## Inverted problem of tectonic fault modelling using GPS data, taking into account rheology of the medium

## M.S. Molodensky

Schmidt Institute of Physics of the Earth, Russian Academy of Sciences, Moscow, Russia

Abstract. Results of numerical calculation of radial inhomogeneous and imperfectly elastic medium deformation during the process of fault slip, determined by arbitrarily oriented flat fault surface, and tangentially located vector of dislocations, are given. The question of medium rheology influence on the picture of postseismic surface deformation is considered. The results obtained are applied for the inverted problem of shape and orientation of the fault determination from the GPS data. It was shown, that taking into account both radial inhomogeneity and rheology of medium allows us not only to find the parameters of earthquake centre more precisely, but also to get essential additional information about the rheology of the medium in its environs.

Keywords: rheology of medium, tectonic fault.