Numerical realization of contact problems between two bodies and with nonmonotone friction

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This contribution deals with an approximation and numerical realization of contact problems between two plane, elastic bodies taking into account an influence of friction governed by a non-monotone law on a common part. The mathematical model leads to a constrained hemivariational inequality of elliptic type. We describe its approximation by piecewise linear triangular elements discretizing the displacement field and by piecewise constant elements used for the discretization of friction forces. Numerical results of several model examples will be presented.