DMITRY (VIKTOROVICH) PONOMAREV

Date of birth: 22.03.1985 (Elektrostal, USSR).

Citizenship: Russian Federation.

E-mail: Dm.V.Ponomarev@gmail.com , dmitry.ponomarev@mathmods.eu , ponomadv@math.mcmaster.ca

Education:
1. *Sep. 2010 – present:* Graduate program at the Department of Mathematics and Statistics, McMaster University.
2. *Sep. 2008 – Jul. 2010:* MathMods - Mathematical Modeling in Engineering: Theory, Numerics, Applications *[graduated with honors]* - international M.Sc. program organized and funded by the European Commission:
   - *Sep. 2008 – Feb. 2009:* Theoretical module - University of L'Aquila, Italy.
   - *Feb. 2009 – Aug. 2009:* Numerics - University of Nice - Sophia Antipolis, France.
   - *Aug. 2009 – Aug. 2010:* Applications ("Advanced computational methods in material science" track) and M.Sc. thesis - Gdansk University of Technology, Poland.
3. *Sep. 2002 – Feb. 2008:*
   National Research Nuclear University MEPhI (formerly Moscow Engineering Physics Institute, State University), the Faculty of Theoretical and Experimental Physics, the Department of Modeling of Physical Processes in Environment.
4. *Sep. 2001 – Jun. 2002:*
   MIPT (Moscow Institute of Physics and Technology, State University) Correspondence School of Physics and Mathematics.
5. *Sep. 1999 – Jun. 2002:*
   Lyceum 8 (the leading Elektrostal high-school with focus on physics and mathematics).
6. *Sep. 1992 – Jun. 1999:*
   School 15 of Elektrostal, class with advanced study of mathematics and informatics.

Internships:
   May 2009 – Aug. 2009: INRIA, Sophia Antipolis, France – industrial training (stage) as a M.Sc. student within the framework of the MathMods program.

Awards, fellowships and grants:
1. Series of diplomas for success in competitions in physics, mathematics and informatics obtained before entering MEPhI.
2. 7 regular (for good and excellent study) and 3 special (for only excellent grades in a semester) MEPhI scholarships.
3. Special MEPhI award for scientific work in modeling of dynamic inflation of a volcanic chamber.
4. Russian national grant for a developer of MEPhI nano-modeling portal.
5. 42,000 EUR Erasmus Mundus study grant and scholarship by the European Commission for participating in the two-year international MathMods program awarded on highly competitive basis.

Publications / preprints:
1. O. Nagornov, D. Ponomarev "Plane Wave Scattering on Single Spherical Inclusions of Different Types in Fluid-Saturated Porous Media", Mechanics of Solids – submitted September 2009.

2. Dmitry V. Ponomarev "High-order Time Integration Leap-Frog Schemes Combined with a Discontinuous Galerkin Method for the Solution of the Maxwell Equations", INRIA preprint [http://hal.inria.fr/inria-00424560/fr/], October 2009.
3. Dmitry V. Ponomarev, Oleg V. Nagornov "On Effective Wave Propagation Characteristics in Porous Fluid-Saturated Medium Containing Fluid Inclusions", Geophysical Journal International, 182, 1043-1057, August 2010.
4. Sergey B. Leble, Dmitry V. Ponomarev "Dressing of zero-range potentials into realistic molecular potentials of finite range", Task Quarterly – submitted September 2010.
5. Dmitry V. Ponomarev, Sergey B. Leble "Molecular zero-range potential method and its application to cyclic structures", Physics Letters A – submitted September 2010.

Conference papers / talks:
1. "Plane Wave Scattering on Solid, Fluid and Porous Inclusions in Fluid-Saturated Porous Media" (with O. Nagornov), Proceedings of Moscow Engineering Physics Institute Scientific Session - 2008, January 2008.
2. "Dynamic Inflation of a Volcanic Chamber in Elastic Half-space" (with O. Nagornov and S. Dunin), Proceedings of Moscow Engineering Physics Institute Scientific Session - 2007, January 2007.

Reviewing experience:
− Reviewer for Geophysical Journal International.

Computer skills:
− Advanced user of MS Windows (including MS Office applications, Adobe Photoshop, etc), Linux.
− Programming experience: Fortran, Assembler, Pascal, Delphi, Perl, PHP, JavaScript, HTML-coding.
− Mathematical and computational software: MATLAB, Maple, COMSOL Multiphysics (FEMLab), ANSYS.

Languages:
Russian (native), English (fluent):
TOEFL iBT (Test of English as a Foreign Language – Internet-Based version) – 103/120:
− Reading: 29/30
− Listening: 28/30
− Speaking: 24/30
− Writing: 22/30

Work / pedagogical experience:
1. *Sep. 2010 – present:* McMaster University, Mathematics and Statistics department – teaching and research assistant.
2. *Mar. 2006 – Feb. 2007:* Lyceum 8 (Elektrostal), physics tutor ("Methods of Solving Advanced Physics Problems" course).
3. *Jul. 2006 – Aug. 2008:* SAS Institute (Moscow), Russia representative office webmaster.
4. *Oct. 1998 – May. 1999:* IntSys – Intellectual Systems (Elektrostal), webmaster of local Internet service provider (unofficial job during school period).

Scientific areas of interest:
Mathematical physics, partial differential equations, porous media, nonlinear waves, soliton theory, dressing method, Darboux transformations, zero-range potentials.

Hobbies / non-scientific interests:
Webdesign, old-time music (jazz, crooners and US/UK bands of 1950s-60s), art-movies and classical cinema (Alfred Hitchcock, Orson Welles, etc).