

ANTON SAVOSTIANOV

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Research interests

Evolutionary Partial Differential Equations; Infinite-Dimensional Dynamical Systems; Attractors.

Employment

Sep 2019 – Current Researcher, Uppsala University, Sweden.
Jan 2017 – Aug 2019 Assistant Professor, Durham University, UK.
Oct 2015 – Oct 2016 Postdoctoral Researcher, University of Cergy-Pontoise, France.

Education

Jan 2012 – Sep 2015 Ph.D. The University of Surrey, UK.
Thesis: Strichartz estimates and smooth attractors of
dissipative hyperbolic equations.
Supervisor: Prof. Sergey Zelik.
Sep 2010 – Jun 2011 MSc (Cum Laude) V. N. Karazin Kharkiv National University, Ukraine.
Supervisor: Prof. Igor Chueshov.
Sep 2006 – Jun 2010 BSc (Cum Laude) V. N. Karazin Kharkiv National University, Ukraine.
Supervisor: Prof. Igor Chueshov.

Scholarships and Awards

Jul 2014 Vice-Chancellor's Award 2014 Finalist, University of Surrey, UK.
Jul 2014 First Place Student Paper Competition Award of AIMS, Madrid, Spain.
2012 – 2015 University Research Scholarship from The University of Surrey, UK.
2012 – 2015 Overseas Research Scholarship from The University of Surrey, UK.
2011 Scholarship of N. I. Akhiezer Fund, Kharkiv, Ukraine.

Grants

2018 London Mathematical Society Grant (Scheme 2), Ref. 21707.

Talks

- Sep 2019 The PDEs and Applications Seminar, Uppsala University, Sweden.
- Jul 2019 Equadiff-19, Leiden University, The Netherlands.
- Jul 2019 Conference "Infinite-dimensional dynamical systems and attractors", Lanzhou University, China.
- May 2019 Conference "Nonlinear dynamics and long-time asymptotics" in memory of V. S. Buslaev, Saint Petersburg Department of Steklov Institute, Russia.
- Feb 2019 Mathematical Finance and Stochastic Analysis Seminar, University of York, UK.
- Jan 2019 Analysis Seminar, Heriot-Watt University, UK.
- Oct 2018 Cardiff Analysis Seminar, Cardiff University, UK.
- Sep 2018 Dynamics of Dissipative PDEs Workshop, University of Surrey, UK.
- Jul 2018 IFIP TC7 Conference on System Modelling and Optimization, University of Duisburg-Essen, Germany.
- Jun 2018 Workshop "Recent advances in homogenisation theory", Durham University, UK.
- Feb 2018 Conference "Infinite-dimensional Analysis and Control Theory" dedicated to the centenary of S. V. Fomin, Lomonosov Moscow State University, Russia.
- Jul 2017 Conference "Dynamics, Bifurcations and Strange Attractors", Workshop IDDSA2, Lobachevsky State University of Nizhny Novgorod, Russia.
- May 2017 Applied Mathematics Seminar, Durham University, UK.
- Mar 2017 The 5th Bremen Winter School and Symposium "Dynamical systems and fluids", University of Bremen, Germany.
- May 2016 Séminaire d'Analyse, Laboratoire de Mathématiques et Modélisation d'Évry, France.
- May 2016 Séminaire EDP et Applications, Université de Poitiers, France.
- Jul 2015 Conference-School "Infinite-dimensional dynamics, dissipative systems, and attractors", Lobachevsky State University of Nizhny Novgorod, Russia.
- Jun 2015 Workshop: Longtime Behaviour of Nonlinear Waves, University of Bielefeld, Germany.
- Jul 2014 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain.
- Mar 2014 University of Surrey Analysis Seminar, University of Surrey, UK.
- Aug 2013 Equadiff-13, Charles University in Prague, Czech Republic.
- Dec 2010 International Young Scientists' Conference "70 years of KNU's mechanics and mathematics faculty", Taras Shevchenko National University of Kyiv, Ukraine.

Teaching

- Sep 2019 – Oct 2019 Conducted Tutorials in Basic Maths (Maths 5);
- Jan 2019 – Mar 2019 Delivered the course "Numerical Methods in PDEs";
Conducted Tutorials and Computer Practicals (Python based)
in Numerical Analysis;
Durham University, UK.
- Oct 2018 – Dec 2018 Delivered the course "Partial Differential Equations";
Conducted tutorials in Linear Algebra, Numerical Analysis;
Computer Practical Classes in Numerical Analysis (Python based);
Durham University, UK.
- Oct 2017 – Dec 2017 Delivered the course "Continuum Mechanics";
Conducted tutorials in Linear Algebra;
Durham University, UK.
- Jan 2017 – Mar 2017 Delivered the course "Numerical Methods in PDEs";
Conducted tutorials in Linear Algebra;
Durham University, UK.
- Jan 2012 – May 2014 Marking of assignments in Linear Algebra, Calculus,
Linear PDEs, Complex Analysis;
Consultations in Linear Algebra, Function Spaces, Operator Theory;
University of Surrey, UK.
- Sep 2010 – Dec 2010 Consultations on Numerical Methods;
V. N. Karazin Kharkiv National University, Ukraine.
- Sep 2009 Mathematics lessons conduction, home task marking;
Kharkiv Lyceum of Physics and Mathematics no. 27, Ukraine.

Projects Supervision

- 2018 Functional Analysis and PDEs (Masters Projects), Durham University:
Tianrui Bayles-Rea (admitted to a PhD Program at the University of Oxford);
James Bower (admitted to a PhD Program at the University of Bath);
Jeniffer Williamson (above average grade).

Publications

- [10] X. Mei, A. Savostianov, C. Sun, S. Zelik, "Infinite energy solutions for weakly damped quintic wave equations in \mathbb{R}^3 ," 2020 (submitted). arXiv:2004.11864.
- [9] A. Savostianov, S. Zelik, "Uniform attractors for measure-driven quintic wave equations," *Russian Mathematical Surveys*, vol. 75, no. 2, pp. 253–320, 2020. original (eng), original (ru), arXiv:1810.03149.
- [8] S. Cooper and A. Savostianov, "Homogenisation with error estimates of attractors for damped semi-linear anisotropic wave equations," *Advances in Nonlinear Analysis*, vol. 9, no. 1, pp. 745–787, 2019. original, arXiv:1804.09947.
- [7] A. Savostianov, "Infinite energy solutions for critical wave equation with fractional damping in unbounded domains," *Nonlinear Analysis: Theory, Methods & Applications*, vol. 136, pp. 136–167, 2016. original, arXiv:1511.04952.
- [6] A. Savostianov and S. Zelik, "Finite Dimensionality of the attractor for the hyperbolic Cahn-Hilliard-Oono equation in \mathbf{R}^3 ," vol. 39, no. 5, pp. 1254–1267, 2016. original, arXiv:1502.02156.
- [5] A. Savostianov and S. Zelik, "Global well-posedness and attractors for the hyperbolic Cahn-Hilliard-Oono equation in the whole space," *Mathematical Models and Methods in Applied Sciences*, vol. 26, no. 7, pp. 1357–1384, 2016. original, arXiv:1407.5890.
- [4] V. Kalantarov, A. Savostianov and S. Zelik, "Attractors for damped quintic wave equations in bounded domains," *Ann. Henri Poincaré*, vol. 17, no. 9, pp. 2555 - 2584, 2016. original, arXiv:1309.6272.
- [3] A. Savostianov, "Strichartz estimates and smooth attractors for a sub-quintic wave equation with fractional damping in bounded domains," *Advances in Differential Equations*, vol. 20, no. 5–6, pp. 495–530, 2015. original, arXiv:1403.7476.
- [2] A. Savostianov and S. Zelik, "Recent progress in attractors for quintic wave equations," *Mathematica Bohemica*, vol. 139, no. 4, pp. 657–665, 2014. original, arXiv:1311.3290.
- [1] A. Savostianov and S. Zelik, "Smooth attractors for the quintic wave equations with fractional damping," *Asymptotic Analysis*, vol. 87, no. 3–4, pp. 191–221, 2014. original, arXiv:1306.2294.