

Publications

ORCID: [0000-0002-8127-6804](https://orcid.org/0000-0002-8127-6804) • GoogleScholar: [Peter Koltai](https://scholar.google.com/citations?user=PeterKoltai)

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- [3] G. Froyland and P. Koltai. “Detecting the birth and death of finite-time coherent sets.” 44 pp. Preprint: [arXiv: 2103.16286](https://arxiv.org/abs/2103.16286). 2021.
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Scientific service

Administrative

2021 Head of the Joint Commission *Data Science* at the FU Berlin

Editorial

2021–23 Advances in Discrete and Continuous Models

(Co-)Organizer of scientific events

09/2021 *MATH+/CECAM Workshop on Generalized Langevin Equations* (Berlin, Germany)

05/2021 Minisymposium “Coherent sets & linear response” at *SIAM Conference on Applications of Dynamical Systems – virtual*

03/2021 Minisymposium “Structural approaches in turbulence” at *CRC1114 Conference: Scaling Cascades in Complex Systems* (Berlin, Germany) – virtual

06/2020 Minisymposium “Transfer operators and geophysical flows” at *SIAM Conference on Mathematics of Planet Earth* (Garden Grove, USA) – virtual

05/2020 Minisymposium “Operator-Based Analysis of Dynamical Data” at *SIAM Conference on Mathematics of Data Science* (Cincinnati, USA) – postponed

05/2019 Minisymposium “Complex dynamics from the perspective of geometry, spectral theory, and data” at *SIAM Conference on Applications of Dynamical Systems* (Snowbird, USA)

07/2018 *CECAM Workshop on “Frontiers of coarse graining in molecular dynamics”* (Berlin, Germany)

05/2017 Minisymposium “Set oriented and transfer operator methods for turbulent flows” at *SIAM Conference on Applications of Dynamical Systems* (Snowbird, USA)

- 09/2016 *7th International Workshop on “Set Oriented Numerics”* (Berlin, Germany)
 05/2016 Minisymposium “Numerics of Chaos: Algorithms & Applications” at *The 9th Chaotic Modeling and Simulation International Conference* (London, Great Britain)
 09/2011 *2nd International Workshop on “Set Oriented Numerics”* (München, Germany)

Reviewer for the journals

- Chaos: An Interdisciplinary Journal of Nonlinear Science
- Communications in Nonlinear Science and Numerical Simulation (CNSNS)
- Computational Methods in Applied Mathematics
- Discrete and Continuous Dynamical Systems (DCDS-B)
- IEEE Transactions on Automatic Control (IEEE-TAC)
- Journal of Computational Dynamics (JCD)
- Journal of Nonlinear Science (JNLS)
- Journal of Optimization Theory and Applications (JOTA)
- Physica D: Nonlinear Phenomena
- Proceedings of the Conference on Decision and Control (CDC)
- SIAM Journal on Applied Dynamical Systems (SIADS)
- SIAM Journal on Multiscale Methods and Simulation (MMS)

Invited talks

- 07/2022 *15th Viennese Conference on Optimal Control and Dynamic Games* (Vienna, AUT)
 06/2022 *Complexity Science Hub Vienna workshop Stochastic Dynamics for Complex Systems: New Directions* (Vienna, AUT)
 05/2021 *SIAM Conference on Applications of Dynamical Systems* – virtual
 04/2021 *Bremen-Oldenburg dynamics seminar* – virtual
 12/2020 *Mathematisches Kolloquium der TU Ilmenau* (Ilmenau, Germany) – postponed
 10/2020 *DynamIC Seminars* of the Imperial College London – virtual (video)
 04/2020 *Joint meeting of the British Mathematical Colloquium (BMC) and the British Applied Mathematics Colloquium (BAMC)* (Glasgow, UK) – cancelled
 12/2019 CIRM conference on “*Thermodynamic Formalism: Dynamical Systems, Statistical Properties and their Applications*” (Marseille, France) – cancelled
 06/2019 *DinAmicI VI* workshop (Pisa, Italy)
 05/2019 *Sydney Dynamics Group Seminar* (Sydney, Australia)
 09/2018 *38th Dynamics Days Europe* (Loughborough, Great Britain)
 05/2018 *Mathematisches Kolloquium der Universität Bayreuth* (Bayreuth, Germany)
 03/2018 *89th GAMM Annual Meeting* (München, Germany)
 03/2018 *ESI workshop on “Mathematical Aspects of Physical Oceanography”* (Wien, Austria)
 09/2017 *8th International Workshop on “Set Oriented Numerics”* (Santa Barbara, USA)
 08/2017 *IMPRS Seminar at the Max Planck Institute for the Physics of Complex Systems* (Dresden, Germany)
 01/2017 *BIRS Workshop on “Transport in Unsteady Flows: from Deterministic Structures to Stochastic Models and Back Again”* (Banff, Canada)
 11/2016 *AMSI Workshop on “Advances in Ergodic Theory, Hyperbolic Dynamics & Statistical Laws”* (Canberra/Australia)
 07/2016 *11th AIMS Conference on Dynamical Systems, Differential Equations and Applications* (Orlando, USA)
 06/2016 *Seminar of the Chair of Applied Mathematics / Prof. Michael Dellnitz* (Paderborn, Germany)
 06/2016 *36th Dynamics Days Europe* (Corfu, Greece)
 04/2016 *Seminar “Computational Dynamics”* (Dresden, Germany)
 04/2016 *SIAM Conference on Uncertainty Quantification* (Lausanne, Switzerland)
 11/2015 *Arbeitsgruppenseminar “Numerik” at the Bielefeld University* (Bielefeld, Germany)

- 09/2015 *Annual Meeting of DMV* (Hamburg, Germany)
- 09/2015 *International Conference on Scientific Computation And Differential Equations (SciCADE)* (Potsdam, Germany)
- 05/2015 *SIAM Conference on Applications of Dynamical Systems* (Snowbird, USA)
- 05/2013 *SIAM Conference on Applications of Dynamical Systems* (Snowbird, USA)
- 04/2013 *BMS Intensive Course “Coarse Grained Dynamics”* (Berlin, Germany)
- 01/2013 *Oberseminar “Numerische Mathematik, Optimierung und dynamische Systeme”* (Bayreuth, Germany)
- 07/2012 *9th AIMS Conference on Dynamical Systems, Differential Equations and Applications* (Orlando, USA)
- 06/2012 *European Seminar on Computing* (Plzeň, Czech Republic)
- 06/2011 *Arbeitsgruppenseminar at the Max-Planck-Institut für Mathematik in den Naturwissenschaften* (Leipzig, Germany)
- 05/2010 *8th AIMS International Conference on Dynamical Systems, Differential Equations and Applications* (Dresden, Germany)
- 05/2009 *SIAM Conference on Applications of Dynamical Systems* (Snowbird, USA)
- 12/2008 *7th Australia-New Zealand Mathematics Convention* (Christchurch, New Zealand)
- 05/2007 *SIAM Conference on Applications of Dynamical Systems* (Snowbird, USA)

Contributed talks

- 09/2020 *Second Symposium on [Machine Learning and Dynamical Systems](#) (The Fields Institute for Research in Mathematical Sciences) – virtual ([video](#))*
- 10/2018 *Annual Meeting of the GAMM activity group “Modelling, Analysis and Simulation of Molecular Systems”* (Berlin, Germany)
- 05/2017 *SIAM Conference on Applications of Dynamical Systems* (Snowbird, USA)
- 03/2017 *CRC 1114 conference on “Scaling Cascades in Complex Systems”* (Berlin, Germany)
- 05/2016 *The 9th Chaotic Modeling and Simulation International Conference* (London, Great Britain)
- 10/2015 *6th International Workshop on “Set Oriented Numerics”* (London, Great Britain)
- 09/2015 *CONFLOW: Complex network perspectives on flow systems* (Potsdam, Germany)
- 09/2014 *5th International Workshop on “Set Oriented Numerics”* (Christchurch, New Zealand)
- 07/2014 *21st International Symposium on Mathematical Theory of Networks and Systems, MTNS 2014* (Groningen, The Netherlands)
- 03/2014 *85th Annual Meeting of the International Association of Applied Mathematics and Mechanics, GAMM2014* (Erlangen, Germany)
- 09/2013 *4th International Workshop on “Set Oriented Numerics”* (Dresden, Germany)
- 03/2013 *84th Annual Meeting of the International Association of Applied Mathematics and Mechanics, GAMM2013* (Novi Sad, Serbia)
- 10/2012 *International Workshop on “Event-Based Control and Optimization”* (München, Germany)
- 09/2012 *3rd International Workshop on “Set Oriented Numerics”* (Sydney, Australia)
- 03/2012 *83th Annual Meeting of the International Association of Applied Mathematics and Mechanics, GAMM2012* (Darmstadt, Germany)
- 09/2011 *2nd International Workshop on “Set Oriented Numerics”* (München, Germany)
- 04/2011 *82th Annual Meeting of the International Association of Applied Mathematics and Mechanics, GAMM2011* (Graz, Austria)
- 11/2010 *1st International Workshop on “Set Oriented Numerics”* (Mexico City, Mexico)
- 03/2008 *79th Annual Meeting of the International Association of Applied Mathematics and Mechanics, GAMM2008* (Bremen, Germany)

Further scientific events

- 05/2021 *Oberwolfach Mini-Workshop on “Analysis of Data-driven Optimal Control”* (Oberwolfach, Germany) – virtual

- 01/2021 *CIB-EPFL Conference on “Linear Response: Rigorous Results and Applications”* (Lausanne, Switzerland) – virtual
- 10/2017 *IPAM workshop “Surrogate Models and Coarsening Techniques”* (Los Angeles, USA)
- 07/2017 *EUROMECH Colloquium: “Turbulent Superstructures in Closed and Open Flows”* (Erfurt, Germany)
- 04/2017 *BIMoS Day* (Berlin, Germany)
- 02/2017 *ZIB Workshop “Hot Topics in Machine Learning”* (Berlin, Germany)
- 11/2016 *Workshop on “Nonlinear Stochastic Evolution Equations: Analysis and Numerics”* (Berlin, Germany)
- 05/2015 *SIAM Workshop on Network Science* (Snowbird, USA)
- 11/2014 *Oberwolfach Seminar on “Projection Based Model Reduction: Reduced Basis Methods, Proper Orthogonal Decomposition, and Low Rank Tensor Approximations ”* (Oberwolfach, Germany)
- 09/2013 *OMPC 2013: SADCO Summer School and Workshop on “Optimal and Model Predictive Control”* (Bayreuth, Germany)
- 07/2013 *IdeaLab 2013: Weeklong Program for Early Career Researchers* (Providence, USA)
- 02/2013 *Elgersburg Workshop* (Elgersburg, Germany)
- 02/2012 *ESF-JSPS Conference for Young Researchers on “Mathematics for Innovation: Large and Complex Systems”* (Tokyo, Japan)
- 01/2012 *“Recent Trends in Dynamical Systems” — An International Conference in Honor of Jürgen Scheurle* (München, Germany)
- 08/2011 *Oberwolfach Workshop on “Applied Dynamics and Geometric Mechanics”* (Oberwolfach, Germany)
- 05/2011 *Workshop on “Sparse Grids and Applications”* (Bonn, Germany)
- 07/2008 *Oberwolfach Workshop on “Applied Dynamics and Geometric Mechanics”* (Oberwolfach, Germany)
- 04/2008 *Oberwolfach Workshop on “Atomistic Models of Materials: Mathematical Challenges”* (Oberwolfach, Germany)
- 12/2007 *Workshop on “Nonlinear and Adaptive Approximation in High Dimensions”* (Bad Honnef, Germany)
- 06/2007 *PhD Course and DCAMM Summerschool “Mathematical Tools for Complex Systems in Science and Technology”* (Lyngby, Denmark)

Public lectures

- 04/2018 *23. Berliner Tag der Mathematik – Title: “Transport im Ozean: Mathematik und Müllinseln”* (Berlin, Germany)