Contents

Vol. 6, No. 1, 2013

A simultaneous English language translation of this journal is available from Pleiades Publishing, Ltd.
Distributed worldwide by Springer. *Numerical Analysis and Applications* ISSN 1995-4239.

Theorem of Learning for a Competition Algorithm
V. S. Antyufeev 1

Solving a Second-Order Nonlinear Singular Perturbation Ordinary Differential Equation by a Samarskii Scheme
A. I. Zadorin and S. V. Tikhovskaya 9

Theoretical Justification of Interior Point Algorithms for Solving Optimization Problems with Nonlinear Constraints
V. I. Zorkaltsev and S. M. Perzhabinsky 24

A Numerical Method for Solving an Inverse Thermoacoustic Problem
S. I. Kabanikhin, O. I. Krivorot'ko, and M. A. Shishlenin 34

Finite Difference Simulation of Elastic Wave Propagation through 3D Heterogeneous Multiscale Media Based on Locally Refined Grids
V. I. Kostin, V. V. Lisitsa, G. V. Reshetova, and V. A. Tcheverda 40

Cubature Formulas on a Sphere That are Invariant with Respect to a Group of Dihedron Rotations with Inversion D_{6h}
A. S. Popov 49

On Constructing Generally Periodic Solutions of a Complicated Structure of a Non-Autonomous System of Differential Equations
A. N. Pchelintsev 54

Comparison Analysis for Improving Preconditioned SOR-Type Iterative Method
H. Saberi Najafi and S. A. Edalatpanah 62

Stochastic Model of Digit Transfer in Computing
L. Ya. Savel'ev and S. V. Balakin 71

Application of the Least Squares Method to Solving Linear Differential-Algebraic Equations
V. F. Chistyakov and E. V. Chistyakova 77