

RUSSIAN JOURNAL OF NUMERICAL ANALYSIS AND MATHEMATICAL MODELLING

EDITORS-IN-CHIEF

Valentin P. Dymnikov, Moscow

Yuri A. Kuznetsov, Houston/Moscow

MANAGING EDITOR

Yuri V. Vassilevski, Moscow

EDITORIAL BOARD

Valeri I. Agoshkov, Moscow

Andrey A. Amosov, Moscow

Igor E. Kaporin, Moscow

Georgy M. Kobelkov, Moscow

Gennady A. Mikhailov, Moscow

Sergey I. Repin, St. Petersburg

Vladimir V. Shaidurov, Krasnojarsk

Yuri I. Shokin, Novosibirsk

Eugene E. Tyrtysnikov, Moscow

DE GRUYTER

RUSSIAN JOURNAL OF NUMERICAL ANALYSIS AND MATHEMATICAL MODELLING provides English translations of selected new original Russian papers on the theoretical aspects of numerical analysis and the application of mathematical methods to simulation and modelling. The members of the editorial board, the most prominent Russian scientists in numerical analysis and mathematical modelling, select papers on the basis of their high scientific standard, innovative approach and topical interest.

All information regarding subscriptions, Open access, back volumes and orders is available online at www.degruyter.com/rjnamm.

ABSTRACTED/INDEXED IN Celdes · CNKI Scholar (China National Knowledge Infrastructure) · CNPIEC · EBSCO: Academic Search; Advanced Placement Source; Engineering Source; MegaFILE; Science & Technology Collection; TOC Premier; Discovery Service · Elsevier: Compendex; Engineering Village; SCOPUS · Gale/Cengage - Academic One File · Google Scholar · Inspec · J-Gate · Mathematical Reviews (MathSciNet) · Naviga (Softweco) · Primo Central (ExLibris) · ProQuest: Aerospace & High Technology Database; Aluminium Industry Abstracts; ANTE: Abstracts in New Technologies and Engineering; Ceramic Abstracts/World Ceramics Abstracts; Civil Engineering Abstracts; Computer and Information Systems Abstracts; Copper Technical Reference Library; Corrosion Abstracts; Deep Indexing: Computing; Deep Indexing: Math & Statistics; Deep Indexing: Science Journals; Earthquake Engineering Abstracts; Electronics and Communications Abstracts; Engineered Materials Abstracts; Engineering Research Database; High Tech Research Database; Illustrata: Natural Sciences; Illustrata: Technology; Industrial and Applied Microbiology Abstracts (Microbiology Abstracts A); Materials Business File; METADEX (Metals Abstracts); Solid State and Superconductivity Abstracts; Technology Research Database · SCImago (SJR) · Summon (Serials Solutions/ProQuest) · TDOne (TDNet) · Thomson Reuters: Journal Citation Reports/Science Edition; Science Citation Index Expanded · Ulrich's Periodicals Directory/ulrichsweb · WorldCat (OCLC) · Zentralblatt Math.

ISSN 0927-6467 · e-ISSN 1569-3988 · CODEN RJNMEH

RESPONSIBLE EDITOR Yuri V. Vassilevski, Institute of Numerical Mathematics, Russian Academy of Sciences, Gubkin str. 8, Moscow 119333, Russia.
Email: journal@dodo.inm.ras.ru

JOURNAL MANAGER Theresa Haney, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany.
Tel.: +49 (0)30 260 05-375, Fax: +49 (0)30 260 05-250
Email: theresa.haney@degruyter.com

RESPONSIBLE FOR ADVERTISEMENTS Heiko Schulze, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany.
Tel.: +49 (0)30 260 05-358, Fax: +49 (0)30 260 05-264
Email: anzeigen@degruyter.com

© 2015 Walter de Gruyter GmbH, Berlin/Boston

PRINTING Franz X. Stickle Druck und Verlag e.K., Ettenheim
Printed in Germany



Contents

Katerina A. Beklemysheva, Alexander A. Danilov, Igor B. Petrov, Victoria Yu. Salamatova, Yuri V. Vassilevski, and Alexey V. Vasyukov

Virtual blunt injury of human thorax: age-dependent response of vascular system — 259

Timur M. Gamilov, Philippe Yu. Kopylov, Roman A. Pryamonosov, and Sergey S. Simakov

Virtual fractional flow reserve assessment in patient-specific coronary networks by 1D hemodynamic model — 269

Alexander K. Khe, Alexander P. Chupakhin, Alexander A. Cherevko, Shalva Sh. Eliava, and Yury V. Pilipenko

Viscous dissipation energy as a risk factor in multiple cerebral aneurysms — 277

Andrey V. Kolobov, Vladimir V. Gubernov, and Maxim B. Kuznetsov

The study of antitumor efficacy of bevacizumab antiangiogenic therapy using a mathematical model — 289

Rufina M. Tretyakova, Andreas Meyerhans, and Gennady A. Bocharov

A drug pharmacodynamics and pharmacokinetics based approach towards stabilization of HIV infection dynamics — 299

