

Delia IONESCU-KRUSE

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Curriculum Vitæ

Date and place of birth : 17th June 1971, Bucharest, Romania.

Marital status : Married, 1 child.

Nationality : Romanian and German.

ACADEMIC DEGREES AND FURTHER QUALIFICATIONS

- 2005 : Qualification at the Maître de Conférences positions, France.
- 2002 : PhD in Mathematics, University of Bucharest,
Thesis: "Applications of the geometry in Logunov's relativistic theory",
Thesis-advisors: Professor S. Ianuş (University of Bucharest), Senior
Researcher E. Soós (Institute of Mathematics of the Romanian Academy).
- 1995: Master degree in Geometry, University of Bucharest.
- 1994: Licentiate degree in Mathematics, University of Bucharest.
- 1989: Baccalaureate, Specialization Mathematics-Physics, Tudor Vianu National
College of Computer Science, Bucharest.

EMPLOYMENT

- 07/2018 - present : Senior Researcher I, Simion Stoilow Institute of Mathematics
of the Romanian Academy (IMAR).
- 03/2015 - 07/2018: Senior Researcher II, IMAR.
- 06/2005 - 03/2015: Senior Researcher III, IMAR.
- 02/2002 - 06/2005: Lecturer, Department of Mathematics, Technical University
of Civil Engineering Bucharest (UTCB), Romania.
- 03/2002 - 08/2004: Post-doctoral Research Fellow within MASIE (Mechanics and
Symmetry in Europe) Research Network, Zentrum Mathematik
der Technischen Universität München (TUM), Germany.
- 02/1998 - 02/2002: Assistant, Department of Mathematics, UTCB.
- 09/1995 - 02/1998: Tutor Assistant, Department of Mathematics, UTCB.

CURRENT RESEARCH INTERESTS

PDEs in Fluid Mechanics, Nonlinear Water Waves, Fluid Stability Problems,
Geophysical Fluid Dynamics.

SCIENTIFIC AWARDS

- 2008: *Dimitrie Pompeiu* prize of the Romanian Academy.

VISITING POSITIONS AND FELLOWSHIPS

- 04/2018: Invited researcher, Department of Mathematics, Shanghai Normal University, China (2 weeks).
- 02/2018: Invited researcher, Erwin Schrödinger Institute (ESI) Vienna, Austria, programme "Mathematical Aspects of Physical Oceanography" (1 week).
- 08/2017: Invited researcher, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, programme "Nonlinear water waves" (2 weeks).
- 06/2015-07/2017,
01/2016-03/2016: Invited researcher, Faculty of Mathematics, University of Vienna, Austria.
- 09/2015: Invited researcher, LAMA, UMR 5127 CNRS, Université Savoie Mont Blanc, France (2 weeks).
- 05/2015-07/2015,
06/2014-08/2014,
05/2013-07/2013: Invited researcher, Faculty of Mathematics, University of Vienna, Austria.
- 05/2011: Invited researcher, ESI Vienna, Austria, programme "Nonlinear water waves" (2 weeks).
- 10/2009: Invited researcher, ESI Vienna, Austria, programme "Recent advances in integrable systems of hydrodynamic type" (2 weeks).
- 10/2007: Invited researcher, Institute of High Energy Physics (IHEP), Protvino, Moscow Region, Russia (2 weeks).
- 07/2007: Invited researcher, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland.
- 05/2007: Invited researcher, Department of Mathematics, Lund University, Sweden (2 weeks).
- 12/2006: Invited researcher, School of Mathematics, Trinity College Dublin, Ireland (2 weeks).
- 10/2006: Invited researcher, Centre de Mathématiques et Informatique, Université d'Aix-Marseille I, France (2 weeks).
- 07/2005: Summer School and Conference on Poisson Geometry, Abdus Salam ICTP-Trieste, Italy, individual fellowship.
- 09/2004, 05/2003,
11/2002: Invited researcher, EPFL, Switzerland.
- 02/2002, 09/1999: Invited researcher, IHEP, Protvino, Moscow Region, Russia.
- 07/1998: Summer School on Differential Geometry Cortona, Italy, individual fellowship.
- 04/1997 - 07/1997: Individual fellowship within Tempus Phare program, Department of Mathematics, Perpignan University, France.

CONFERENCES AND WORKSHOPS

- 05/2018: Invited talk at the workshop *Analyse, analyse numérique et contrôle des milieux continus*, University of Bucharest, Romania.
- 12/2017: Invited talk at the workshop *Nonlinear water waves - an interdisciplinary interface*, ESI Vienna, Austria.
- 06/2015: Invited talk at the International Conference *Water Waves Dynamics*, University of Vienna, Austria.

- 08/2014: Invited special section talk at the *12ème Colloque Franco-Roumain de Mathématiques Appliquées*, Lyon, France.
- 07/2014: Invited special section talk at the *The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Madrid, Spain.
- 06/2013: Invited special section talk at the *Joint International Meeting of the American Mathematical Society and the Romanian Mathematical Society*, Alba Iulia, Romania.
- 07/2012: Attended conference: *6th European Congress of Mathematics*, Krakow, Poland, (EMS "Support of East European Mathematicians").
- 03/2012: Invited talk at the International Conference *Mathematical Aspects of Water Waves*, King's College London, UK.
- 01/2012: Attended conference: *Recent Trends in Dynamical Systems - An International Conference in Honor of Jürgen Scheurle*, TU München, Germany.
- 05/2011: Invited talk, Erwin Schrödinger Institute (ESI) Viena, Austria.
- 08/2010: Invited special section talk at the *10ème Colloque Franco-Roumain de Mathématiques Appliquées*, Poitiers, France.
- 01/2012: Attended conference: *Geometry, Mechanics, and Dynamics: A Workshop celebrating the 60th Birthday of Tudor Ratiu*, CIRM, Luminy, France.
- 05/2010: Contributed talk at the NSF-CBMS conference *Nonlinear water waves with applications to wave-current interactions and tsunamis*, University of Texas-Pan American, Texas, USA.
- 11/2007: Invited talk at the conference *Geometrical Mechanics*, Centre International de Rencontres Mathématiques (CIRM), Luminy, France.
- 07/2007: Invited special section talk at the *6th Congress of Romanian Mathematicians*, Bucharest, Romania.
- 08/2006: Talk at the *8ième Colloque Franco-Roumain de Mathématiques Appliquées*, Chambéry, France.
- 08/2006: Invited talk at the *Colloque International de Théorie Variationnelle (CITV)* (organizers: J.M. Souriau, C. Vallee), Notre-Dame-de-Vaulx, France.
- 03/2006: Contributed talk at the *77th Annual Meeting of the Gesellschaft für Angewandte Mathematik und Mechanik (GAMM)*, Berlin, Germany.
- 09/2005: Talk at the *The Seventh International Workshop on Differential Geometry and its Applications*, Deva, Romania.
- 08/2005: Invited talk at the *Colloque International de Théorie Variationnelle (CITV)*, (organizers: J.M. Souriau, C. Vallee), Asnelles-sur-Mer dans le Calvados, France.
- 07/2004: Invited talk at the conference *Geometric Mechanics and its Applications*, EPFL, Switzerland.
- 08/2003: Invited talk at the *Colloque International de Théorie Variationnelle (CITV)*, (organizers: J.M. Souriau, C. Vallee), Mauges en Anjou, France.
- 05/2003: Talk at conference *Geometry, Symmetry and Mechanics*, Cargese, Corsica, France.
- 08/2002: Attended conference with presentation: *Conference on Dynamical System Methods in Fluid Mechanics*, Oberwolfach, Germany.
- 07/2002: Talk at the *Workshop on: Geometry, Symmetry and Mechanics*, Warwick, England.
- 09/2001: Talk at *The Fifth International Workshop on Differential Geometry and its Applications*, Timișoara, Romania.

06/2000: Invited talk at *The XXIII International Workshop on High Energy Physics and Field Theory*, Protvino, Moscow Region, Russia.

- Member of the Scientific Committee for the "Trimestre Analyse et EDP à Bucarest", 18 Sep 2017 - 09 Jul 2018.

RESEARCH PROJECTS

Groupement de Recherche International (GDRI) (2017–), under the project:
"A qualitative description of travelling shallow water waves with constant vorticity"
Project leaders: Dr. D. Ionescu-Kruse, IMAR and Dr. D. Dutykh, Université Savoie.

Member of the European ERC Advanced Grant project no. 267116/(2011-2016),
"Nonlinear studies of water flows with vorticity" (NWFV),
Project leader: Prof. Dr. A. Constantin, University of Vienna.

Laboratoire Europeen Associe (LEA) MATH-MODE (2015), under the project:
"A variational approach to water waves in shallow waters"
Project leaders: Dr. D. Ionescu-Kruse, IMAR and Dr. D. Dutykh, Université Savoie.

Member of the SCOPES project between IMAR and EPFL,
no. IB7320-110721/1(2005-2008),
"Applied symplectic geometry and modelling of materials",
Project leaders: Prof. Dr. V. Brinzanescu, IMAR and Prof. Dr. T. Ratiu, EPFL.

Interacademic cooperation project no. 19626(10/2006) between Romanian Academy (IMAR) and CNRS (LATP, UMR 6632, Université Marseille I, France),
"Methodes symplectiques en hydrodynamique",
Project leaders: Dr. D. Ionescu-Kruse, IMAR and Dr. B. Kolev, Université Marseille I.

Member of the CEEEX (centre of excellence) project CEx06-11-12/25.07.06(2006-2008),
"Mathematical modelling in continuum mechanics. Applications in material sciences",
Project leader: Prof. Dr. S. Țigoiu, University of Bucharest.

Member of the CEEEX (centre of excellence) project CEx05-D11-23/2005(10/2005-09/2008)
"Operatorial Methods, Complex and Functional Analysis, with Applications",
Project leader: Prof. Dr. L. Beznea, IMAR.

Post-doc at Technische Universität München (TUM) within European network MASIE (Mechanics and Symmetry in Europe) no. HPRN-CT-2000-00113(03/2002 - 08/2004),
"Continuum Mechanics and Hamiltonian PDE's",
Project leader: Prof. Dr. J. Scheurle, TUM.

REFEREE ACTIVITY

- Referee for *Journal of Differential Equations*, *Proceedings of the Royal Society A*, *Physics of Fluids*, *Journal of Mathematical Physics*, *Journal of Physics A: Mathematical and Theoretical*, *Communications in Mathematical Sciences*, *Physica D*, *Physics Letters A*, *Wave Motion*, *Int. J. Non-Linear Mechanics*, *Environmental Fluid Mechanics*, *Complex Analysis and Operator Theory*, *Proc. Ro. Acad. Series A*.
- In 2010: Judge nominated by the Higher Education Commission (HEC) Pakistan, for the HEC Outstanding Research Awards 2008-09 in the Discipline Basic and Applied Sciences, sub-field Mathematics.

FOREIGN LANGUAGES

English: fluent.

French: fluent (Diplôme Approfondi de Langue Française).

German: fluent (Zertifikat Deutsch, Goethe Institut).