

CURRICULUM VITAE

DOC. RNDr. ARTUR SERGYEV, DSc.

BASIC DATA

PERSONAL

[REDACTED]

EMPLOYMENT

- 2005–present Associate Professor at the Mathematical Institute of Silesian University in Opava, Czech Republic
- 2000–2005 Assistant Professor at the Mathematical Institute of Silesian University in Opava, Czech Republic
- 1999–2000 Junior Research Associate at the Division of Applied Research, Institute of Mathematics of National Academy of Sciences of Ukraine, Kyiv, Ukraine (also 2001–2003 on leave of absence)

ACADEMIC HISTORY

- 2020 **DSc.**, Academy of Sciences of the Czech Republic, Prague, Czech Republic
- 2005 **Doc. (Habilitation)**, Mathematical Institute of Silesian University in Opava, Czech Republic
- 2001 **RNDr.**, Mathematical Institute of Silesian University in Opava, Czech Republic
- 2000 **Cand. Phys.-Math. Sci.** (equivalent to **Ph.D.**), Institute of Mathematics, National Academy of Sciences of Ukraine, Kyiv, Ukraine
- 1996 **Specialist** (equivalent to **M.Sc.**), summa cum laude, Department of Physics, National Taras Shevchenko University, Kyiv, Ukraine

ACADEMIC SERVICE

MENTORING

- Ph.D. theses defended under my supervision:
 - Petr Vojčák (2012)
 - Jiřina Jahnová (née Vodová) (2013)

Both are currently employed as Assistant Professors at Silesian University in Opava.

- currently supervising Ph.D. students:
 - Jakub Vašíček (since Fall 2018)
 - Pavel Holba (since Fall 2019)
- supervised the bachelor and master theses of Jakub Vašíček (2015–2018)

ADMINISTRATION

- Head of Department of Geometry and Mathematical Physics at the Mathematical Institute of Silesian University in Opava (since 2021)

TEACHING AND RELATED ACTIVITIES

Running Seminar on Differential Geometry and its Applications (since 2009)

Teaching various subjects at Silesian University in Opava since 2000 including lectures on

- *Algebraic Structures*
- *Differential Geometry I and II*
- *Geometrical Methods in Mechanics*

- *Geometrical Theory of Partial Differential Equations I and II*
- *Global Analysis*
- *Mathematical Foundations of General Relativity I*
- *Mathematical Methods for Physics and Technology I and II*
- *A Second Course in Ordinary Differential Equations*
- *A Second Tutorial in Differential Geometry I and II*
- *Solution Methods for Ordinary Differential Equations*
- *Variational Analysis I and II*

REVIEWING

- external reviewer of the habilitation thesis of Jiří Hrivnák (Czech Technical University, Prague, Czech Republic, 2019)
- external reviewer for NWO (Netherlands Organisation for Scientific Research) grant application (2018)
- external reviewer of the Ph.D. theses of
 - Elsa Maria Dos Santos Cardoso-Bihlo (University of Vienna, Austria, 2014)
 - Pierandrea Vergallo (University of Salento, Italy, 2022)
- referee for *Archivum Mathematicum*, *Czech. J. Phys.*, *Diff. Geom. Appl.*, *J. Geom. Phys.*, *J. Nonlin. Math. Phys.*, *Lett. Math. Phys.*, *J. Difference Eq. Appl.*, *J. Lie Theor.*, *J. Math. Anal. Appl.*, *J. Phys. A: Math. Theor.*, *Nonlinearity*, *Phys. Lett. A*, *Rep. Math. Phys.*, *Rev. Col. Mat.*, *Russ. Math. Surveys*, *SIGMA*, etc.
- reviewed more than 50 items for *Mathematical Reviews* and 48 items for *Zentralblatt für Mathematik*

DISTINCTIONS

- The paper *Ordering of two small parameters in the shallow water wave problem* is included into Highlights of 2013 of Journal of Physics A: Mathematical and Theoretical
- Bronze medal of Silesian University in Opava (2011)
- Prize of the Rector of Silesian University in Opava (2002)

RESEARCH TALKS GIVEN ABROAD¹

- Integrable (3+1)-dimensional systems from contact geometry (University of Sydney, Australia, 2020, online)
- Integrable (3+1)-dimensional system with an algebraic nonisospectral Lax pair (AGH University of Science and Technology, Kraków, Poland, 2019)
- Integrable partial differential systems in four independent variables: a new construction using contact geometry (Matej Bel University, Banská Bystrica, Slovakia, 2018)
- Recursion operators for multidimensional integrable PDEs (AGH University of Science and Technology, Kraków, Poland, 2018)
- New integrable systems in (3+1) dimensions and contact geometry (University of Vienna, Austria, 2017)
- Integrable partial differential systems in four independent variables and contact geometry (Wrocław University of Science and Technology, Poland, 2017)
- Dispersionless integrable systems: a new class from contact geometry (University of Wrocław, Poland, 2017)
- Dispersionless (3+1)-dimensional integrable hierarchies (AGH University of Science and Technology, Kraków, Poland, 2016)
- New integrable systems in 3+1 dimensions from contact geometry (University of Warsaw, Poland, 2015)
- Coupling constant metamorphosis as an integrability-preserving transformation for general finite-dimensional dynamical systems and ODEs (AGH University of Science and Technology, Kraków, Poland, 2012)
- A simple way of turning a Hamiltonian system into a bi-Hamiltonian one (Université de Montréal, Canada, 2004)
- On sufficient conditions of locality for hierarchies of symmetries of evolution systems (University of Paderborn, Germany, 2001)

¹Many of these talks were invited; for conference talks see separate list

ACADEMIC VISITS AND FELLOWSHIPS

A. SHORT-TERM VISITS²

- AGH University of Science and Technology (Kraków, Poland, 2012, 2014, 2016, 2018, 2019)
- Adam Mickiewicz University (Poznań, Poland, 2007, 2008, 2009, 2011, 2012, 2013, 2015, 2016, 2018)
- Matej Bel University (Banská Bystrica, Slovakia, 2018)
- University of Vienna (Vienna, Austria, 2008, 2009, 2011, 2013, 2017)
- University of Wrocław (Wrocław, Poland, 2008, 2016, 2017)
- University of Warsaw (Warsaw, Poland, 2015)
- University of Tromsø (Tromsø, Norway, 2013)
- Université de Montréal (Montréal, Canada, 2004)
- Universität Paderborn (Paderborn, Germany, 2001)
- Vrije Universiteit van Amsterdam (Amsterdam, the Netherlands, 2001)

B. FELLOWSHIPS

- The Jacob Blaustein Postdoctoral Fellow at the Jacob Blaustein Institute for Desert Research, Ben-Gurion University of the Negev (Sede Boqer, Israel, April 2003 – May 2004)
- Postdoctoral Fellow at Institut für Mathematik, Humboldt-Universität zu Berlin (Berlin, Germany, April–December 2001)

GRANT HISTORY

- INTER-EXCELLENCE project No. LTI17018 Support and development of international scientific cooperation in the field of relativistic astrophysics and preparation of X-ray space missions (Principal Investigator RNDr. Jiří Horák, Ph.D. (Academy of Sciences of the Czech Republic)), 2017–2020, Invited Expert
- Student Grant of Silesian University in Opava SGS 13/2020 Local and Nonlocal Objects Related to Integrability, 2020–2022, Project Leader
- Student Grant of Silesian University in Opava SGS 6/2017 Geometric Structures in the Theory of Differential Equations, 2017–2019, Project Leader
- Eduard Čech Institute for Algebra, Geometry and Physics, Project of Excellence in Basic Research, funded by the Grant Agency of the Czech Republic (GA ČR) under project P201/12/G028 (Principal Investigator Jiří Rosický (Masaryk University, Brno)), 2012–2018, Team Member
- Student Grant of Silesian University in Opava SGS/11/2012 Hamiltonian Operators and Related Structures (Principal Investigator J. Vodová), 2012–2014, Team Member as a student supervisor
- EU project with European Social Fund support CZ.1.07/2.3.00/20.0002 Development of research capabilities of Mathematical Institute of Silesian University in Opava, 2012–2015, Team Member
- GA ČR Grant P201/11/0356 Riemannian, pseudo-Riemannian and affine differential geometry (Principal Investigator Josef Mikeš (Palacký University, Olomouc)), 2011–2013, Team Member
- Student Grant of Silesian University in Opava SGS/18/2010 Symmetries of Partial Differential Equations and Related Structures (Principal Investigator P. Vojčák), 2010–2012, Team Member as a student supervisor
- Internal Grant of Silesian University in Opava IGS 2/2009 International Collaboration with the DIANA group (Vienna), 2009, Principal Investigator
- Internal Grant of Silesian University in Opava IGS 9/2008 Symmetries and Integrability, 2008, Principal Investigator
- Internal Grant of Silesian University in Opava IGS 10/2007 International Collaboration on Theory of Integrable Systems, 2007, Principal Investigator
- Institutional grant (výzkumný záměr) MSM4781305904 Topological and Analytic Methods in Theory of Dynamical Systems and Mathematical Physics, 2005–2011, Team Member
- Development project of the Ministry of Education, Youth and Sport of the Czech Republic (MŠMT ČR) no. 254/2004 Support of attaining the habilitation – RNDr. Artur Sergyeyev, Ph.D., 2004, Project Leader

²Many were fully or partially supported by the inviting party

- Internal Grant of Silesian University in Opava IGS 1/2004 Support for Presentation of New Results on Theory of Integrable Systems and of Timely Application for Habilitation, 2004, Principal Investigator
- GA ĆR Grant 201/04/0538 Geometry of integrable systems (Principal Investigator Michal Marvan), 2004–2006, Team Member
- Institutional grant (výzkumný záměr) MSM 192400002 Global analysis, 2000–2004, Team Member
- GA ĆR Grant 201/00/0724 Geometric analysis (Principal Investigator Demeter Krupka), 2000–2002, Team Member
- ISSEP (Soros Students Program) individual grant GSU 052172, Ukraine, 1995, Project Leader

MEMBERSHIP IN PROFESSIONAL BODIES

- member of Editorial Boards of
 - Acta Universitatis Matthiae Belii series Mathematics (since 2017)
 - Advances in Mathematical Physics (since 2018)
 - Partial Differential Equations in Applied Mathematics (since 2020)
 - Journal of Nonlinear Mathematical Physics (since 2021)
- member of Advisory Panel for *J. Phys. A: Math. Theor.* (since 2009)
- member of Organizing Committees for the international events:
 - Conference Dynamics, Geometry and Analysis: 20 years of Mathematical Institute in Opava (2019, Hradec nad Moravicí, Czech Republic)
 - Workshop on Geometry of Differential Equations and Integrability (2010, Hradec nad Moravicí, Czech Republic)
- member of Scientific Committees for the international events:
 - Workshop A Century of Noether’s Theorem and beyond (2018, Opava, Czech Republic)
 - 10th Symposium on Integrable Systems (2017, Lviv, Ukraine)
 - Workshop on Integrable Nonlinear Equations (2015, Mikulov, Czech Republic)
 - Workshop on Geometry of PDEs and Integrability (2013, Teplice nad Bečvou, Czech Republic)
- member of the Local Organizing Committee for the international conferences Symmetry in Nonlinear Mathematical Physics (Kyiv, Ukraine) in 2003, 2005, 2007
- member of the Habilitation Committees for
 - Diana Barseghyan (at University of Ostrava, Czech Republic, 2015)
 - Igor Khavkine (at Silesian University in Opava, Czech Republic, 2019)
- member of the Scientific Board of Silesian University in Opava (since 2021)
- member of the Silesian University Grant Commission for the Student Grant Competition (SGS) (since 2020)
- member of the Silesian University Grant Commission for the Internal Grant Competition (IGS) (since 2020)
- member of the Silesian University Grant Commission for the Student Grant Foundation (SGF) (since 2020)
- member of the Scientific Board of the Mathematical Institute of Silesian University in Opava (since 2006)

PUBLICATIONS

Please see separate list

CONFERENCE TALKS

Please see separate list

CITATIONS

More than 340 citations (without self-citations) in the journals and proceedings covered by Web of Science; please see separate list for details