Vol. 21 No. 2

## VALIDATION OF A SOLUTION METHOD FOR THE PROBLEM OF RECONSTRUCTING THE DYNAMICS OF A MACROECONOMIC SYSTEM

Received January 14, 2015

## E.A. Krupennikov

For a class of nonlinear control systems, we describe a method for the reconstruction of the dynamics and controls from known inaccurate measurements of state trajectories. The method is based on Pontryagin's maximum principle and Tikhonov's regularization method. A validation of the method is provided.

Keywords: dynamic reconstruction, optimal control, Pontryagin's maximum principle.

*E.A. Krupennikov*, Doctoral student, Krasovskii Institute of Mathematics and Mechanics, Ural Branch of the Russian Academy of Sciences, Yekaterinburg, 620990 Russia, e-mail: krupennikov@imm.uran.ru,.

Cite this article as:

E. A. Krupennikov. Validation of a solution method for the problem of reconstructing the dynamics of a macroeconomic system, *Trudy Inst. Mat. Mekh. UrO RAN*, 2015, vol. 21, no. 2, pp. 102–114.