

Prof. dr hab. Piotr Gwiazda

Institute of Mathematics
Polish Academy of Sciences

Phone: +48 (22) 5228 182
Fax: +48 (22) 5544-700
Email: pgwiazda@mimuw.edu.pl
URL: <http://pgwiazda.mimuw.edu.pl>



EDUCATION

Habilitation in Mathematics - 26.10.2006, University of Warsaw
MS in Economics - 2001, University of Warsaw
PhD in Mathematics - 28.10.1999, University of Warsaw
MS in Mathematics - 1995, University of Warsaw

AFFILIATION

since 2015 Full Professor, Institute of Mathematics, Polish Academy of Sciences,
03.2009 – present Associate Professor at the University of Warsaw,
10.2012 – 02.2013 Vertretung der Professur Angewandte Analysis, Heidelberg University
10.2002 – 03.2009 Assistant Professor at the University of Warsaw,
Institute of Applied Mathematics and Mechanics.
10.2004 – 09.2005 Researcher, MC-RTN Ecole Normale Supérieure Paris, DMA,
in the group of Benoît Perthame
2000 – 2002 Researcher, SFB 298 "Deformation and failure in granular and metallic
materials" Technical University Darmstadt,
in the group of Reinhard Farwig
1995 – 2000 Assistant at University of Warsaw.

HONORS, AWARDS AND SCHOLARSHIPS

05.06.2014 Professor Title in Mathematics (given by the President of the Republic of Poland),
9.2013 Award of the Rector of the University of Warsaw
6.2011 – 7.2011 Alexander von Humboldt fellowship, Renewed Research Stay,
University of Duisburg–Essen, hosted by Petra Wittbold
6.2009 Laureate of the program MPD (International PhD projects) of the Foundation
for Polish Science
9.2009 Award of the Rector of the University of Warsaw
9.2009 – 10.2009 Alexander von Humboldt fellowship, Renewed Research Stays,
Heidelberg University, hosted by Anna Marciniak-Czochra
3.2008 – 2.2009 Alexander von Humboldt return fellowship
6.2006 – 2.2007 Alexander von Humboldt (individual research scholarship) Heidelberg
University, Germany, hosted by Willi Jäger

- 2.2004 – 8.2004 HyKE EC-project (scholarship) University of Ferrara/Brescia University, Italy, hosted by Rinaldo Colombo
- 7.2003 – 8.2003 DAAD scholarship, TU Darmstadt, Germany, hosted by Reinhard Farwig
- 2.2003 – 3.2003 Guest Professor, WIAS Berlin, Germany
- 10.1996 – 9.1997 DAAD scholarship, TH Darmstadt, hosted by Hans-Dieter Alber

GRANTS

- 2015–2018 Grant of the National Science Centre OPUS Nr 2014/13/B/ST1/03094 (principal inv.) "Complex flows", (110 000 EUR)
- 2013–2015 Research Group Linkage Programme, Alexander von Humboldt Foundation (Polish coordinator), (50 000 EUR)
- 2014-2015 Grant POLONIUM Nonlocal hyperbolic conservation laws: modeling, analysis, approximations, joint project with Universite de Franche-Comte, Besancon, France,
- 2011–2014 Grant of the National Science Centre Nr 6085/B/H03/2011/40 (principal inv.) "Measure and Orlicz spaces in mathematical description of flow and growth phenomena" (80 000 EUR)
- 2009–2015 Foundation for Polish Science International PhD Projects Programme (head of the project) Ph.D. Programme: Mathematical Methods in Natural Sciences" (1 400 000 EUR)
- 2007–2010 Grant of Ministry of Sci. and Higher Educ. Nr N201 033 32/2269 (principal inv.), "Analysis of physical and biological problems in the framework of mathematical entropies" (30 000 EUR)
- 2008 – 2009 Visegrad Fund international standard grant (partner) "Non-Newtonian Fluids"
- 2004–2007 Grant KBN No. 1 P03A 03127, (co-investigator) "Analysis of non-monotone problems in the theory of elastic deformations"
- 2015–2017 Grant of the National Science Centre Nr 2014/13/N/ST1/02626 (supervisor of the project) "Mathematical analysis of thermo-visco-elasticity" (PhD grant, Filip Klawe)
- 2013–2015 Grant of the National Science Centre Nr 2012/07/N/ST1/03369 (supervisor of the project) "Numerical simulations of severe plastic deformations by flow model of crystal plasticity" (PhD grant, Piotr Minakowski)
- 2013–2015 Grant of the National Science Centre Nr 2012/05/N/ST1/03132 (supervisor of the project) "Analysis of structured population models in metric spaces (PhD grant, Agnieszka Ulikowska)
- 2011–2013 Grant of the National Science Centre Nr 6113/B/H03/2011/40 (supervisor of the project) "Non-Newtonian fluids with non-standard rheology" (PhD grant, Aneta Wroblewska)

SCIENTIFIC ACTIVITIES

1. Member of Scientific Council of Juliusz Schauder Centre for Nonlinear Studies, Toruń, Poland (since October 2012)
2. Member of Scientific Council of the Institute of Geophysics, Polish Academy of Sciences (since 2014)

3. Coordinator of international PhD program Mathematical Methods in Natural Sciences: 16 PhD students (Consortium members: Faculty of Mathematics, Informatics and Mechanics, University of Warsaw; Institute of Mathematics, University of Wrocław; Institute of Mathematics of the Polish Academy of Sciences; Interdisciplinary Centre for Mathematical and Computational Modelling, University of Warsaw; Interdisciplinary Center for Scientific Computing, Institute of Applied Mathematics, Heidelberg University; Laboratoire Jacques-Louis Lions, Faculte des Sciences Mathematiques, Universite Pierre et Marie Curie, Paris; Faculty of Mathematics and Physics, Charles University in Prague; Institute of Mathematics of the Academy of Sciences of the Czech Republic)
<http://mmns.mimuw.edu.pl/>
4. Member of the Selection Committee for post-doc positions at Warsaw Center of Mathematics and Computer Science (since 2014)
5. Member of the Warsaw Scientific Society Selection Committee (Conference scholarships granted by the Foundation for Polish Science) (2007)
6. Member of the Visegrad Scholarship Programme Selection Committee (2004, 2007)
7. Referee of three habilitation theses and seven Ph.D theses
8. Editor in Topological Methods in Nonlinear Analysis (since January 2013)

TEACHING AND MENTORING EXPERIENCE

- SUPERVISION OF PH.D. STUDENTS

- Completed PhD theses

1. Aneta Wróblewska-Kamińska, Non-Newtonian fluids with nonstandard rheology, 2008 – 2013,
2. Agnieszka Ulikowska, Structured population models in metric spaces, 2009-2013, (co-supervisor Anna Marciniak-Czochra Institute of Applied Mathematics Heidelberg University)
3. Grzegorz Jamróz, Structured population models of cell aging and differentiation, 2009-2014, (co-supervisor Anna Marciniak-Czochra Institute of Applied Mathematics Heidelberg University)
4. Filip Klawe, Mathematical analysis of thermo visco-elastic models, since 2012, (co-supervisor Agnieszka Świerczewska-Gwiazda), final exam 11.06.2015
5. Piotr Minakowski, Fluid model of crystal plasticity - mathematical properties and computer simulations, since 2010, (co-supervisor Josef Málek Charles University in Prague), thesis submitted

- On-going PhD projects

1. Paweł Subko, On various aspects of behaviour of polymers, since 2011, (co-supervisor Agnieszka Świerczewska-Gwiazda)
2. Piotr Orliński, since 2012
3. Jan-Erik Busse, since 2012, (co-supervisor: Anna Marciniak-Czochra), Heidelberg University

- SUPERVISION OF POST-DOCS

- Completed projects

dr Magdalena Rosińska 01.10.2013–30.11.2014
dr Przemysław Kamiński 01.10.2013–31.03.2014
dr Leszek Bartczak 02.2014–09.2015

- On-going projects

dr Sebastian Owczarek 02.2015–01.2016

ORGANISATION OF CONFERENCES, SCHOOLS, WORKSHOPS AND MINI-SYMPOSIA

1. 12.2015 – Two minisymposia: *Around Euler Equations and Polymers* at SIAM Conference on Analysis of Partial Differential Equations, Phoenix, USA
2. 09.2015 – VII Symposium on Nonlinear Analysis, Juliusz Schauder Center for Nonlinear Studies, Toruń, Poland, <https://www.sna2015.mat.umk.pl/>
3. 04.2015 – Conference *Bio + Fluids in Warsaw*, Poland, <http://bcc.impan.pl/15Bio/>
4. 09.2014 – Minisymposium *Nonlinear PDEs with applications in materials science and biology*, DMV-PTM Joint Meeting, Poznań,
5. 07.2014 – Minisymposium *Evolving population structure and dynamics of epidemic*, The Joint Annual Meeting of the Japanese Society for Mathematical Biology and the Society for Mathematical Biology, Osaka, Japan
6. 02.2014 – Conference *Follow the Flow: analysis, numerics and applications*, Białka Tatrzańska, Poland, <http://pde.mimuw.edu.pl/>
7. 01.2014 – Workshop *Nonlinear differential equations: analysis, discretization methods and applications*, Warsaw, Poland
8. 12.2013 – Workshop *Data driven application of Bayesian approach and Monte Carlo Markov chain methods to estimation of HIV prevalence in Europe*, Warsaw, Poland
9. 08.2013 – Minisymposium *Hyperbolic Conservation Laws*, Equadiff 2013, Prague, Czech Republic,
10. 10.2013 – Workshop *Engaging Flows* Warszawa, Poland
11. 02.2013 – Conference *Environmental's PDEs*, Białka Tatrzańska, Poland, <http://pde.mimuw.edu.pl/2013/>
12. 07.2012 – Minisymposium *Hyperbolic Conservation Laws*, 6th European Congress of Mathematics, Cracow, Poland
13. 02.2012 – Conference *Beyond basic science - mathematics today*, Białka Tatrzańska, Poland, <http://beyond.mimuw.edu.pl/>
14. 09.2010 – Conference *Partial Differential Equations in Mathematical Biology*, <http://www.mimuw.edu.pl/pdemb/>
15. 13 – 18.06.2010 – Będlewo, Poland, VII Forum of Partial Differential Equations

16. 07-13.02.2009 – Korbielów, International Winter School: *Thermodynamics and Mathematical Analysis of Non-Newtonian Fluids*, <http://nnf.mimuw.edu.pl/winterschool/>

MAIN RESEARCH VISITS AND CONFERENCES (SELECTED FROM THE LAST FOUR YEARS)

1. 25-29.05.2015 University of Cambridge, Department of Applied Mathematics and Theoretical Physics
2. 18-22.05.2015 - Fields Institute for Research in Mathematical Sciences *Short Thematic Program on Delay Differential Equations*, Toronto, Canada
3. 6-9.01.2015 - Laboratoire Jacques-Louis Lions, Université Pierre et Marie Curie, Paris (collaboration with Alexander Lorz)
4. 12.2014 - Institute of Mathematics of the Czech Academy of Sciences (collaboration with Eduard Feireisl)
5. 11.2014 - University of Zürich (collaboration with Camillo De Lellis)
6. 11.2014 - IWH Symposium Simulation and Optimization of Extreme Fluids, Heidelberg
7. 09.2014 - DMV-PTM Joint meeting, Poznań, Poland
8. 04-09.05.2014 Vorticity, rotation and symmetry (III) - Regularity of fluid motion, Centre International de Rencontres Mathématiques (CIRM) in Luminy, Marseille, France
9. 06.2014 - Laboratoire Jacques-Louis Lions, Université Pierre et Marie Curie, Paris (collaboration with Boris Andreianov, Benoit Perthame)
10. 18-23.05.2014 Collective Behavior: Macroscopic versus Kinetic Description, Imperial College London
11. 03.2014 - Mathematical Institute, University of Oxford (collaboration with Endre Süli)
12. 03-07.02.2014 Université Paris Diderot-Paris 7 / Institut Henri Poincaré
13. 23-27.11.2013. Implicitly constituted materials: Modeling, analysis, and computing, Liblice, Czech Republic
14. 26-30.08. 2013 Equadiff 2013, Prague, Czech Republic
15. 09-15.06.2013 Hyperbolic Techniques for Phase Dynamics, Oberwolfach, Germany
16. 05-08.03.2013 Imperial College London (collaboration with José Carillo)
17. 16 - 21.09.2012: Model reduction in continuum thermodynamics: Modeling, analysis and computation, Banff International Research Station, Canada,
18. 02 - 07.07.2012: 6th European Congress of Mathematics, Kraków, Poland,
19. 06.-07.2011 - University Duisburg - Essen, Germany (collaboration with Petra Wittbold)
20. 23 - 27.05.2011: Vorticity, rotation and symmetry (II) - Regularity of fluid motion, Centre International de Rencontres Mathématiques (CIRM) in Luminy, Marseille, France
21. 20 - 26.03.2011: Mathematical Modeling of Biophysical Phenomena, Iguazu Falls, Brazil.