Anna Nasedkina

Department of Mathematical Modeling
Institute of Mathematics, Mechanics and Computer Science
Southern Federal University
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Date of Birth: 6th September, 1982

Current position: Associate Professor, Department of Mathematical Modelling, Southern Federal University (SFedU)

Research interests: mathematical and numerical modeling, finite element method, mechanics of porous media, soil engineering, geomechanics, coupled-field analysis, homogenization techniques

Education

- PhD in Physics and Mathematics, Southern Federal University, Rostov-on-Don, March 2011.
- Master of Applied Mathematics and Informatics (Diploma with honors), Rostov State University, Rostov-on-Don, June 2005
- Bachelor of Mathematics (Diploma with honors), Rostov State University, Rostov-on-Don, July 2003

Positions after graduation

- Research assistant (2005-2009), Scientific Research Institute of Mechanics and Applied Mathematics, SFedU
- Teaching Assistant (2006-2009), Faculty of High Technologies, SFedU
- Teaching Assistant (2009 – 2013), Institute of Mathematics, Mechanics and Computer Science (IMMSC), SFedU
- Senior Lecturer (2013–2016), IMMSC, SFedU
- Associate Professor (2016 – present), IMMSC, SFedU

Language skills: Cambridge Certificate in Advanced English, Council of Europe Level C1 (overall score 193), date of examination: July 2015.

Teaching experience

- Supervisor of undergraduate students
- Took part in Tempus-IV program project «Internationalised Curricula Advancement at Russian Universities in the Southern Region» (ICARUS), developed courses for Master program IT in Biomechanics, Southern Federal University

Courses in Institute of Mathematics, Mechanics and Computer Science, Southern Federal University (from 2009)

- **Undergraduate**: Software packages of Linear Algebra (lectures and computer practice), Computational Mechanics, Concepts of modern Natural Science (practice)
- **Graduate**: Numerical Methods of Linear Algebra for Sparse Matrices (lectures and computer practice); Modern Problems of Applied Mathematics and Informatics, Modeling of piezoelectric materials for practical applications, Computer simulation of material deformation, FEM modeling of coupled problems, Nonlinear Models, Finite Element method in Mechanics, Coupled problems, Modern Problems of Informatics (computer practice)

Courses at the Faculty of Management, Southern Federal University (fall 2016)

- **Graduate**: System analysis and Decision Making in Management (lectures and practice)

Courses at the Faculty of High Technologies, Southern Federal University (2006-2009)

- **Undergraduate**: System analysis, Theory of Information Processes and Systems, Corporate Information Systems, Geographical Information Systems (computer practice)

Courses at the Faculty of Chemistry (2010-2015)

- **Undergraduate**: Information Technologies (lectures and computer practice); Programming, Informatics (computer practice)

International teaching mobility programs

- Erasmus+ program, visiting professor at Lappeenranta University of Technology with the course of lectures "Iterative Numerical methods of Linear Algebra for Sparse Matrices", March 2016.

International research grants

- INNOPIPES (Innovative Nondestructive Testing and Advanced Composite Repair of Pipelines with Volumetric Surface Defects), Marie Curie 7-th Framework program: 4 months in Warsaw (Poland), 2014; 1 month in Ploiesti (Romania), 2016.
- INTAS Fellowship Grant for Young Scientists (Ref. Nr. 05-109-4980) for two years (March 2006 – March 2008): 2 months in University of Salerno, 4 months in Universities of Bologna, Salerno, Catania (Italy).

Publications: textbook in English

Nasedkin A.V., Nasedkina A.A. Finite element modeling of coupled problems: textbook. Rostov-on-Don: publishing house of Southern Federal University, 2015. 174 pages. ISBN 978-5-9275-1611-7.

Some journal publications

1. Nasedkina, A. Alexiev, J. Malachowski. Numerical Simulation of Ultrasonic Torsional Guided Wave Propagation for Pipes with Defects. In: Springer proceedings in Physics, vol. 175. Advanced Materials - Manufacturing, Physics, Mechanics and Applications. Eds. Ivan A. Parinov, Shun-Hsyung, Vtaly Yu. Topolov. Springer, Heidelberg, New York, Dordrecht, London, 2016. P.475-488. ISBN 978-3-319-26322-9, ISSN: 09308989. (Scopus, doi: 10.1007/978-3-319-26324-3_33)
2. Nasedkin A.V., Nasedkina A.A. Finite element modeling and computer design of porous composites // Poromechanics V. Proc. of the Fifth Biot Conference on Poromechanics. July 10-12, 2013, Vienna, Austria. Eds. Hellmich C., Pichler B., Adam D. Publ. ASCE, 2013. P. 608-617. (Scopus; doi: 10.1061/9780784412992.072)
3. A. A. Nasedkina, A. V. Nasedkin, and G. Iovane. Modeling and finite element analysis of the nonstationary action on a multi-layer poroelastic seam with nonlinear geomechanical properties. Journal of Mining Science, Springer, 2009, Vol. 45, No. 4, pp. 324-333. Translated from Fiziko-Tekhnicheskie Problemy Razrabotki Poleznykh Iskopaemykh, No. 4, pp. 23–32, July–August, 2009. DOI 10.1007/s10913-009-0040-7
4. Nasedkina A.A., Nasedkin A.V., Iovane G. A model for hydrodynamic influence on a multi-layer deformable coal seam. Computational Mechanics, Springer, vol. 41, no. 3, 2008. P. 379-389. DOI 10.1007/s00466-007-0194-6.