FMSP Lectures

Anar Rahimov

(The Institute of Control Systems of ANAS and Baku State University)

An approach to numerical solution to inverse source problems with nonlocal conditions

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Abstract:
We consider two inverse source problems for a parabolic equation under nonlocal, final, and boundary conditions. A numerical method is proposed to solve the inverse source problems, which is based on the use of the method of lines. The initial problems are reduced to a system of ordinary differential equations with unknown parameters. To solve this system, we propose an approach based on the sweep method type. We present the results of numerical experiments on test problems. This is joint work with Prof. K. Aida-zade.