Mikhail E. Semenov

Division for Experimental Physics
Tomsk Polytechnic University
30, Lenin ave., Tomsk, 634050, Russia
Tel. + 7 903 952 24 93 (mob.)
+7 3822 606 335 (office)
e-mail: sme@tpu.ru
Web-page: http://portal.tpu.ru/SHARED/s/SME/eng

Current position: Associate Professor at Division for Experimental Physics, Tomsk Polytechnic University, Russia, since 2010

Main Research Topics: Applied Mathematics, Statistical Computing, Numerical Methods and Analysis, Mathematical Programming, Differential Equations, Social Network Analysis

Academic degrees:

2006 PhD in Physics and Mathematics, Tomsk State University, Russia. PhD thesis: Mathematical Model and Software for Investigation of Plastic Deformation Processes by Slip in FCC Material, Advisor: Prof. Svetlana N. Kolupaeva

2000 Diploma (Master of Science) in Mathematics, Tomsk State University, Russia

Professional Experience:

2006 – 2011 Associate Professor, Tomsk State University of Architecture and Building, Russia

2000 – 2003 PhD student, Engineer, Institute of Strength Physics and Materials Science of Siberian Branch of the Russian Academy of Sciences, Laboratory of Computer-Aided Design of Materials, Russia

Teaching experience

- Network analysis, University of Maribor, Slovenia (8h, Invited Lector)
- Research, Data Analysis and Presentation Academic Skills, Tomsk Science International Program (20h, Lector)
- Statistical Modeling and Forecasting, Tomsk Polytechnic University (64h, Lector)
- Theory of Probability and Mathematical Statistics, Tomsk Polytechnic University (72h, Lector)
- Numerical Methods, Tomsk Polytechnic University (30h, Lector)
- Mathematics, Tomsk Polytechnic University (150h, Lector, Trainer)
- Differential Equations, Tomsk Polytechnic University (60h, Lector)
- Programming, Tomsk State University of Architecture and Building (60h, Lector)
- Discrete Mathematics, Tomsk Polytechnic University (60h, Lector)
- Finance and Stock Market, Tomsk State University (20h, Lector)
- Logistics, Tomsk Polytechnic University (40h, Lector)

Graduate student supervision: 18 M.Sc. students and 24 B.Sc. students since 2010.
Current students: 2 PhD students, 4 M.Sc. students and 6 B.Sc. students.

Research projects and grants:

- Erasmus+ Grant (2019) for academic staff mobility, University of Maribor, Slovenia
- Leader team of the project No. 13-01-90903 «Design block methods for solving stiff system of ordinary differential equations» (2013)

- Team member of the project No. 13-07-98037 «Development of hybrid intelligent training-testing system for blended education and training» (2013).
- Team member of the project No. 11-07-98015 «Intelligent expansion of geoinformation system for regional development» (2011-2012).
- Team member of the project No. 10-01-00462-a «Creation of the fault-tolerant diagnostic tests, decision-making based on them and development of cognitive graphics means in intelligent systems» (2010-2012).
- Russian Federation President Grant No. МК-2425.2007.8 on the State Support of Young Russian Scientists (2007, 2008).

Academic Organization Experience:

- Editor of the Special Issue PFSD-2019, Journal of Physics: Material Science and Engineering
- Editor of the Special Issue PFSD-2018, PFSD-2020 Journal of Physics: Conference Series
- International Conference on **Prospects of Fundamental Sciences Development**, 2009-2020, Tomsk, Russia, Deputy Chairman of Organizing Committee, http://conf-prfn.org/
- International Conference of **Materials and Engineering Technologies** (TICMET'19), 2019, Gaziantep, Turkey, Member of Scientific Committee, https://ticmet.org/
- International Conference on **Issues of Physics and Technology in Science, Power Industry and Medicine**, 2015-2016, Tomsk, Russia, Program Committee Members.

Foreign Collaboration Experience:

Osh State University, Osh, Kyrgyzstan
Monash University, Melbourne, Australia
Chinese Academy of Sciences, Beijing, China
University of Biskra, Algeria
Federal University of Technology, Minna, Nigeria
University of Southampton, Southampton, UK
Al-Farabi Kazakh National University, Almaty, Kazakhstan
Rzeszow University, Poland
University of Maribor, Slovenia
Indiana University of Pennsylvania, USA
Indian Institute of Technology, Kanpur, India

Postdoctoral training:

2020 - R Programming, coursera.org/verify/KZDGGYYJVC2S
2014 – Delivering through the medium English, University of Southampton, Southampton, UK
2013 – China-Russia bilateral meeting on Novel Magnetosensitive Materials and Sensors, Jilin University, China.
2012 – State Key Laboratory of Magnetism, Institute of Physics, Chinese Academy of Sciences, Beijing.
2012 – Department of Materials Engineering, Monash University, Melbourne, Australia.

Awards:

2014 – Award for the Best Associate Professor at Tomsk Polytechnic University.
2013 – Award for the best report «Algorithm for Parallel Computing of First Order Ordinary Differential», The International Conference on Information Science and Computer Technology (ICISCT'2013). Shenyang Polytechnic University, China, September 22-23, 2013.

Selected publications, h-index = 5:

1. Chursin, G., **Semenov, M.** (2020) Learning game development with Unity3D engine and Arduino microcontroller. Journal of Physics: Conference Series. **1488** 012023
2. **M. Semenov,** Y. S. Colen, J. Colen, A. Pardala (2020) **An Introduction to the Edumatrix Set and Its Didactic Capabilities**. J. Korean Soc. Math. Educ., Ser. D, Res. Math. Educ. **23**(1) 47-62.
3. **M. Semenov**, D. Smagulov (2019) Portfolio Risk Assessment using Copula Models, in Global Economics and Management: Transition to Economy 4.0. Chapter 9, p.91-101.

4. U. Mohammed, R.B. Adeniyi, **M. Semenov**, M. Jiya, A.I. Ma'ali (2018) A Family of Hybrid Linear Multi-Step Methods Type for Special Third Order Ordinary Differential Equations. Journal of the Nigerian Mathematical. **37**(1), p. 1-22.
5. M. Fatyanova, **M. Semenov** (2017) Model for Constructing an Options Portfolio with a Certain Payoff Function. / CEUR Workshop Proceedings: Online Proceedings for Scientific Conferences and Workshops. — 2017. — Vol. 1904: MM-ITNT 2017 — p. 254-262.
6. **M. Semenov**, E. Koroleva, D. Tursunov, L. Bulygin (2016) A Project Teams Creation based on Communities Detection. Proceedings of the Fifth International Conference on Analysis of Images, Social Networks and Texts (AIST 2016), Yekaterinburg, Russia, April 6-8, 2016, p.303-314.
7. **M. Semenov** (2016) Study of the Materials Microstructure using Topological Properties of Complex Networks. IOP Conference Series: Materials Science and Engineering. **135**: Issues of Physics and Technology in Science, Industry and Medicine.
8. Yankovskaya A.E., **Semenov M.E.** (2013) Decision Making in Intelligent Training–Testing Systems Based on Mixed Diagnostic Texts. Scientific and Technical Information Processing, 2013, **40** (6), p. 48–56.
9. Daneyko O.I., Kovalevskaya T.A., Kolupaeva S.N., Kulaeva N.A. and **Semenov M.E.** (2012) Influence of the temperature and strain rate on the evolution of the dislocation structure of a dispersion-hardened material with FCC matrix, Russian Physics Journal, **54**(9), p.989-993.

- International Conference on Prospects of Fundamental Sciences Development, 2009-2014, Tomsk, Russia, Program Committee Member. http://science-persp.tpu.ru/Committee_en.aspx .
- World Academy of Science, Engineering and Technology, International Scientific Editorial Board Members, since 2012., http://waset.org.
- Exhibition & Competition of Scientific and Creative Works by International Students, 2013, Tomsk, Russia, Program Committee Members. , http://www.iie.tpu.ru/ru/anons/smotr.php

Jilin University, China

Shenyang Ligong University, China

- The winner of the contest «IT-Idea" (2011), Project Leader.
- The winner of the international competition of student projects carried out with technology computer-aided design "Credo", (2010), Project Leader.
- Finalist of Russian Stage of the Microsoft competition "Imagine Cup" (2008), Project Leader.

Award for the Best Associate Professor at Tomsk Polytechnic University, 2014.

Award for the best report «Mikhail Semenov, Algorithm for Parallel Computing of First Order Ordinary Differential», The International Conference on Information Science and Computer Technology (ICISCT'2013). Shenyang Polytechnic University, China, September 22-23, 2013.