

CURRICULUM VITAE

NAME: **Kirill Cherednichenko**

WORK ADDRESS: Department of Mathematical Sciences, University of Bath, Claverton Down, Bath, UK

E-MAIL: K.Cherednichenko@bath.ac.uk

TELEPHONE: +44 (0)1225 386891

URL: <http://people.bath.ac.uk/kc525>

Academic Employment

Currently: Professor of Applied Analysis, University of Bath; **Jul 2014 – Jan 2021:** Reader in Mathematics, University of Bath; **Oct 2006 – Jun 2014:** Lecturer, then Senior Lecturer in Mathematics, Cardiff University; **Oct 2005 – Sep 2006:** Research Associate, DAMTP, University of Cambridge; **Oct 2001 – Sep 2005:** Junior Research Fellow in Mathematics, St. John's College, University of Oxford.

Education and Qualifications

Nov 1998 – Nov 2001: PhD in Mathematics (Awarded: December 2001. Viva date: August 2001.)

May 2009: Postgraduate Certificate in University Teaching and Learning, Cardiff University

Research Funding

Current grants:

EPSRC, Responsive Mode Grants: Oct 2021 – Sep 2024 (£394K)

University of Bath, International Funding Scheme: Jan – Dec 2020 (£9.9K)

CONACyT, Mexico (Co-I): Oct 2020 – Sep 2020 (£100K)

Previous grants:

Engineering and Physical Sciences Research Council (EPSRC), Fellowship: Jul 2014 – Jun 2019 (£899K)

London Mathematical Society (LMS), Research in Pairs: Feb – Sep 2019 (£1K); Mar – Jun 2021 (£1K)

LMS Conference Grant: Jun 2018 – Jan 2019 (£5.8K)

Royal Society – Newton Mobility Grant: Feb 2017 – Jan 2019 (£12K)

EPSRC Impact Acceleration Account: Sep 2016 – Mar 2017 (£6.3K)

LMS Conference Grant: Nov 2015 (£6.8K)

University of Bath, Global Mobility Scheme: Mar 2015 – Jun 2016 (£4.9K)

LMS, Joint Research Groups in the UK: Jan – Sep 2015 (£1.5K)

Leverhulme Trust Grant RPG-167 (Co-I): Apr 2012 – Mar 2013 (£161K)

EPSRC, Responsive Mode Grants: Nov 2011 – Oct 2012 (£23.4K); Nov 2008 – Oct 2010 (£183.6K)

Cardiff University, International Collaboration Fund Award: May 2008 (£3.2K)

LMS, Conference Grants: Jul 2008 (£2.5K); Feb 2008 (£3.1K); Feb 2007 (£2.5K)

WIMCS Conference Grant, Apr 2008 (£0.9K)

LMS, Collaborative Grants: Oct 2007 (£0.6K); Mar 2006 (£0.5K)

Research Supervision

Postdocs:

J. Žubrinić (Mar – Jun 2021), R. Castaneira (Oct 2018 – Mar 2019), Y. Ershova (Feb 2016 – Jul 2018), J. Roberts (Nov 2016 – Mar 2017), M. Waurick (Oct 2015 – Sep 2017), M. Cherdantsev (Oct 2008 – Sep 2010), S. Cooper (Apr 2012 – Mar 2013), K. Kuliev (Sep 2012 – Aug 2013)

PhD students:

Y. S. Lim (Oct 2019 – Sep 2023), W. Graham (Oct 2018 – Jun 2021), A. Pim (Sep 2017 – Dec 2021), S. D'Onofrio (Sep 2016 – Mar 2020), M. Lewis (Sep 2014 – Mar 2018), J. Evans (Sep 2012 – Mar 2016)

MPhil students:

R. Hicks (Sep 2010 – Jun 2013), A. Burgmann (Sep 2008 – Nov 2009)

MMath students:

F. Maxey-Hawkins, D. Gardham (Jun 2016 – May 2017), L. Steyer (Jan – June 2014), M. Corkhill (Sep 2011 – May 2012), J. Evans (Sep 2011 – May 2012)

MSc students:

J. Allen (Feb – Aug 2022), G. Grishchenko (Feb – Sep 2020)

Undergraduate projects:

R. Braymuk (Nov 2018 – June 2019), M. Tasic (Jan 2018 – May 2020), J. Larsson (Sep 2010 – Jun 2011); D. Hughes, N. Prowse (Sep 2008 – Jun 2009)

Mentoring and Network Activities

— David Parkin Visiting Professorship: U. Smilansky, Wezmann Institute (2020–2021)

— EPSRC Postdoctoral Fellowships: M. Cherdantsev (2010–2013, Cardiff), S. Cooper (2015–2017, Bath)

— Bath-UNAM-CIMAT (“BUC”) Research Series (Apr 2015 – present)

— Weekly research seminar “Operators, Asymptotics and Functionals” (Jan 2016 – present)

— Examination of PhD theses:

M. Evans – University of Bath (2019), J. Harris – University of Bath (2018), X. Pellet – University of Bath (2017), A. Rahimabadi – Cardiff University (2014), Y. Ershova – Ukraine National Academy of Sciences, Institute of Mathematics (2014), Y. Liu – École Centrale Marseille (2013)

— Examination of habilitation thesis:

M. Waurick – Technische Universität Dresden (2016)

Visiting Research Appointment

Jul – Sep 2012: Visiting CNRS Researcher, Fresnel Institute, Aix-Marseille Université, France

Invited Research Visits

Jun 2019: Hausdorff Center for Mathematics, Bonn; Apr 2019: IIT Bombay, India; Apr 2018: University of Santiago, Chile; Mar 2018: University of Helsinki, Finland; Jan 2018, Feb 2017: University of Freiburg, Germany; May 2017: University of Zagreb; Oct 2015: TU Dresden, Germany; May 2015: University of Utah; Apr 2012, Nov 1998: Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany; Dec 2021, Aug 2018, Aug 2016, Jun 2015, Dec 2013, Aug 2007, Dec 2003: Instituto de Investigaciones en Matemáticas Aplicadas y en Sistemas

(IIMAS), UNAM, Mexico; Sep 2012, Jan 2003, Nov 2001: Departement de Mecanique et Genie Civil, Université Montpellier II, France; Feb–Mar 2019, Mar–Apr 2015, Sep–Dec 1999: Isaac Newton Institute for Mathematical Sciences, Cambridge, UK; Apr 2020, Feb 2015, Oct 2010: Basque Center for Applied Mathematics, Bilbao, Spain.

Conferences Organised

Apr 2023: British Mathematics Colloquium (University of Bath)

May 2022: Operators, Operator Families, and Asymptotics III (University of Bath)

Jan 2019: Operators, Operator Families, and Asymptotics II (University of Bath)

BUC (Bath-UNAM-CIMAT) workshop series:

— January 2019 (BUC-XVI): Recent Developments in Wave Propagation and Their Application to New Materials (CIMAT, Mérida);

— Sep 2019 (BUC-XVI): “Resonant” Media: Wave Scattering Phenomena under Strong Length-Scale Interactions, (UNAM, México City);

— Sep 2018 (BUC-XV): Function Spaces Meet Materials Science: Recent Developments in Spectral Theory and Scattering (CIMAT Guanajuato, México);

— Mar 2018 (BUC-XII): Asymptotic and Operator-Theoretic Techniques for the Analysis of Time-Dispersive Media (University of Bath);

— Nov-Dec 2017 (BUC-XI): Advances in the Mathematics of Multiple Scales (CIMAT Mérida);

— Mar-Apr 2017 (BUC-VII): Spring School on Analysis and Applications to Mathematical Physics and Materials Science (UNAM, Mexico City) and Applied Analysis of Operators, PDE, and Functionals (CIMAT Mérida)

May 2016: Operators, Operator Families, and Asymptotics I (University of Bath)

Dec 2015 (University of Bath), Jan 2014 (Cardiff University): LMS-WIMCS Analysis Day

Dec 2012, May 2012: Dissipative Spectral Theory: Operator Theory, PDEs and Numerics (Cardiff University)

Jun 2011: Metamaterials and High-Contrast Homogenisation: Analysis, Numerics and Applications (Cardiff University)

Jan 2009: South-West UK Analysis Meeting (University of Bath)

Aug 2008: Non-Classical, Boundary and Localisation Phenomena in Mathematical Homogenisation (Cardiff University)

Sep 2007: Perturbed Periodic PDE, Problems with Singular Boundaries and Their Numerical aspects (Cardiff University)

Prizes and Awards

Junior Research Fellowship, St. John’s College, University of Oxford: Sep 2001 – Sep 2005

Overseas Research Studentship (ORS), CVCP: Nov 1998 – Nov 2001

Soros Studentship in Mathematics: Mar 1997 – Oct 1998

Invited Talks at International Conferences

Euromech Colloquium on Mechanics of High-Contrast Composites, Keele University (September 2021)

Quantum Mechanics of Artificial Material Structures, Sochi Mathematics Centre, Russia (Feb 2020)

OTAMP 2020: Operator Theory, Analysis and Mathematical Physics, UNAM, México (Jan 2020)

Small Scales and Homogenisation, Cardiff University (Jun 2019)

Dynamic Phenomena in Media with Microstructure, Tel-Aviv University (Oct 2018)
 Calculus of Variations and Applications, University of Zagreb (Sep 2018)
 Applied Analysis Day, TU Dresden (Jun 2018)
 SIAM Conference of Mathematical and Computational Issues in the Geosciences (Sep 2017)
 Partial Differential Equations, Optimal Control and Numerics, Benasque, Spain (Aug 2017)
 9th St. Petersburg Conference in Spectral Theory (Jul 2017)
 International Conference on Elliptic and Parabolic Problems, Gaeta, Italy (May 2017)
 InterPore: 9th International Conference on Porous Media, TU Delft, The Netherlands (May 2017)
 Mathematical and Computational Aspects of Maxwell's Equations, EPSRC Durham Symposium (Jul 2016)
 New Trends in Nonlinear PDEs: from Theory to Applications, Cardiff University (Jun 2016)
 Computational and Analytic Problems in Spectral Theory, Cardiff University (Jun 2016)
 Spectral Theory of Novel Materials, CIRM, Marseille (Apr 2016)
 Spectral Theory and Applications, Stockholm University (Mar 2016)
 Mathematics of Novel Materials, Mittag-Leffler Institute, Sweden (Jun 2015)
 Partial Differential Equations, Optimal Control and Numerics, Benasque, Spain (Aug 2015)
 Periodic and Other Ergodic Problems, Isaac Newton Institute, Cambridge, UK (Apr 2015)
 Crimean International Mathematics Conference, Sudak, Ukraine (Sep 2013)
 ETOPIM9, Marseille, France (Sep 2012)
 Analytic and Computational Techniques in Spectral Theory and Related Topics, Gregynog, UK (Jun 2011)
 Multiscale Methods and Qualitative Properties of Differential Operators, Naples, Italy (May 2011);
 Equadiff, Loughborough University, UK (Sep 2011)
 Differential Equations and Dynamical Systems, Suzdal, Russia (Jul 2010)
 Microscopic Models of Plastic Evolution, University of Warwick, UK (Sep 2007)
 Multi-Scale Problems: Modelling, Analysis and Applications, University of Bath, UK (Sep 2005)
 Multiscale Methods in Nonlinear PDE, Isaac Newton Institute, Cambridge, UK (Apr 2001)

Invited Seminars at Mathematics Departments

Aberystwyth (2009), Bath (2008, 2010), BCAM Bilbao (2010, 2015), Birmingham (2010, 2020), Bristol (2009),
 University of Buenos Aires (2017), Cambridge (2007), Cardiff (2003, 2015, 2018), CMM, University of Chile
 (2018), TU Dresden (2015), ETH Zürich (2021), Freiburg (2017, 2018), Helsinki (2018), Imperial College London
 (2006, 2012), Keele (2019), King's College London (2011), Liverpool (2006), TU Munich (2009), Pontificia
 Universidad Católica, Santiago de Chile (2018), Saint-Étienne (2018), St. Petersburg (2018), Steklov Institute
 (2020), Surrey (2014), Sussex (2017), University College London (2010, 2012), Kings College London (Paris-
 London Analysis Seminar, 2014), University of Utah (2015), Zagreb (2018)

Invited lectures at Research Schools

QJMAM/IMA Summer School on Asymptotics of PDEs and Modelling of Waves (University of Liverpool, Jul 2021)
 Mini-courses in Mathematical Analysis (University of Padova, Jun 2021)

Academic Community Service

- Fellow of the Institute for Mathematical Innovation, University of Bath (Mar 2021 – present)
- Editorial Board Member for Differential Equations and Applications (2019 – present)
- Member of the London Mathematical Society (2008 – present)
- EPSRC College Full Member (2012 – present)

— Editorial reviewer for international mathematics and mechanics journals:

American Mathematical Society Translations, Annales de l'Institut Henri Poincaré (C) Analyse Non Linéaire, Applicable Analysis, Archive for Rational Mechanics and Analysis, European Journal of Applied Mathematics, European Journal of Mechanics A, Journal de Mathématiques Pures et Appliquées, IMA Journal of Applied Mathematics, Journal of the Mechanics and Physics of Solids, Multiscale Modelling and Simulation (SIAM), Networks and Heterogeneous Media (AIMS), Proceedings of the Royal Society A, Proceedings of the Royal Society of Edinburgh A, Quarterly Journal of Mechanics and Applied Mathematics, SIAM Journal on Applied Mathematics, SIAM Journal on Mathematical Analysis, St. Petersburg Mathematical Journal, Wave Motion

University Service

- Chair of the MSc Working Group, Department of Mathematical Sciences, University of Bath (2019 – present)
- Member of the Board of Studies, Faculty of Engineering & Design, University of Bath (2016 – present)
- Chair of Mathematics Subject Board, School of Mathematics, Cardiff University (2007 – 2009)

24 January 2022