

On One Non-Local Contact Problem for One-dimensional Parabolic Equation

Tinatin Davitashvili

e-mail: tinatin.davitashvili@tsu.ge

Department of Numerical Analysis and Computational
Technologies, Faculty of Exact and Natural Sciences,
Ivane Javakhishvili Tbilisi State University, University
str.13, Tbilisi, Georgia

The present work is devoted to the initial-boundary problem stated for nonlocal contact problem for one-dimensional parabolic type equation. The existence and uniqueness of the solution of initial differential problem is proved. For numerical solution the iteration process is constructed, which allows one to reduce the solution of the initial problem to the solution of a sequence of classical Cauchy-Dirichlet problems. The algorithm is suitable for parallel implementation. The specific problem is considered as example and solved numerically.