

Domain decomposition methods for contact problems with given friction.

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We shall introduce and analyze domain decomposition methods for numerical realization of contact problems for two elastic bodies with Tresca model of friction. We shall define an iterative process in which each step is given by two subproblems for each body separately completed by two auxiliary problems of Neumann type in order to ensure the continuous transmission of contact stresses across the contact part. This technique enables us to solve the problem in parallel. The analysis will be done on the continuous as well as the discrete level. Numerical results of model examples will be shown. This is a common research with R. Kučera (Technical University of Ostrava, CZ) and T. Sassi (University of Caen, F).