ITERATIVE NUMERICAL RECOVERING OF THE LOWEST ORDER SPACE-WISE COEFFICIENT IN PARABOLIC EQUATIONS

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In this work we suggest an iterative process for coefficient inverse problem. A parabolic equation is considered in a bounded area $\Omega \subset \mathbb{R}^d$ supplied with initial condition and monotonic nondecreasing on time Dirichlet condition on the boundary $\partial\Omega$. The problem is to recover the lowest order coefficient that depends only on spatial variables under an additional information as the observation of a solution taken at the final point of time. For numerical recovering of the coefficient we build the iterative process. The finite-element approximation and fully implicit two-level scheme are used for discretization on space and on time direction respectively. For capabilities of given iterative process computational tests are presented for a model problem.