, In: The Mathematics of Finite Elements and Applications V, (ed. J. R. Whiteman), Academic Press, London, 1984, 27–47.

[**D4**] **V. Preiningerová, M. Křížek, and V. Kahoun**, *Temperature distribution in large transformer cores*, Proc. of GANZ Conf., ed. M.Franyó, Budapest, 1985, 254–261.

Cited in:

[Q2339] I. Faragó, S. Korotov, and T. Szabó: On continuous and discrete maximum principles for elliptic problems with the third boundary condition, Appl. Math. Comput. 219 (2013), 7215–7224.

[Q2340] S. Korotov: Variational crimes and equilibrium finite elements in three-dimensional space, Univ. of Jyväskylä, Dept. of Math., Report 74, 1997, 1–111.

[Q2341] J. Mlýnek: Matematické modely vedení tepla v elektrických strojích. Habilitační práce, Tech. Univ. Liberec, 2007.

[**D5**] **M. Křížek**, *Superconvergence results for linear triangular elements*, Proc. Internat. Conference EQUADIFF 6, ed. J. Vosmanský and M. Zlámal, Brno, 1985, LN in Math. 1192, Springer-Verlag, Berlin, Heidelberg, 1986, 315–320.

Cited in:

[Q2342] L. Chang, W. Gong, and N. Yan: Finite element method for a nonsmooth elliptic equation, Front. Math. China 5 (2010), 191–209.

[Q2343] C. M. Chen: Superconvergence for triangular finite elements, Science in China, Ser. A-Math., 42 (1999), 917–924.

[Q2344] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q2345] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[Q2346] S. J. Goebbels: The sharpness of a pointwise error bound in connection with linear finite elements, Numer. Funct. Anal. Optim. 18 (1997), 541–553.

[Q2347] Y. Huang, L. Wang, and N. Yi: Mesh quality and more detailed error estimates of finite element method, Numerical Math. 10 (2017), 420–436.

[Q2348] Q. Lin: Tetrahedral or cubic mesh? Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 160–182.

[Q2349] Q. Lin and N. N. Yan: The construction and analysis for efficient finite elements (Chinese), Hebei Univ. Publ. House, 1996.

[Q2350] L. B. Wahlbin: Lecture notes on superconvergence in Galerkin finite element methods, Cornell Univ., 1994, 1–243.

[Q2351] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q2352] N. N. Yan: Superconvergence analysis and a posteriori error estimation in finite element methods, Ser. Inf. Comput. Sci., vol. 40, Science Press, Beijing, 2008.

[Q2353] Y. Zhang, Y. Huang, and N. Yi: Superconvergence of the Crouzeix-Raviart element for elliptic equation, Adv. Comput. Math. 45 (2019), 2833–2844.

[Q2354] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[Q2355] Q. D. Zhu and Q. Lin: Superconvergence theory of finite element methods (in Chinese), Hunan Science and Technology Publishers, Hunan, 1989, (see p. 178).

[Q2356] A. Ženíšek: Nonlinear elliptic and evolution problems and their finite element approximations, Academic Press, London, 1990, (see p. 383).

[Q2357] Y. Zhang, Y. Huang, and N. Yi: Superconvergence of the Crouzeix-Raviart element for elliptic equation, Adv. Comput. Math. 45 (2019), no. 5-6, 2833–2844.

[**D6**] **P. Neittaanmäki and M. Křížek**, *Postprocessing of a finite element scheme with linear elements*, Numerical Techniques in Continuum Mechanics, Proc. of a GAMM-Seminar, ed. W.Hackbusch and K.Witsch, Kiel, 1986, Vieweg & Sohn, Wiesbaden, 1987, 69–83.

Cited in:

[Q2358] C. M. Chen and Y. Q. Huang: High accuracy theory of finite element methods (in Chinese), Hunan Science and Technology Press, Changsha, 1995.

[**D10**] **P. Neittaanmäki and M. Křížek**, *On $\mathcal{O}(h^4)$-superconvergence of piecewise bilinear FE-approximations*, Proc. of the Second Internat. Symposium on Numer. Anal., Prague, 1987, ed. I. Marek, BSP Teubner (Teubner-Texte zur Mathematik, Band 107), Leipzig, 1988, 250–255.

Cited in:

[Q2359] S. Repin: A posteriori estimates for partial differential equations, Radon Ser. Comput. Appl. Math., vol. 4, Walter de Gruyter, Berlin, New York, 2008.

[Q2360] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q2361] L. Zhang and L. Li: On superconvergence of isoparametric bilinear finite elements. Comm. Numer. Methods Engrg. 12 (1996), 849–862.

[**D11**] **M. Křížek**, *Higher order global accuracy of a weighted averaged gradient of the Courant element on irregular meshes*, Finite Element Methods: Fifty Years of the Courant Element (eds. M. Křížek, P. Neittaanmäki, R. Stenberg), LN in Pure and Appl. Math., vol. 164, Marcel Dekker, 1994, 267–276.

Cited in:

[Q2362] L. Angermann: A posteriori error estimates for FEM with violated Galerkin orthogonality. Numer. Methods Partial Differential Equations 18 (2002), 241–259.

[Q2363] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q2364] J. Dalík: Quadratic interpolation in vertices of planar triangulations and an application, preprint, VUT Brno, 2004, 1–31.

[Q2365] J. Dalík: Optimal-oder quadratic interpolation in vertices of unstructured triangulations, Appl. Math. 53 (2008), 547–560.

[Q2366] J. Dalík: Averaging of directional derivatives in vertices of nonobtuse regular triangulations, Numer. Math. 116 (2010), 619–644.

[Q2367] I. Hlaváček and J. Chleboun: Shape design sensitivity formulae approximated by means of a recovered gradient method, Proc. Conf. Finite Element Methods: Superconvergence, Post-processing and A Posteriori Estimates, Univ. of Jyväskylä, 1996, Marcel Dekker, New York, 1998, 135–146.

[Q2368] Q. Lin: Tetrahedral or cubic mesh? Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 160–182.

[Q2369] Q. Lin and N. N. Yan: The construction and analysis for efficient finite elements (Chinese), Hebei Univ. Publ. House, 1996.

[Q2370] X. Ma, D. Mao, and A. Zhou: Extrapolation for finite volume approximations, SIAM J. Sci. Comput. 24 (2003), 1974–1993.

[Q2371] L. B. Wahlbin: Superconvergence in Galerkin finite element methods, LN in Math., vol. 1605, Springer-Verlag, Berlin, 1995.

[Q2372] S. W. Walker and M. J. Shelley: Shape optimization of peristaltic pumping, J. Copmut. Phys. 229 (2010), 1260–1291.

[Q2373] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[D13] **S. Korotov and M. Křížek**, *Finite element analysis of variational crimes for a nonlinear heat conduction problem in three-dimensional space*, Proc. Second European Conf. on Numer. Math. and Advanced Applications, ENUMATH 97, Heidelberg (ed. by H. G. Bock et al), World Sci. Publishing, Singapore, 1998, 421–428.

Cited in:

[Q2374] I. Faragó and J. Karátson: Numerical solution of nonlinear elliptic problems via preconditioning operators: Theory and applications. Nova Science Publisher, New York, 2003.

[Q2375] M. Kallel, M. Moakher, and A. Theljani: The Cauchy problem for a nonlinear elliptic equation: Nash-game approach and application to image inpainting. Inverse Probl. Imaging 9 (2015), 853–874.

[Q2376] C. H. Yao: Finite element approximation for TV regularization, Internat. J. Numer. Anal. Model. 5 (2008), 516–526.

[D14] **M. Křížek, L. Liu**, *Conforming finite element method for the Navier-Stokes problem*, In: Navier-Stokes Equations: Theory and Numerical Methods (ed. R. Salvi), Pitman Research Notes in Math. Series vol. 388, Longman, Harlow, 1998, 289–294.

Cited in:

[Q2377] S.-S. Chow, G. F. Carey: Numerical approximation of generalized Newtonian fluids using Powell-Sabin-Heindl elements. I. Theoretical estimates. Internat. J. Numer. Methods Fluids 41 (2003), no. 10, 1085–1118.

[D15] **M. Křížek, L. Liu, and P. Neittaanmäki**, *Finite element analysis of a nonlinear elliptic problem with a pure radiation condition*, Applied Nonlinear Analysis (Proc. Conf. devoted to the 70th birthday of Prof. J. Nečas, Lisbon, 1999), Kluwer, Amsterdam, 1999, 271–280.

Cited in:

[Q2378] O. BartoĹ, M. Feistauer, and F. Roskovec: On the effect of numerical integration in the finite element solution of an elliptic problem with a nonlinear Newton boundary condition, Appl. Math. 64 (2019), 129–167.

[Q2379] B. Borsos, J. Karátson: Quasi-Newton iterative solution of anisotropic elliptic problems in 3D with boundary nonlinearity, Comput. Methods Appl. Math. 22 (2022), 327–340.

[Q2380] M. Feistauer, K. Najzar, and V. Sobotíková: Error estimates for the finite element solution of elliptic problems with nonlinear Newton boundary conditions, Numer. Funct. Anal. Optim. 20 (1999), 835–851.

[Q2381] M. Feistauer, K. Najzar, and V. Sobotíková: On the finite element analysis of problems with nonlinear Newton boundary conditions in nonpolygonal domains, Appl. Math. 46 (2001), 353–382

[Q2382] M. Feistauer, K. Najzar, P. Sváček, and V. Sobotíková: Numerical analysis of problems with nonlinear Newton boundary conditions, ENUMATH 99, Proc. of the 3rd European Conf. on Numer. Methods and Advanced Applications, Univ. of Jyväskylä (P. Neittaanmäki, T. Tiihonen, and P. Tarvainen eds.), World Scientific, Singapore, 2000, 486–493.

[Q2383] M. Feistauer, K. Najzar, and K. Švadlenka: On a parabolic problem with nonlinear Newton boundary condition, Comment. Math. Univ. Carolin. 43 (2002), 429–455.

[Q2384] P. Knobloch: Numerical modelling of heat phemonena induced by heat radiation, PhD. Thesis, Tech. Univ. Liberec, 2019.

[Q2385] V. Sobotíková: Error estimate for the finite element solution of an elliptic problem with a nonlinear boundary condition in nonpolygonal domains, preprint FEL ČVUT, Praha, 2002, 1–13.

[Q2386] V. Sobotíková: The finite element analysis of an elliptic problem with a nonlinear Newton boundary conditions, Proc. Conf. ENUMATH V, Prague 2003, Springer-Verlag, Berlin, 2004, 765–774.

[Q2387] V. Sobotíková: An error estimate for the finite element solution of an elliptic problem with a nonlienear Newton boundary condition in nonpolygonal domains, Numer. Funct. Anal. Optim. 24 (2003), 621–635.

[Q2388] P. Sváček: Finite element method for a problem with nonlinear boundary conditions, Ph.D. Thesis, Faculty of Mathematics and Physics, Prague, 2002, 1–106.

[Q2389] P. Sváček and K. Najzar: Error estimates for the FE solution of problems with nonlinear Newton boundary conditions, submitted in 2003.

[D17] **J. Brandts and M. Křížek**, *History and future of superconvergence in three-dimensional finite element methods*, MSRI Workshop on superconvergence, Berkeley, March 2000, and also Proc. Conf. Finite Element Methods: Three-dimensional Problems, Jyväskylä, July 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Gakkotosho, Tokyo, 2001, 22–33.

Cited in:

[Q2390] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q2391] C. M. Chen and S. Hu: The highest order superconvergence for bi-k degree rectangular elements at nodes: a proof of $2k$-conjecture Math. Comp. 83 (2014), 2161–2185.

[Q2392] J. Chen, D. Wang, and Q. Du: Linear finite element superconvergence on simplicial meshes, preprint 2014.

[Q2393] L. Chen: Superconvergence of tetrahedral linear finite elemnets, Internat. J. Numer. Anal. Model. 3 (2006), 273–282.

[Q2394] X. Feng, R. He, and Z. Chen: H^1-superconvergence of finite difference method based on Q_1-element on quasi-uniform mesh for 3D Poisson equation, Numer. Methods Partial Differential Equations 36 (2020), 29–48.

[Q2395] X. Feng, R. He, and Z. Chen: Superconvergence in H^1-norm of a difference finite element method for the heat equation in a 3D spatial domain with almost-uniform mesh, Numer. Algorithms 86 (2021), no. 1, 357–395.

[Q2396] R. He, X. Feng, and Z. Chen: H^1-superconvergence of a difference finite element method based on the $P_1 - P_1$-conforming element on non-uniform meshes for the 3D Poisson equations, Math. Comp. 87 (2018), 1659–1688.

[Q2397] P. Huang, X. Ma, and R. Askar: A superconvergence result of the natural convection equations. Math. Methods Appl. Sci. 39 (2016), 3496–3505.

[Q2398] D. Li, Y. Nie, and C. Wang: Superconvergence of numerical gradient for weak Galerkin finite element methods on nonuniform Cartesian partitions in three dimensions, Comput. Math. Appl. 78 (2019), 905–928.

[Q2399] Q. Lin: Tetrahedral or cubic mesh? Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 160–182.

[Q2400] Q. Lin: Superconvergence analysis for FEMs, Proc. Conf. Xiamen, May 29-June 3, 2001.

[Q2401] Q. Lin: High performance FEMs, Proc. Internat. Sympos. on Computational and Applied PDEs, Zhanjiajie, China, 2001, 1–17.

[Q2402] Q. Lin: Finite element method, superconvergence and post-processing. In: Finite Element Handbook for Engineers (in Chinese), Beijing, 2002, Chapt. 16.

[Q2403] Q. Lin and J. Lin: Finite elements methods: Accuracy and improvement, Science Press, Beijing, 2006.

[Q2404] Q. Lin, L. Tobiska, and A. Zhou: On the superconvergence of nonconforming low order elements applied to the Poisson equation, Preprint Nr. 17, Fakultät für Mathematik, Otto-von-Guericke-Universität Magdeburg, 2001, 1–14.

[Q2405] Q. Lin, L. Tobiska, and A. Zhou: Superconvergence and extrapolation of non-conforming low order finite elements applied to the Poisson equation, IMA J. Numer. Anal. 25 (2005), 160–181.

[Q2406] Q. Lin, J.-M. Zhou, and H.-T. Chen: Supercloseness and extrapolation of the tetrahedral linear finite elements for elliptic problem (in Chinese), Mathematics in Practice and Theory 39 (2009), 200–208.

[Q2407] R. Lin: Natural superconvergence in two and three dimensional finite element methods, Dissertation, Wayne State Univ., Detroit, 2005, 1–240.

[Q2408] R. Lin and Z. Zhang: Natural superconvergence points in three-dimensional finite elements, SIAM J. Numer. Anal.46 (2008), 1281–1297.

[Q2409] J. Liu: Pointwise supercloseness of the displacement for tensor-product quadratic pentahedral finite elements, Appl. Math. Lett. 25 (2012), 1458–1463.

[Q2410] J. Liu and G. Hu: Maximum norm error estimates for quadratic block finite elements with twenty-six degrees of freedom, Key Engrg. Materials 480–481 (2011), 1388–1392.

[Q2411] J. Liu, G. Hu, and Q. D. Zhu: Superconvergence of tetrahedral quadratic finite elements for a variable coefficient elliptic equation, Numer. Methods Partial Differential Equations 29 (2013), 1043–1055.

[Q2412] J. Liu and X. Huo: Convergence analysis for cubic serendipity finite elements with thirty-two degrees of freedom, Adv. Materials Res. 268–270 (2011), 501–504.

[Q2413] J. Liu, X. Huo, and Q. D. Zhu: Pointwise supercloseness of quadratic serendipity block finite elements for the variable coefficient elliptic equation, Numer. Methods Partial Differential Equations 27 (2011), 1253–1261.

[Q2414] J. Liu, B. Jia, and Q. D. Zhu: An estimate for the three-dimensional discrete Green's function and applications, J. Math. Anal. Appl. 370 (2010), 350–363.

[Q2415] J. Liu, Q. Li, Z. Xiong, and Q. D. Zhu: L^{∞}- and L^2-norms superconvergence of the displacement of the tetrahedral quadratic finite element, submitted to Comput. Math. Appl. in 2023, 1–9.

[Q2416] J. Liu, W. Liu, and Q. D. Zhu: Locally pointwise superconvergence of the tensor-product finite element in three dimensions, Appl. Math. 64 (2019), 383–396.

[Q2417] J. Liu, H. Sun and Q. D. Zhu: Superconvergence of tricubic block finite elements, Sci. in China, Ser. A 52 (2009), 959–972.

[Q2418] J. Liu and D. Yin: Superconvergence recovery for the gradient of the trilinear finite element, Adv. Materials Res. 268–270 (2011), 1021–1024.

[Q2419] J. Liu, D. Yin, and Q. D. Zhu: A note on superconvergence of recovered gradients of tensor-product linear pentahedral finite element approximations, Proc. Internat. Conf. on Internet Comput. and Information Services, ICICIS 2011, 227–229.

[Q2420] J. Liu and Q. Zhu: Maximum-norm superapproximation of the gradient for the trilinear rectangular block finite element, Numer. Methods Partial Differential Equations 23 (2007), 1501–1508.

[Q2421] J. Liu and Q. D. Zhu: Pointwise supercloseness of tensor-product block finite elements, Numer. Methods Partial Differential Equations 25 (2009), 990–1008.

[Q2422] J. Liu and Q. D. Zhu: Pointwise supercloseness of pentahedral finite elements, Numer. Methods Partial Differential Equations 2009, 1572–1580.

[Q2423] J. Liu and Q. D. Zhu: Superconvergence of the function value for pentahedral finite elements for an elliptic equation with varying coefficients, Bound. Value Probl. 2020, Paper No. 7, 15 pp.

[Q2424] J. Liu and Q. D. Zhu: Local pointwise convergence of the 3D finite element, Appl. Math. J. Chinese Univ. 34 (2019), 1–14.

[Q2425] J. Liu and Q. D. Zhu: Superconvergence of the function value for pentahedral finite elements for an elliptic equation with varying coefficients, Bound. Value Probl. 2020, Paper No. 7, 15 pp.

[Q2426] G. Matthies, P. Skrzypacz, and L. Tobiska: Superconvergence of a 3d finite element method for stationary Stokes and Navier-Stokes problems, Numer. Methods Partial Differential Equations 21 (2005), 701–725.

[Q2427] A. A. Naga: On recovery-type a posteriori error estimators in adaptive C^0 Galerkin finite element methods, Dissertation, Wayne State Univ., Detroit, 2004.

[Q2428] U. Risch: Superconvergence of a nonconforming low order finite element, Appl. Numer. Math. 54 (2005), 324–338.

[Q2429] P. Skrzypacz: Finite element analysis for flows in chemical reactions, Dissertation, Univ. Wroclaw, 2010, 1–123.

[Q2430] G. Xie, J. Li, L. Xie, and F. Xie: GL method for solving equations in math-physics and engineering, Acta Math. Appl. Sinica 24 (2008), 391–404.

[Q2431] N. N. Yan: Superconvergence analysis and a posteriori error estimation in finite element methods, Ser. Inf. Comput. Sci., vol. 40, Science Press, Beijing, 2008.

[Q2432] P. Yang, Y. Li, and X. Wang: Global L^2 superconvergence of the tetrahedral quadratic finite element, Comput. Math. Appl. 133 (2023), 104–123.

[Q2433] E.-J. Zhong and T.-Z. Huang: Superconvergence of compact difference schemes for Poisson equation, submitted to Numer. Algorithms in 2010, 1–21.

[Q2434] Q. D. Zhu: Unsymmetric point structure of superconvergence for cubic triangular element. Proc. Conf. on Superconvergence, Hunan Normal Univ., Chang-sha, 2004, 1–6.

[Q2435] Q. D. Zhu: High accuracy and the theory of post-processing of the finite element method, Science Press, Beijing, 2008.

[**D19**] M. Křížek, L. Liu, and P. Neittaanmäki, *On harmonic and biharmonic finite elements*, Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Gakkōtosho, Tokyo, 2001, 143–151.

Cited in:

[Q2436] Q. Lin and J. Lin: Finite elements methods: Accuracy and improvement, Science Press, Beijing, 2006.

[**D21**] **M. Křížek and J. Šolc**, *Acute versus nonobtuse tetrahedralizations*, In: Conjugate Gradient Algorithms and Finite Element Methods, Springer-Verlag, Berlin, 2004, 161–170.

Cited in:

[Q2437] E. E. Chukwuemeka and S. W. Walker: Accelerated gradient descent methods for the uniaxially constrained Landau-de Gennes model, Adv. Appl. Math. Mech. 14 (2022), 1–32.

[Q2438] J. Karátson and S. Korotov: Continuous and discrete maximum principles for nonlinear elliptic problems. Proc. Internat. Conf. on Comput. and Math. Methods in Sci. and Engrg. (E. Brändas, J. Vigo-Aguiar eds.), Uppsala, 2004, 191–200.

[Q2439] J. Karátson and S. Korotov: On the discrete maximum principles for finite element solutions of nonlinear elliptic problems. Proc. Conf. ECCOMAS 2004 (P. Neittaanmäki et al eds.), Univ. of Jyväskylä, 2004, 1–12.

[Q2440] J. Karátson and S. Korotov: Discrete maximum principles for FEM solutions of some nonlinear elliptic interface problems, Internat. J. Numer. Anal. Model. 6 (2009), 1–16.

[Q2441] S. W. Walker: A finite element method for the generalized Ericksen model of nematic liquid crystals, ESAIM Math. Model. Numer. Anal. 54 (2020), 1181–1220.

[**D23**] **S. Korotov and M. Křížek**, *Dissection of an arbitrary polyhedron into nonobtuse tetrahedra*, Reports of the Dept. of. Math. Inform. Technology, Series B, Sci. Comput. No. B 3/2002, Univ. of Jyväskylä, also in Proc. Conf. ECCOMAS 2004, vol. 2, eds. P. Neittaanmäki et al., Jyväskylä, 1–6.

Cited in:

[Q2442] J. Stańdo: Issues of the finite element method in the context of automatic triangulation and numerical integration (in Polish), Ph.D. Thesis, Uviv. of Lodz, Poland, 2004.

[D25] **J. Brandts, S. Korotov, and M. Křížek**, *The strengthened Cauchy-Bunyakowski-Schwarz inequality for n-simplicial linear finite elements*, Proc. of the Third Conf. on Numer. Anal. Appl. (Z. Li et al. eds.), Bulgaria, NAA 2004, LNCS 3401, Springer-Verlag, Berlin, Heidelberg, 2005, 203–210.

Cited in:

[Q2443] B. Aksoylu and M. Holst: Optimality of multilevel preconditioners for local mesh refinement in three dimensions, SIAM J. Numer. Anal. 44 (2006), 1005–1025.

[Q2444] A. Cihangir: Nonobtuse simplices and special matrix classes, PhD Thesis, Korteweg-de Vries Institute, Uviv. of Amsterdam, 2015, 1–195.

[Q2445] M. S. Petrov and T. D. Todorov: Properties of the multidimensional finite elements, accepted by Appl. Math. Comput. (2020), 1–30.

[Q2446] M. S. Petrov and T. D. Todorov: The rate of divergence of hypercubic pyramidal elements, submitted in 2021, 1–5.

[D29] **S. Korotov, M. Křížek, and J. Šolc**, *On a discrete maximum principle for linear FE solutions of elliptic problems with a nondiagonal coefficient matrix*, Proc. of the 4th Internat. Conf. on Numerical Analysis and Applications (NAA'08), Rousse, 2008, LNCS 5434 (eds. S. Margenov, L. G. Vulkov, and J. Waśniewski), Springer-Verlag, Berlin, Heidelberg, 2009, 384–391.

Cited in:

[Q2447] H. Li and X. Zhang: On the monotonicity and discrete meximum principle of the finite difference omplementation of $C^0 - Q^2$ finite element method, Numer. Math. (2019), 1–34.

[D33] **J. Brandts, S. Korotov, and M. Křížek**, *A geometric toolbox for tetrahedral finite element partitions*, Efficient Preconditioned Solution Methods for Elliptic Partial Differential Equations (eds. O. Axelsson and J. Karátson), Bentham Science Publishers, 2011, 103–122.

Cited in:

[Q2448] L. Chen, H. Wei, and M. Wen: An interface-fitted mesh generator and virtual element methods for elliptic interface problems, J. Comput. Phys. 334 (2017), 327–348.

[Q2449] J. E. Vatne: Simplices rarely contain their circumcenter in high dimensions, Appl. Math. 61 (2016), 62 (2017), 213–223.

[E17] **M. Křížek and L. Somer**, *Anthropic principle and the local Hubble expansion*, Proc. Conf. Cosmology on Small Scales 2016, Local Hubble Expansion and Selected Controversies in Cosmology (eds. M. Křížek, Y. V. Dumin), Inst. of Math., Prague, 2016,, 65–94.

Cited in:

[Q2450] L. A. King and H. Siplilä: Cosmological expansion in the Solar System, Phys. Essays 35, 2 (2022), 139–142.

[Q2451] A. Maeder: An alternative to the ΛCDM model: The case of scale invariance, Astrophys. J. 834 (2017), 194–209.

[Q2452] A. Maeder and V. G. Gueorguiev: The scale-invariant vacuum (SIV) theory: A possible origin of dark matter and dark energy, Universe 46 (2020), 6, 1–33.

[Q2453] A. Maeder and V. G. Gueorguiev: Local dynamical effects of scale invariance: the lunar recession Proc. Conf. Cosmology on Small Scales 2022, (eds. M. Křížek, Y. V. Dumin), Inst. of Math., Prague, 2022, 9–29.

[F3] **M. Křížek and K. Segeth**, *Numerické modelování problémů elektrotechniky*, Karolinum, Praha, 2001.

Cited in:

[Q2454] M. Dostál: Numerical methods for MDH problems, Proc. Seminar Programs and Algorithms of Numerical Mathematics 12 (eds. J. Chleboun, P. Přikryl, and K. Segeth), Dolní Maxov, Mathematical Institute, Prague, 2004, 41–46.

[Q2455] P. Knobloch: Numerical modelling of heat phemonena induced by heat radiation, PhD. Thesis, Tech. Univ. Liberec, 2019.

[Q2456] Z. Kounický: The calculation of magnetic field distribution in nonlinear anisotropic media using the finite element method, Master thesis, Faculty of Math. and Phys., Charles Univ., 2008, 1–92.

[Q2457] P. Kubásek: Výpočetní srovnání *hp*-adaptivních přístupů, Master thesis, Faculty of Math. and Phys., Charles Univ., 2008, 1–68.

[Q2458] D. Lukáš: Matematické modelování elektromagnetických polí (skripta), Matematika pro inženýry 21. století, VŠB, Ostrava, 2012.

[Q2459] J. Mlýnek: The application of the thermal balance method for computation of warming in electrical machines, Proc. PANM 13 dedicated to the 80th birthday of Professor Ivo Babuška, Math. Inst. Prague (eds. J. Chleboun, K. Segeth, T. Vejchodský), 2006, 196–201.

[Q2460] J. Mlýnek: Matematické modely vedení tepla v elektrických strojích. Habilitační práce, Tech. Univ. Liberec, 2007.

[Q2461] J. Mlýnek: Výpočet oteplení elektrických strojů. Sborník semináře: Matematika na vysokých školách, Herbertov (ed. L. Herrmann), SF ČVUT, Praha, 2007, 71–73.

[Q2462] J. Mlýnek: Box Method application in electrical engineering, Proc. Internat. Conf. Presentation of Mathematics '07 (eds. J. Příhonská, K. Segeth, D. Andrejsová), Tech. Univ. of Liberec, 2007, 63–68.

[Q2463] J. Mlýnek: Variational formulation of the heat conduction problem, Proc. Internat. Conf. Presentation of Mathematics'08 (ed. J. Příhonská, K. Segeth, D. Andrejsová), Tech. Univ. Liberec, 2008, 45–50.

[**G6**] **M. Křížek**, *On semiregular families of decompositions of a polyhedron into tetrahedra and linear interpolation*, Mathematical Methods in Engineering, Plzeň, 1991, ŠKODA Plzeň, 1991, 269–274.

Cited in:

[Q2464] J. Mackerle: 2D and 3D finite element meshing and remeshing: A bibliography (1990–2001), Engrg. Computations (Swansea) 18 (2001), 1108–1197.

[**H6**] **M. Křížek and P. Neittaanmäki**, *On a global superconvergent recovery technique for the gradient from piecewise linear FE-approximations*, Preprint nr. 33, Univ. of Jyväskylä, 1984, 1–17.

Cited in:

[Q2465] V. Kantchev and R. D. Lazarov: Superconvergence of the gradient of linear finite elements for 3D Poisson equation, Proc. Internat. Conf. Optimal Algorithms (ed. B. Sendov), Blagoevgrad, 1986, Izd. Bulg. Akad. Nauk, Sofia, 1986, 172–182.

[**I1**] **M. Křížek and P. Neittaanmäki**, *Bibliography on superconvergence*, Proc. Conf. Finite Element Methods: Superconvergence, Postprocessing and A Posteriori Estimates, Marcel Dekker, New York, 1998, 315–348.

Cited in:

[Q2466] I. Babuška, U. Banerjee, and J. E. Osborn: Superconvergence in the generalized finite element method, Numer. Math. 107 (2007), 353–395.

[Q2467] I. Babuška and T. Strouboulis: The finite element method and its reliability, Calderon Press, Oxford, 2001, p. 413.

[Q2468] C. Bi and V. Ginting: Global superconvergence and a posteriori error estimates of finite element method for second-order quasilinear elliptic problems, J. Comput Appl. Math. 260 (2014), 78–90.

[Q2469] J. H. Brandts: Superconvergence for triangular order $k = 1$ Raviart-Thomas mixed finite elements and for triangular standard quadratic finite element methods, Appl. Numer. Math. 34 (2000), 39–58.

[Q2470] J. H. Brandts: Analysis of a non-standard mixed finite element method with applications to superconvergence, Appl. Math. 54 (2009), 225–235.

[Q2471] J. Brandts and Y. Chen: Superconvergence of least-squares mixed finite elements, Int. J. Numer. Anal. Model. 3 (2006), 303–310.

[Q2472] J. Brandts, Y. Chen, and J. Yang: A note on least-squares mixed finite elements in relation to standard and mixed finite elements, IMA J. Numer. Anal. 26 (2006), 779–789.

[Q2473] W. Cao, C.-W. Shu, Y. Yang, and Z. Zhang: Superconvergence of discontinuous Galerkin methods for two-dimensional hyperbolic equations, SIAM J. Numer. Anal. 53 (2015), 1651–1671.

[Q2474] C. M. Chen: Structure theory of superconvergence of finite elements (in Chinese), Hunan Science and Technology Press, Changsha, 2001.

[Q2475] C. M. Chen: Orthogonality correction technique in superconvergence analysis, Internat. J. Numer. Anal. Model. 2 (2005), 31–42.

[Q2476] C. M. Chen and S. Hu: The highest order superconvergence for bi-k degree rectangular elements at nodes: a proof of $2k$-conjecture, Math. Comp. 82 (2013), 1337–1355.

[Q2477] W. Chen: Analysis of the mixed finite methods for the eigenvalue problems. Collected works, Shandong Univ., Jinan, 2003, 1–49.

[Q2478] W. Chen, P. Chen, M. Gunzburger, and N.-N. Yan: Superconvergence analysis of FEMs for the Stokes-Darcy system, Math. Methods Appl. Sci. 33 (2010), 1605–1617.

[Q2479] L. Du and N.-N. Yan: Gradient recovery type a posteriori error estimate for finite element approximation on non-uniform meshes, Adv. Comput. Math. 14 (2001), 175–193.

[Q2480] J. A. Ferreira and R. D. Grigorieff: Supraconvergence and supercloseness of a scheme for elliptic equations on nonuniform grids, Numer. Funct. Anal. Optim. 27 (2006), 539–564.

[Q2481] W. Gong and N.-N. Yan: A mixed finite element scheme for optimal control problems with pointwise state constraints, J. Sci. Comput. 46 (2011), 182–203.

[Q2482] C. Huang and Z. Zhang: Polynomial preserving recovery for quadratic elements on anisotropic meshes, Numer. Methods Partial Differential Equations 28 (2012), 966–983.

[Q2483] Y. Q. Huang, J. Li, and C. Wu: Averaging for superconvergence: verification and application of 2D edge elements to Maxwell's equations in metamaterials, Comput. Methods Appl. Mech. Engrg. 255 (2013), 121–132.

[Q2484] Y. Q. Huang, J. Li, C. Wu, and W. Yang: Superconvergence analysis for linear tetrahedral edge elements, J. Sci. Comput. 62 (2015), 122–145.

[Q2485] Y. Q. Huang and N. Yi: The superconvergent cluster recovery method, J. Sci. Comput. 44 (2010), 301–322.

[Q2486] M. Kumar, T. Kvamsdal, and A. K. Johannessen: Superconvergent patch recovery and a posteriori error estimation technique in adaptive isogeometric analysis, Comput. Methods Appl. Mech. Engrg. 316 (2017), 1086–1156.

[Q2487] J. Li and S. Shields: Superconvergence analysis of Yee scheme for metamaterial Maxwell's equations on non-uniform rectangular meshes, Numer. Math. 134 (2016), 741–781.

[Q2488] M. Li, Q. Lin, and S. Zhang: Extrapolation and superconvergence of the Steklov eigenvalue problem, Adv. Comput. Math. 33 (2010), 25–44.

[Q2489] R. Li, W. Liu, and N.-N. Yan: A posteriori error estimates of recovery type for distributed convex optimal control problems, J. Sci. Comput. 33 (2007), 155–182.

[Q2490] Z. C. Li, H. T. Huang, and N. N. Yan: Global superconvergence of finite elements for elliptic equations and its applications, Science Press, Beijing, 2012.

[Q2491] J. Lin and Q. Lin: Superconvergence of a finite element method for the biharmonic equation, Numer. Methods Partial Differential Equations 18 (2002), 420–427.

[Q2492] Q. Lin: Tetrahedral or cubic mesh? Proc. Conf. Finite Element Methods: Three-dimensional Problems, Univ. of Jyväskylä, 2000, GAKUTO Internat. Ser. Math. Sci. Appl., vol. 15, Tokyo, 2001, 160–182.

Q. Lin and J. Li: Superconvergence analysis for Maxwell's equations in dispersive media, Math. Comp. 77 (2008), 757–771.

[Q2493] Q. Lin and J. Lin: Finite elements methods: Accuracy and improvement, Science Press, Beijing, 2006.

[Q2494] Q. Lin, T. Liu, and S. Zhang: Superconvergence estimates of finite element methods for American options, Appl. Math. 54 (2009), 181–201.

[Q2495] Q. Lin, J. Zhou, and N. N. Yan: Superconvergence in high-order Galerkin finite element methods. J. Math. Study 32 (1999), 217–231.

[Q2496] R. Lin: Natural superconvergence in two and three dimensional finite element methods, Dissertation, Wayne State Univ., Detroit, 2005, 1–240.

[Q2497] R. Lin and Z. Zhang: Natural superconvergent points of triangular finite elements, Numer. Methods Partial Differential Equations 20 (2004), 864–906.

[Q2498] R. Lin and Z. Zhang: Natural superconvergence points in three-dimensional finite elements, SIAM J. Numer. Anal. 46 (2008), 1281–1297.

[Q2499] R. Lin and Z. Zhang: Numerical study of natural superconvergence in least-squares finite element methods for elliptic problems, Appl. Math. 54 (2009), 251–266.

[Q2500] R. Lin and Z. Zhang: Convergence analysis for least-squares finite element approximations of second-order two-point boundary value problems, J. Comput. Appl. Math. 236 (2012), 4436–4447.

[Q2501] T. Lin and D. L. A. Russell: A superconvergent method for approximating the bending moment of elastic beams with hysteresis damping, Appl. Numer. Math. 38 (2001), 145–165.

[Q2502] D. Mao, L. Shen, and A. Zhou: Adaptive finite element algorithms for eigenvalue problems based on local averaging type a posteriori error estimates, Adv. Comput. Math. 25 (2006), 135–160.

[Q2503] S. Mao and Z.-C. Shi: High accuracy analysis of two nonconforming plate elements, Numer. Math. 111 (2009), 407–443.

[Q2504] P. K. Moore: Applications of Lobatto polynomials to an adaptive finite element method: a posteriori error estimates for hp-adaptivity and grid-to-grid interpolation, Numer. Math. 94 (2003), 367–401.

[Q2505] A. A. Naga: On recovery-type a posteriori error estimators in adaptive C^0 Galerkin finite element methods, Dissertation, Wayne State Univ., Detroit, 2004.

[Q2506] A. Naga and Z. Zhang: A posteriori error estimates based on the polynomial preserving recovery, SIAM J. Numer. Anal. 42 (2004), 1780–1800.

[Q2507] A. Naga and Z. Zhang: The polynomial-preserving recovery for higher order finite element methods in 2D and 3D, Discrete Contin. Dyn. Syst. Ser. B 5 (2005), 769–798.

[Q2508] H.-G. Roos and T. Linss: Gradient recovery for singularly perturbed boundary value problems. I. One-dimensional convection-diffusion. Archives for scientific computing. Numerical methods for transport-dominated and related problems (Magdeburg, 1999), Computing 66 (2001), 163–178.

[Q2509] H.-G. Roos and T. Linss: Gradient recovery for singularly perturbed boundary value problems. II. Two-dimensional convection-diffusion, Math. Models Methods Appl. Sci. 11 (2001), 1169–1179.

[Q2510] L. Shen and A. Zhou: A defect correction scheme for finite element eigenvalues with applications to quantum chemistry, SIAM J. Sci. Comput. 28 (2006), 321–338.

[Q2511] C. Wang: Superconvergence of Ritz-Galerkin finite element approximations for second order elliptic problems, Numer. Methods Partial Differential Equations 34 (2018), 838–856.

[Q2512] Z. Xie and Z. Zhang: Superconvergence of DG method for one-dimensional singularly perturbed problems, J. Comput. Math. 25 (2007), 185–200.

[Q2513] N.-N. Yan: A posteriori error estimators of gradient recovery type for elliptic obstacle problems. A posteriori error estimation and adaptive computational methods, Adv. Comput. Math. 15 (2001), 333–362.

[Q2514] N.-N. Yan: A posteriori error estimators of gradient recovery type for FEM of a model optimal control problem. Challenges in computational mathematics (Pohang, 2001), Adv. Comput. Math. 19 (2003), 323–336.

[Q2515] N.-N. Yanand A. Zhou: Gradient recovery type a posteriori error estimates for finite element approximations on irregular meshes, Comput. Methods Appl. Mech. Engrg. 190 (2001), 4289–4299.

[Q2516] D. Yang, Y. Chang, and W. Liu: A priori error estimate and superconvergence analysis for an optimal control problem of bilinear type, J. Comput. Math. 26 (2008), 471–487.

[Q2517] L. Yi and B. Guo: Superconvergence of the $h-p$ version of the finite element method in one dimension, J. Comput. Appl. Math. 233 (2009), 150–164.

[Q2518] L. C. Young: Orthogonal collocation revisited, Comput. Methods Appl. Mech. Engrg. 345 (2019), 1033–1076.

[Q2519] L. Zhang, T. Strouboulis, and I. Babuška: η%-superconvergence of finite element solutions and error estimators. Adv. Comput. Math. 15 (2001), 393–404.

[Q2520] S. Zhang. Y. Lin, and M. Rao: Defect correction and a posteriori error estimation of Petrov-Galerkin methods for nonlinear Volterra integro-differential equations., Appl. Math. 45 (2000), 241–263.

[Q2521] T. Zhang, Y.-P. Lin, and R. J. Tait: Superapproximation properties of the interpolation operator of projection type and applications, J. Comput. Math. 20 (2002), 277–288.

[Q2522] T. Zhang, Y.-P. Lin, and R. J. Tait: The derivative patch interpolating recovery technique for finite element approximations, J. Comput. Math. 22 (2004), 113–122.

[Q2523] T. Zhang and J. Liu: Accuracy enhancement of discontinuous Galerkin method for hyperbolic systems, Numer. Math. Theory Methods Appl. 7 (2014), 214–233.

[Q2524] T. Zhang and S. Yu: The derivative patch interpolation recovery technique and superconvergence for the discontinuous Galerkin method, Appl. Numer. Math. 85 (2014), 128–141.

[Q2525] T. Zhang and S. Zhang: Finite element derivative interpolation recovery technique and superconvergence. Appl. Math. 56 (2011), 513–531.

[Q2526] Z. Zhang: A posteriori error estimates on irregular grids based on gradient recovery, A posteriori error estimation and adaptive computational methods, Adv. Comput. Math. 15 (2001), 363–374.

[Q2527] Z. Zhang: Derivative superconvergent points in finite element solutions of harmonic functions – a theoretical justification, Math. Comp. 71 (2002), 1421–1430.

[Q2528] Z. Zhang: Finite element superconvergence on Shishkin mesh for 2-D convection-diffusion problems, Math. Comp. 72 (2003), 1147–1177.

[Q2529] Z. Zhang: Polynomial preserving gradient recovery and a posteriori estimate for bilinear element on irregular quadrilaterals, Int. J. Numer. Anal. Model. 1 (2004), 1–24.

[Q2530] Z. Zhang: Polynomial preserving recovery for meshes from Delaunay triangulation or with high aspect ratio, Numer. Methods Partial Differential Equations 24 (2008), 960–971.

[Q2531] Z. Zhang: Superconvergence points of polynomial spectral interpolation, SIAM J. Numer. Anal. 50 (2012), 2966–2985.

[Q2532] Z. Zhang and R. Lin: Locating natural superconvergent points of finite element methods in 3D, Int. J. Numer. Anal. Model. 2 (2005), 19–30.

[Q2533] Z. Zhang and A. Naga: A new finite element gradient recovery method: superconvergence property, SIAM J. Sci. Comput. 26 (2005), 1192–1213.

[Q2534] Z. Zhang and A. Naga: Natural superconvergent points of equilateral triangular finite elements – a numerical example, J. Comput. Math. 24 (2006), 19–24.

[Q2535] Z. Zhang, N.-N. Yan, and T. Sun: Superconvergent derivative recovery for the intermediate finite element family of the second type, IMA J. Numer. Anal. 21 (2001), 643–665.

[**K1**] **M. Křížek**, *Padesát let metody konečných prvků*, Pokroky Mat. Fyz. Astronom. **37** (1992), 129–140.

Cited in:

[Q2536] T. Vejchodský: Aposteriorní odhady chyby v metodě konečných, Pokroky Mat. Fyz. Astronom. 53 (2008), 104–112.

[**K4**] **M. Křížek**, *O problému tří těles*, Rozhledy mat.-fyz. **70** (1992), 105–112.

Cited in:

[Q2537] A. Doktor: Zeptám se počítače, Rozhledy mat.-fyz. 70 (1992), 223–229.

[Q2538] J. Němec: Numerical solution of the three-body problem (in Czech), Mgr. Thesis, MFF UK, Prague, 1996, 1–68.

[Q2539] J. Němec: Lagrangeovy librační body. Rozhledy mat.-fyz. 76 (1999), 12–18.

[Q2540] J. Němec: An alternative proof of Painlevé's theorem. Appl. Math. 45 (2000), 291–299.

[K11] **M. Křížek**, *O Fermatových číslech*, Pokroky Mat. Fyz. Astronom. **40** (1995), 243–253.

Cited in:

[Q2541] J. Klaška: Hypotéza Franciszka Jakóbczyka o Mersennových číslech, Kvaternion 1–2 (2021), 47–57.

[Q2542] A. Šolcová: D'Artagnan mezi matematiky — pocta Pierru Fermatovi k 400. výročí narození, Pokroky Mat. Fyz. Astronom. 46 (2001), 286–298.

[K14] **M. Křížek and L. Liu**, *Struktura tradičního čínského kalendáře*, Rozhledy mat.-fyz. **73** (1996), 270–275.

Cited in:

[Q2543] J. Klokočík: Čínské pyramidy, edice Průhledy sv. 14, Academia, Praha, 2015.

[K15] **M. Křížek, M. Práger, and E. Vitásek**, *Spolehlivost numerických výpočtů*, Pokroky Mat. Fyz. Astronom. **42** (1997), 8–23.

Cited in:

[Q2544] J. Šolc: Numerické problémy v geodetických aplikacích. Diplomová práce, Stavební fakulta ČVUT, Praha, 2002, 1–61.

[K17] **M. Křížek and L. Liu**, *Matematika ve starověké Číně*, Pokroky Mat. Fyz. Astronom. **42** (1997), 223–233.

Cited in:

[Q2545] J. Veselý: Zlatý řez a co vše s ním souvisí? Učitel matematiky 6 (1998), 153–158.

[Q2546] J. Vild, V. Vytlačil, and K. Kašák: Animation of modular arithmetic and its applications, Proc. Internat. Conf. Presentaion of Mathematics '09, Tech. Univ. Liberec, 2010, 121–128.

[K19] **M. Křížek**, *Gaussův příspěvek k eukleidovské geometrii*, Rozhledy mat.-fyz. **74** (1997), 254–258.

Cited in:

[Q2547] K. Horák: Konstrukce pravidelného sedmnáctiúhelníku. Rozhledy mat.-fyz. 74 (1997), 259–260.

[Q2548] J. Pradlová: Rovinné mozaiky aneb Keplerova harmonie světa. Učitel matematiky 9 (2001), 85–97.

[K20] **M. Křížek**, *Metoda RSA pro šifrování zpráv pomocí velkých prvočísel*, Rozhledy mat.-fyz. **75** (1998), 101–107.

Cited in:

[Q2549] A. Šolcová: Fermatův odkaz, Cahiers du CEFRES 28 (2002), 173–202.

[K21] **A. Šolcová and M. Křížek**, *Čas plyne, jméno zůstává: Albert Einstein*, Pokroky Mat. Fyz. Astronom. **43** (1998), 265–277.

Cited in:

[Q2550] R. Kolomý: V Praze byla odhalena pamětní deska Albertu Einsteinovi. Matematika – fyzika – informatika IX (1999), 250–255.

[Q2551] V. Procházka: Nová pamětní deska Albertu Einsteinovi v Praze, Num. listy 1999, 78–80.

[K22] **J. Pradlová and M. Křížek**, *Grupy kolem nás*, Rozhledy mat.-fyz. **76** (1999), 209–216, 261–267; **77** (2000), 5–12.

Cited in:

[Q2552] V. Pravda: Maticové Lieovy grupy a Lieovy algebry, Pokroky Mat. Fyz. Astronom. 52 (2007), 219–230.

[**K23**] **M. Křížek**, *Má ryze teoretická matematika uplatnění v technické praxi?*, Pokroky Mat. Fyz. Astronom. **44** (1999), 14–24.

Cited in:

[Q2553] J. Kurzweil: Medailonek o Vojtěchu Jarníkovi (1897–1970), Pokroky Mat. Fyz. Astronom. 58 (2013), 311–314.

[Q2554] F. Kuřina: O užitečnosti školské matematiky, Matematika-fyzika-informatika 8 (1998/99), 385–391.

[Q2555] F. Kuřina, Z. Půlpán: Podivuhodný svět elementární matematiky. Elementární matematika čtená podruhé. Academia, Praha, 2006.

[**K26**] **A. Šolcová and M. Křížek**, *Nová pamětní deska na počest Alberta Einsteina*, Pokroky Mat. Fyz. Astronom. **44** (1999), 258–261.

Cited in:

[Q2556] P. Šámal, A. Rymarev: Domy na Starém Městě pražském III., nakl. Lidové noviny, Praha, 2008.

[**K41**] **J. H. Brandts and M. Křížek**, *Padesát let metody sdružených gradientů aneb Zvládnou počítače soustavy miliónů rovnic o miliónech neznámých?*, Pokroky Mat. Fyz. Astronom. **47** (2002), 103–113.

Cited in:

[Q2557] K. Maleček, M. Bořík: Zobrazení dvojrozměrných prostorů. Lineární operátory. Sborník 23. konference o geometrii a počítačové grafice, 2004, 1–6.

[**K42**] **M. Křížek**, *Od Fermatových prvočísel ke geometrii*, Cahiers du CEFRES **28** (2002), 131–161.

Cited in:

[Q2558] M. Klazar: Prvočísla obsahují libovolně dlouhé posloupnosti, Pokroky Mat. Fyz. Astronom. 49 (2004), 177–187.

[Q2559] F. Kuřina: I elementární matematika může být krásná, Pokroky Mat. Fyz. Astronom. 48 (2003), 115–128.

[**K46**] **F. Katrnoška and M. Křížek**, *Genetický kód a teorie monoidů aneb 50 let od objevu struktury DNA*, Pokroky Mat. Fyz. Astronom. **48** (2003), 207–222.

Cited in:

[Q2560] F. Cvrčková: Jak se čtou genomy: bioinformatika jakožto obor na pomezí biologie a exaktních věd, Pokroky Mat. Fyz. Astronom. 51 (2006), 288–300.

[Q2561] J. Kalina: Ronald Fisher, otec biostatistiky, Pokroky Mat. Fyz. Astronom. 57 (2012), 186–190.

[Q2562] L. Kárná: Genetický kód aneb Studovala příroda teorii kódů, Pokroky Mat. Fyz. Astronom. 56 (2011), 89–98.

[**K52**] **M. Křížek and A. Šolcová**, *Prvočíslo 11 v kódování*, Rozhledy mat.-fyz **78** (2004), 208–214.

Cited in:

[Q2563] J. Mlýnek: Informační bezpečnost, Pokroky Mat. Fyz. Astronom. 51 (2006), 89–98.

[Q2564] J. Mlýnek: Zabezpečení obchodních informací, Computer Press, Brno, 2007.

[**K53**] **F. Křížek, M. Křížek, and J. Šolc**, *Jakou hmotnost má černá díra uprostřed naší Galaxie?*, Pokroky Mat. Fyz. Astronom. **49** (2004), 104–113.

Cited in:

[Q2565] K. Bartuška: O některých sporných názorech v současné didaktice fyziky, Pokroky Mat. Fyz. Astronom. 49 (2004), 337–343.

[**K54**] **A. Šolcová and M. Křížek**, *Numerický matematik a astronom Zdeněk Kopal*, Pokroky Mat. Fyz. Astronom. **49** (2004), 244–257.

Cited in:

[Q2566] V. Kopecký: Editorial, Astropis XII (2005), Speciál str. 5.

[Q2567] V. Kopecký: S ASTROnomickým časoPISem do říše hvězd, Astropis 135 (2023), 22–23.

[Q2568] M. Skřivánek and S. Vosyka (eds.): Zdeněk Kopal: My Life, Litomyšl, 2014, pp. 72.

[Q2569] E. Těšínská, Z. Dolejšek, M. Heyrovský, M. Rotter (eds.): Fyzik Václav Dolejšek 1895–1945, Matfyzpress, Praha, 2005, str. 48.

[**K59**] **M. Křížek, F. Luca, and L. Somer**, *Algebraické vlastnosti Fibonacciových čísel*, Pokroky Mat. Fyz. Astronom. **50** (2005), 127–140.

Cited in:

[Q2570] V. Havelková, A. Jančařík, T. Kepka: Aritmetika II – dělitelnost. Fibonacciho posloupnost, Učitel matematiky 29 (2021), 37–45.

[Q2571] M. Jarošová: Souvislost Fibonacciho čísel s jinými matematickými pojmy, Matematika v proměnách věků IV (ed. E. Fuchs), Dějiny matematiky, sv. 32, Akad. nakl. CERM, Brno, 2007, 181–196.

[Q2572] V. Snášel, J. Bouchala, P. Vodstrčil: Kouzlo Fibonacciho kódování, Pokroky Mat. Fyz. Astronom. 61 (2016).

[Q2573] A. Šolcová: Further Development of Fermat's ideas in Connection with Applied Mathematics in Engineering, Ph.D. Thesis, Czech Technical Univesrity, Prague, 2005, 1–115.

[**K60**] **J. Brandts, S. Korotov, and M. Křížek**, *O triangulacích bez tupých úhlů*, Pokroky Mat. Fyz. Astronom. **50** (2005), 193–207.

Cited in:

[Q2574] A. Porazilová: Shortest paths on polyhedral surfaces. Dissertation Thesis, Faculty of Applied Sciences, Univ. of West Bohemia, Pilsen, 2008, 1–80.

[**K74**] **V. Pravda and M. Křížek**, *Citace: dobrý sluha, špatný pán*, Pokroky Mat. Fyz. Astronom. **52** (2007), 28–36.

Cited in:

[Q2575] P. Ráb a I Kadlecová: Vývoj vědeckého výkonu Akademie věd v posledních deseti letech, Akademický Bulletin 9/2007.

[**K75**] A. **Šolcová and M. Křížek**, *Procházky Prahou matematickou, fyzikální a astronomickou (2. část)*, Pokroky Mat. Fyz. Astronom. **52** (2007), 127–141.

Cited in:

[Q2576] H. Durnová: Antonín Svoboda (1907–1980) — průkopník výpočetní techniky v Československu, Pokroky Mat. Fyz. Astronom. 52 (2007), 322–329.

[Q2577] J. Růžička and J. Valenta: Keplerovo jméno na Pohořelci stále žije, Čs. Čas. Fyz. 72 (2022), 130–133.

[Q2578] J. Zeman: Fyzika Josefa Steplinga, Kuďej 22 (2021), 65–80.

[**K76**] **M. Křížek, J. Šolc, and A. Šolcová**, *Pražský orloj a stereografická projekce*, Matematika-fyzika-informatika **17** (2007), 129–139.

Cited in:

[Q2579] P. Král, A. Vrba, P. Baudisch: Astrolabium Parvum – malý astroláb z orlojní knihy, Pokroky Mat. Fyz. Astronom. 58 (2013), 201–210.

[Q2580] M. Patka: Rytina pražského orloje z roku 1837, Pokroky Mat. Fyz. Astronom. 58 (2013), 215–220.

[**K81**] **A. Šolcová and M. Křížek**, *Nobelova cena na dosah — zapomenutý osud fyzika Vladimíra Vanda*, Pokroky Mat. Fyz. Astronom. **53** (2008), 7–21.

Cited in:

[Q2581] S. Daniš: Cesta sněhové vločky k Nobelovým cenám a k Mezinárodnímu roku krystalografie, Pokroky Mat. Fyz. Astronom. 59 (2014), 177–186.

[Q2582] H. Durnová: Sovietization of Czechoslovak computing: The rise and fall of the SAPO project, IEEE Ann. Hist. Comput 32 (2010), No. 2, 21–31.

[Q2583] H. Durnová: Matematikové u matematických strojů, Pokroky Mat. Fyz. Astronom. 56 (2011), 194–206.

[Q2584] P. Pavlíková: 125 let od narození Miloše Kösslera (1884–1961) Pokroky Mat. Fyz. Astronom. 54 (2009), 144–156.

[Q2585] P. Pavlíková: Miloš Kössler (1884–1961), Praha, (viz s. 33), to appear.

[**K82**] **F. Katrnoška, M. Křížek, and L. Somer**, *Magické čtverce a sudoku*, Pokroky Mat. Fyz. Astronom. **53** (2008), 113–124.

Cited in:

[Q2586] P. Stehlík: Matematika za karetní hrou double, Pokroky Mat. Fyz. Astronom. 64 (2019), 69–90.

[**K84**] **M. Křížek, L. Somer**, *Abelova cena v roce 2008 udělena za objevy v teorii neabelovských grup*, Pokroky Mat. Fyz. Astronom. **53** (2008), 177–187.

Cited in:

[Q2587] P. Stehlík and V. Vopravil: John Horton Conway (1937–2020), Pokroky Mat. Fyz. Astronom. 65 (2020), 125–148.

[**K90**] **M. Křížek**, *Gravitační zákon — objev tisíciletí*, Pokroky Mat. Fyz. Astronom. **54** (2009), 164–169.

Cited in:

[Q2588] J. Zeman: Fyzika Josefa Steplinga, Kuďej 22 (2021), 65–80.

[**K98**] **M. Křížek, L. Somer, and A. Šolcová**, *Deset matematických vět o pražském orloji*, Pokroky Mat. Fyz. Astronom. **54** (2009), 281–300.

Cited in:

[Q2589] R. Pipek: O poškození staroměstského orloje v květnu 1945, Pokroky Mat. Fyz. Astronom. 58 (2013), 237–250.

[Q2590] P. Skála: Nepřesnosti v konstrukci původního astrolábu staroměstského orloje, Pokroky Mat. Fyz. Astronom. 58 (2013), 187–198.

[Q2591] P. Skála: Malé závěrkové kolečko na bicím stroji pražského orloje, Pokroky Mat. Fyz. Astronom. 58 (2013), 225–231.

[**K102**] **M. Křížek and P. Křížek**, *Kružnice na astronomickém ciferníku pražského orloje*, Matematika-fyzika-informatika **19** (2010), 577–586.

Cited in:

[Q2592] P. Král, A. Vrba, P. Baudisch: Astrolabium Parvum – malý astroláb z orlojní knihy, Pokroky Mat. Fyz. Astronom. 58 (2013), 201–210.

[Q2593] M. Patka: Menclův model orloje, Pokroky Mat. Fyz. Astronom. 58 (2013), 256–260.

[Q2594] K. Sandler: Planetní hodiny pražského orloje a trisekce úhlu, Pokroky Mat. Fyz. Astronom. 58 (2013), 199–200.

[**K110**] **M. Křížek, P. Křížek, and J. Šolc**, *Astronomické omyly provázející pražský orloj*, Čs. čas. fyz. **60** (2010), 337–340.

Cited in:

[Q2595] M. Brož: K rekonstrukci Pražského orloje, Povětroň 26 (2018), 3–8.

[**K112**] **A. Šolcová and M. Křížek**, *Procházky Prahou matematickou, fyzikální a astronomickou (3. část)*, Pokroky Mat. Fyz. Astronom. **55** (2010), 215–230.

Cited in:

[Q2596] L'. Balková, Č. Škarda: Násobíme chytře? Pokroky Mat. Fyz. Astronom. 57 (2012), 205–216.

[**K117**] **A. Šolcová and M. Křížek**, *K 100. výročí narození Vladimíra Vanda*, Astropis **18** (2011), č. 1, 16–17.

Cited in:

[Q2597] J. Žd'árská: Vladimír Vand ... aneb když geny píší dějiny, Čs. čas. fyz. 68, (2018), 414–417.

[**K118**] **M. Křížek and A. Šolcová**, *Vladimír Vand – konstruktér mechanických počítačů. K 100. výročí narození*, Pokroky Mat. Fyz. Astronom. **56** (2011), 19–34.

[Q2598] J. Žd'árská: Vladimír Vand ... aneb když geny píší dějiny, Čs. čas. fyz. 68, (2018), 414–417.

[**K141**] **M. Křížek and F. Křížek**, *Před 80 lety Zwicky objevil temnou hmotu*, Pokroky Mat. Fyz. Astronom. **58** (2013), 107–123.

Cited in:

[Q2599] M. Vraštil: Temná hmota (Bc. thesis), MFF UK, Praha, 2013.

[**K143**] **M. Křížek**, *Pražský orloj, jak jej neznáte*, Pokroky Mat. Fyz. Astronom. **58** (2013), 177–180.

Cited in:

[Q2600] M. Brož: K rekonstrukci Pražského orloje, Povětroň 26 (2018), 3–8.

[**K155**] **M. Křížek**, *Stáčení perihelia Merkuru z pohledu numerického matematika*, Čs. čas. fyz. **66** (2016), 225–230.

Cited in:

[Q2601] M. Ryston: Obecná teorie relativity středoškolsky — druhá část: geometrický pohled na gravitaci, Čs. čas. fyz. 70 (2020), 198–203.

[**K156**] **M. Křížek and L. Somer**, *Abelova cena v roce 2016 udělena za důkaz Velké Fermatovy věty*, Pokroky Mat. Fyz. Astronom. **61** (2016), 169–188.

Cited in:

[Q2602] V. Kala: Abelova cena v roce 2018 udělena za Langlandsův program, Pokroky Mat. Fyz. Astronom. 63 (2018), 78–90.