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

12/2018 - present : Senior Researcher I, Simion Stoilow Institute of Mathematics
                   of the Romanian Academy (IMAR).
03/2015 - 12/2018: 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

01/2020:	Invited researcher, Erwin Schrödinger Institute (ESI) Vienna, Austria, programme "Mathematical Aspects of Geophysical Flows" (1 week).
04/2018:	Invited researcher, Department of Mathematics, Shanghai Normal University, China (2 weeks).
02/2018:	Invited researcher, 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

06/2019:	Invited talk at *IMAR70 - Conférence dédiée au 70ème anniversaire de l'Institut de Mathématiques de l'Académie Roumaine*, Bucharest, Romania.
06/2019:	Invited talk at *9th Congress of Romanian Mathematicians*, sections "Ordinary and Partial Differential Equations, Controlled Differential Systems" and

"Mechanics, Astronomy, Numerical Analysis, and Mathematical Models in Sciences", Galaţi, România.

05/2019: Invited talk at the *2nd Workshop on Analysis, PDEs and Mechanics*, "Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics of the Romanain Academy.

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*, Chambery, 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*, Timişoara, 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.

- Member of the Scientific Committee for the *15th Franco-Romanian Colloquium on Applied Mathematics*, which will be held in August, 2020, Braşov, Romania.

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 CEEX (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. Ţigoiu, University of Bucharest.

Member of the CEEX (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 Appplied Sciences, sub-field Mathematics.

FOREIGN LANGUAGES

English: fluent.
French: fluent (Diplôme Approfondi de Langue Française).
German: fluent (Zertifikat Deutsch, Goethe Institut).