

Education

- 2014–2018 **Ph.D Mathematics**, *McMaster University*, Hamilton, ON, Canada
Supervisor: Dmitry Pelinovsky. Awarded: September 12, 2018
- 2012–2014 **M.Sc. Applied Mathematics**, *MIET*, Zelenograd, Moscow, Russia
Supervisor: Georgy Alfimov. Awarded: June 11, 2014
- 2008–2012 **B.Sc. Information and Computer Science**, *MIET*, Zelenograd, Moscow, Russia
Supervisor: Georgy Alfimov. Awarded: July 2, 2012

Postdoctoral Experience

- 2021–2024 **Visiting Assistant Professor**, *SUNY Buffalo*, Buffalo, NY, USA
- 2019–2021 **Postdoctoral Fellow**, *University of Victoria*, Victoria, BC, Canada
Supervisor: David Goluskin
- 2018–2019 **Postdoctoral Fellow**, *University of Cape Town*, Cape Town, South Africa
Supervisor: Igor Barashenkov

Publications

Journal Articles

- 2023 **A. Chernyavsky, S. Dyachenko**, *Dynamics of 2D fluid in bounded domain via conformal variables*, *Stud. Appl. Math.*, DOI: 10.1111/sapm.12663
- 2023 **A. Chernyavsky, G. Biondini**, *Whitham modulation theory for the Zakharov-Kuznetsov equation and transverse instability of its periodic traveling wave solutions*, *Stud. Appl. Math*, DOI: 10.1111/sapm.12651
- 2023* **A. Chernyavsky, J. Bramburger, G. Fantuzzi, D. Goluskin**, *Convex relaxations of integral variational problems: pointwise dual relaxation and sum-of-squares optimization*, *SIAM J. Optim.* 33 481–512
- 2023 **I.V. Barashenkov, F. Smuts, A. Chernyavsky**, *Integrability and trajectory confinement in \mathcal{PT} -symmetric waveguide arrays*, *J. Phys. A: Math. Theor.* 56, 165701
- 2020* **I.V. Barashenkov, A. Chernyavsky**, *Stable solitons in a nearly \mathcal{PT} -symmetric ferromagnet with spin-transfer torque*, *Physica D* 409, 132481
- 2018* **A. Chernyavsky, D.E. Pelinovsky**, *Krein signature for instability of \mathcal{PT} -symmetric states*, *Physica D* 371 48–59
- 2017 **G.L. Alfimov, A. Chernyavsky, I.V. Mel'nikov, N.A. Sobolev**, *Solitonic molecules in CMOS-compatible lasers with a nonlinear microring*, *Nonlinear Optics (NLO) NW4A.1*
- 2016* **A. Chernyavsky, D.E. Pelinovsky**, *Breathers in Hamiltonian \mathcal{PT} -symmetric chains of coupled pendula under a resonant periodic force*, *Symmetry* 8, 59
- 2016* **A. Chernyavsky, D.E. Pelinovsky**, *Long-time stability of breathers in Hamiltonian \mathcal{PT} -symmetric lattices*, *J. Phys. A: Math. Theor.* 49, 475201

Book Chapters

2022 **A. Chernyavsky, S. Dyachenko**, *Dynamics of Two-Dimensional Fluid in Bounded Domain via Conformal Variables*, in *Nonlinear Waves and Solitons on Contours and Closed Surfaces*, Springer Series in Synergetics

2019 **A. Chernyavsky, P.G. Kevrekidis, D.E. Pelinovsky**, *Krein Signature in Hamiltonian and \mathcal{PT} -symmetric Systems*, in *Parity-time Symmetry and Its Applications*, Springer Tracts in Modern Physics 280

In Preparation

2024 **G.L. Alfimov, A. Chernyavsky**, *Methods for Solving Nonlinear Problems*, undergraduate textbook

2023 **A. Chernyavsky, B. Prinari, T. Horikis, D. Frantzeskakis, G. Koutsokostas**, *Dark-Bright Soliton Perturbation Theory for the Manakov System*

Thesis

2018 **A. Chernyavsky**, *Hamiltonian Methods in \mathcal{PT} -symmetric Systems*, PhD Thesis

Awards and Scholarships

2020 **UVic** President's Research-Enriched Teaching Award, CAD\$5,000

2019 **UCT** Postdoctoral Travel Grant, R20,000 (\sim CAD\$2,000)

2018 **SIAM** Travel Award, US\$650

2016 **SIAM** Travel Award, US\$650

2015 **PIMS** IPSW Travel Support, CAD\$750

2015–2018 **McMaster** International Excellence Award, CAD\$5,000 per year

2014–2015 **F.R. Britton** Scholarship, CAD\$5,000 per year

2014–2018 **McMaster** Graduate Scholarship, CAD\$3,000 per year

2014–2018 **McMaster** Research Scholarship, CAD\$9,000 per year

2013 **MIET** research grant, RUB50,000 (\sim CAD\$2,000)

Events

Conferences

2024 SIAM Conference on Nonlinear Waves and Coherent Structures *Baltimore, MD*

2023 CMS Winter Meeting *Montréal, QC*

The 4th Biennial Meeting of the SIAM PNW Section *Bellingham, WA*

AMS Fall Eastern Sectional Meeting *Buffalo, NY*

AIMS Conference on Dynamical Systems,
Differential Equations and Applications *Wilmington, NC*

2022 AMS Fall Eastern Sectional Meeting *Amherst, MA*

SIAM Conference on Nonlinear Waves and Coherent Structures *Bremen, Germany*

IMACS Conference on Nonlinear Evolution Equations and Wave Phenomena *Athens, GA*

2019 The 2nd Biennial Meeting of the SIAM PNW Section *Seattle, WA*

The 3rd IMA Conference on Nonlinearity and Coherent Structures *Newcastle, UK*

2018 SIAM Conference on Nonlinear Waves and Coherent Structures *Orange, CA*

2016 CMS Winter Meeting *Niagara Falls, ON*

- SIAM Conference on Nonlinear Waves and Coherent Structures *Philadelphia, PA*
 2013 Microelectronics and informatics conference *Zelenograd, Moscow, Russia*
 Nonlinear Equations and Complex Analysis *Bannoe Lake, Bashkortostan, Russia*

Invited Talks

- 2021 MIET Applied Math seminar *Zelenograd, Moscow, Russia*
 2020 McMaster AIMS Lab seminar *Hamilton, ON*

Workshops

- 2016 Nonlinear dynamics of many body systems workshop *Buffalo, NY*
 2015 PIMS Industrial Problem Solving Workshop *Saskatoon, SK*

Summer Schools

- 2016 MSRI Summer School *Berkeley, CA*
 Ontario Summer School on High Performance Computing *Hamilton, ON*

Teaching Experience

- 2021-2024 **Instructor**, *SUNY Buffalo*, Buffalo, NY, USA
 College Calculus II, Introduction to Linear Algebra
 2019-2021 **Sessional Faculty**, *University of Victoria*, Victoria, BC, Canada
 Computer-assisted Mathematics and Physics, Calculus for Social and Biological Sciences
 2017 **Sessional Faculty**, *McMaster University*, Hamilton, ON, Canada
 Engineering Mathematics
 2014-2018 **Teaching Assistant**, *McMaster University*, Hamilton, ON, Canada

Teaching Development

- 2024 Perspectives on AI in Higher Education Conference
 2023 Perspectives on Inclusive Pedagogy Conference
 2022 Supervising student employees, Here to Career: What a Supervisor Needs to Know
 2020 Faculty Institute of Teaching 2 Spring Course (FIT completion certificate)
 Instructional Skills Workshop (ISW completion certificate)
 How to Quickly Move Your Class Online, CourseSpaces Basics, Teaching with Kaltura,
 Teaching with Crowdmark, Introduction to Brightspace, Microsoft Teams for Teaching
 Anti-racism Awareness Pathway: A courageous conversation Workshop
 2019 Faculty Institute of Teaching 1 Fall Course, Large-Class Lecturing Workshop

Service

- 2023 Organizer of two sessions at AMS Fall Eastern Sectional Meeting
 2023-present SIAM Journal on Optimization Reviewer
 2022-present Equity, Diversity and Inclusion Committee
 2022-present Undergraduate Studies Committee
 2021-present European Physics Journal Reviewer
 2021 Strategic Planning Research Retreat in Faculty of Science
 2016-2018 McMaster SIAM Student Chapter secretary
 2014 CMS Winter Meeting volunteer

Computer skills

Basic	PASCAL, ERLANG, HASKELL, SCHEME, R
Intermediate	C, C++, JULIA, PYTHON, HTML, BASH, GIT, Windows, Mac OS
Advanced	MATLAB, MAPLE, MATHEMATICA, \LaTeX , Linux, Unix

Referees

- 1 **Prof. Gino Biondini**, biondini@buffalo.edu
SUNY Buffalo, Department of Mathematics,
324 Mathematics Building, Buffalo, NY 14260 USA
Phone: +1-716-645-8810; Fax: 716-645-5039
- 2 **Prof. Barbara Prinari**, bprinari@buffalo.edu
SUNY Buffalo, Department of Mathematics,
314 Mathematics Building, Buffalo, NY 14260 USA
Phone: +1-716-645-8799; Fax: 716-645-5039
- 3 **Prof. Sergey Dyachenko**, sergeydy@buffalo.edu
SUNY Buffalo, Department of Mathematics,
312 Mathematics Building, Buffalo, NY 14260 USA
Phone: +1-716-645-8797; Fax: 716-645-5039
- 4 **Prof. David Goluskin**, goluskin@uvic.ca
University of Victoria, Department of Mathematics and Statistics,
David Turpin Building A539, Victoria, BC, Canada V8P 5C2
Phone: +1-250-721-7450; Fax: +1-250-721-8962
- 5 **Prof. Dmitry Pelinovsky**, dmpeli@math.mcmaster.ca
McMaster University, Department of Mathematics and Statistics
1280 Main Street West, Hamilton, ON, Canada L8S 4K1
Phone: +1-905-525-9140, ext. 23424; Fax: +1-905-522-0935
- 6 **Prof. John Ringland**, ringland@buffalo.edu (*Teaching*)
SUNY Buffalo, Department of Mathematics,
226 Mathematics Building, Buffalo, NY 14260 USA
Phone: +1-716-645-8781; Fax: 716-645-5039