

Anton Savostianov

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Research Interests

Infinite dimensional dynamical systems generated by nonlinear partial differential equations.

Employment

Jan 2017 - Present **Temporary Lecturer in Applied Mathematics**, *Durham University, UK.*

Oct 2015 – Oct 2016 **Postdoctoral Researcher**, *The University of Cergy-Pontoise, France.*

Education

Jan 2012 – Sep 2015 **PhD Research in Mathematics and Statistics**, *The University of Surrey, Guildford, Surrey, UK.*

Thesis *Strichartz estimates and smooth attractors of dissipative hyperbolic equations*

Supervisor *Sergey Zelik*

July 2011 **MSc in Mathematics with Honours**, *V. N. Karazin Kharkiv National University, Kharkiv, Ukraine.*

Thesis *Asymptotic dynamics to a class of systems with non-local non-linearity*

Supervisor *Igor Chueshov*

July 2010 **BSc in Mathematics with Honours**, *V. N. Karazin Kharkiv National University, Kharkiv, Ukraine.*

Thesis *A parabolic problem with the attractor that contains a homoclinic orbit*

Supervisor *Igor Chueshov*

Scholarships and Awards

- Jul 2014 Vice-Chancellor's Award 2014 Finalist, University of Surrey, Guildford, UK.
- Description Each year Vice-Chancellor's Award recognises exceptional performances by members of staff of the University. Only 4 Postgraduate students from the whole University became finalists of Vice-Chancellor's Award in recognition of their exceptional contribution made to research.
- Jul 2014 First Place Student Paper Competition Award of AIMS, Madrid, Spain.
- 2012 - 2015 University Research Scholarship from The University of Surrey, Guildford, UK.
- 2012 - 2015 Overseas Research Scholarship from The University of Surrey, Guildford, UK.
- 2011 Scholarship of N. I. Akhiezer Fund, Kharkiv, Ukraine.

Talks

- 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, 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", Nizhny Novgorod, Russia.
- Jun 2015 Workshop: Longtime Behaviour of Nonlinear Waves, Bielefeld, Germany.
- Jul 2014 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain.
- Mar 2014 University of Surrey Analysis Seminar, Guildford, UK.
- Aug 2013 Equadiff 13, Prague, Czech Republic.
- Dec 2010 International Young Scientists' Conference "70 years of KNU's mechanics and mathematics faculty", Kiev, Ukraine.

Teaching Experience

- Oct 2017 – Delivered the course "Continuum Mechanics";
Dec 2017 Conducted tutorials in Linear Algebra.
Durham University, UK.
- Jan 2017 – Delivered the course "Numerical Methods in PDEs";
Mar 2017 Conducted tutorials in Linear Algebra.
Durham University, UK.
- Jan 2012 – Marking of assignments in Linear Algebra, Calculus, Linear PDEs, Complex
May 2014 Analysis; Consultations in Linear Algebra, Function Spaces, Operator Theory.
University of Surrey, UK.
- Sep 2010 – Consultations on Numerical Methods.
Dec 2010 V. N. Karazin Kharkiv National University, Ukraine.
Sep 2009 Mathematics lessons conduction, home task marking.
Kharkiv Lyceum of Physics and Mathematics no. 27, Ukraine.

Publications

- [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.
- [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.
- [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.
- [4] V. Kalantarov, A. Savostianov, and S. Zelik, "Attractors for damped quintic wave equations in bounded domains," *Annales Henri Poincaré*, 2016. DOI: 10.1007/s00023-016-0480-y, arXiv:1309.6272.
- [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.
- [6] A. Savostianov and S. Zelik, "Finite dimensionality of the attractor for the hyperbolic Cahn-Hilliard-Oono equation in \mathbf{R}^3 ," *Math. Meth. Appl. Sci.*, vol. 39, no. 5, pp. 1254–1267, 2016. original, arXiv:1502.02156.
- [7] A. Savostianov, "Infinite energy solutions for critical wave equation with fractional damping in unbounded domains," *Nonlinear Analysis*, vol. 136, pp. 136–167, 2016. original, arXiv:1511.04952.
- [8] S. Cooper and A. Savostianov, "Homogenisation with error estimates of attractors for damped semi-linear anisotropic wave equations," 2018. arXiv:1804.09947.