Name:	**Christian Kuehn**
E-mail:	ckuehn@ma.tum.de
Citizenship:	German
Born:	December 7th, 1981
Address:	Technical University of Munich Faculty of Mathematics Boltzmannstr. 3 85748 Garching bei München, Germany
Website:	`www-m8.ma.tum.de/personen/kuehn`

EMPLOYMENT

2016 – now	Technical University of Munich, Germany Assistant Professor for "Multiscale and Stochastic Dynamics" (W2, tenure-track) Lichtenberg Professorship (2016-2021)
2011 – 2016	Vienna University of Technology, Austria Institute for Analysis and Scientific Computing Postdoctoral Researcher (in the research group: PDE and Dynamical Systems) 2013 - 2016: APART Fellow - Austrian Academy of Sciences 2011 - 2013: Marie-Curie International Re-Integration Grant
2013	Mathematisches Forschungsinstitut Oberwolfach (MFO), Germany Leibniz Fellow
2010 – 2011	Max Planck Institute for Physics of Complex Systems, Germany Postdoctoral Researcher (in the research group: Biological Networks)

EDUCATION

2016	Vienna University of Technology, Austria **Privatdozent (Priv.-Doz.)** "venia docendi" Habilitation in Applied Mathematics
2008 – 2010	Cornell University, United States of America **Doctor of Philosophy (PhD)** in Applied Mathematics 2010 Advisor: Professor John Guckenheimer
2006 – 2008	Cornell University, United States of America **Master of Science (MSc)** in Applied Mathematics 2008 *Average Grade* 4.0 [4.0=best, 0.0=worst]
2005 – 2006	University of Cambridge, United Kingdom **Certificate of Advanced Study (CASM)** 2006 (**Master of Advanced Studies (MASt)** in Mathematics)
2002 – 2005	Jacobs University Bremen, Germany **Bachelor of Science (BSc)** in Mathematics 2005 *Average grade* 1.1 [1.0=best, 5.0=worst]
1994 – 2001	Cato Bontjes van Beek-Gymnasium Achim, Germany **Abitur** 2001 *Average grade* 1.0 [1.0=best, 6.0=worst]

Awards & Grants (assistant professor level)

- 2017: Richard-von-Mises Prize
  Gesellschaft für Angewandte Mathematik und Mechanik
  (International Association of Applied Mathematics and Mechanics)
- 2017 - now: Complexity Science Hub Vienna, Austria
  External Faculty Fellow
- 2016: Best Paper Award for 2015 (with F. Achleitner)
  Faculty of Mathematics & Geoinformation, Vienna University of Technology
  (for F. Achleitner & C. Kuehn, Adv. Diff. Eq., Vol. 20, No. 9-10, pp. 887-936, 2015)
- 2016 - 2019: Individual Project Grant
  Austrian Science Fond (FWF)
  (**co-PI**; transferred to **PI** S. Thurner)
- 2016 - 2021: Lichtenberg Professorship
  Volkswagen Foundation
  (**PI**)

Awards & Grants (post-doctoral level)

- 2015 - 2018: Innovative Training Networks - Project CRITICS
  Call Horizon 2020 - MSCA-ITN-2014
  (*associated member*)
- 2013: Best Paper Award for 2012
  Faculty of Mathematics & Geoinformation, Vienna University of Technology
  (for C. Kuehn, SIAM Journal on Scientific Computing, 34(3), pp. A1635-A1658, 2012)
- 2013 - 2016: APART Fellowship - Austrian Academy of Sciences (ÖAW)
  Austrian Programme for Advanced Research and Technology
  (**PI**)
- 2013: Leibniz Fellowship
  Mathematisches Forschungsinstitut Oberwolfach (MFO)
  (**PI**)
- 2011 - 2015: European Commission Marie-Curie Re-integration Grant
  hosted by: P. Szmolyan, Vienna University of Technology
  (**PI**)
- 2011: DAAD travel grant to attend ICIAM 2011
  (**PI**)

Awards & Grants (pre-doctoral level)

- 2010: Travel grant for conference: "The 8^{th} AIMS conference"
- 2010: Travel grant for conference: "Emerging Topics in DS & PDE"
- 2010: Travel grant for conference: "Stochastic Models in the Neurosciences"
- 2009: SIAM Certificate for "outstanding efforts and accomplishment"
  (for my role in the SIAM Chapter at Cornell University)
- 2008 - 2010: Three travel grants by the Cornell Graduate School
- 2007: SIAM Contest DSWeb 2007 - Winner ($ 1000 prize)
- 2007: Grant for workshop: "Nonlinear Evolution Equations and Dynamical Sytems"
- 2007: Selection & Grant for "AARMS Summer School 2007"
- 2006: JSS Scholarship & Travel Grant to attend the 16^{th} Jyväskylä Summer School
- 2005 - 2006: Partial Bursary - Cambridge European Trust
- 2005: Selection & Grant for "AARMS Summer School 2005"

- 2004, 2005: President's List Jacobs University Bremen
  (awarded for a grade point average of 1.5 or better [1.0=best,5.0=worst], my GPA was 1.1)
- 2002 - 2005: Merit-based scholarship - Jacobs University Bremen

Organization & Service

- 2018: Conference organizer (with N. Berglund, A. Debussche, F. Delarue)
  Stochastic Partial Differential Equations (approx. 30 talks)
  at Centre International de Rencontres Mathématiques (Marseille, France)
- 2017 - now: Entrance Committee Member, Mathematics in Science and Engineering at TUM
- 2017: Organization (jointly with D. Blömker) of a mini-symposium
  Title: *Stochastic Dynamics* (4 talks)
  at the SIAM Conference on Applications of Dynamical Systems (Snowbird, US)
- 2016 - now: Steering Board Member, TUM Elitestudienprogramm TopMath
- 2015: Conference organizer (jointly with F. Hubalek)
  Austrian Stochastics Days (18 talks)
  at Vienna University of Technology (Vienna, Austria)
- 2015: Organization (jointly with J. Rademacher) of a mini-symposium
  Title: *Dynamics of Patterns* (8 talks)
  at the DMV Annual Meeting (Hamburg, Germany)
- 2015: Organization (jointly with D. Avitabile and H. Uecker) of a mini-symposium
  Title: *Frontiers in Numerical Continuation Methods* (8 talks)
  at the SciCADE Conference (Potsdam, Germany)
- 2015: Organization (jointly with M. Wolfrum) of a mini-symposium
  Title: *Coupled Oscillators and their Mean-Field Dynamics* (8 talks)
  at the Equadiff Conference (Lyon, France)
- 2014: Organization of a mini-workshop
  Title: *Fluids, Dynamics and Differential Equations* (2 talks)
  at Vienna University of Technology (Vienna, Austria)
- 2014: Organization (jointly with B. Sandstede) of a mini-symposium
  Title: *Stochastic Partial Differential Equations and Patterns* (4 talks)
  at the SIAM Conference on Nonlinear Waves and Coherent Structures (Cambridge, UK)
- 2013: Organization of a mini-symposium
  Title: *Numerical Methods for Stochastic Dynamical Systems* (4 talks)
  at the SIAM Conference on Applications of Dynamical Systems (Snowbird, US)
- 2011: Organization (jointly with S. Hallerberg & H. Kantz) of a mini-symposium
  Title: *Dynamics of Critical Transitions and Extreme Events* (4 talks)
  at the Dynamics Days Europe (Oldenburg, Germany)
- 2011: Organization (jointly with J. Sieber) of a mini-symposium
  Title: *Prediction of Noisy Slow-Fast Critical Transitions* (8 talks)
  at the SIAM Conference on Applications of Dynamical Systems (Snowbird, US)
- 2009: Established SIAM Student Chapter at Cornell University
- 2008-2010: Initiated and organized the "Graduate Student Applied Dynamical Systems Seminar" at Cornell University

Reviewing

- Reviewer (journals):
  - Acta Applicandae Mathematicae
  - American Naturalist

- Applied Mathematical Modelling
- Applied Mathematics and Computation
- Bioinformatics and Biology Insights
- Bulletin of Mathematical Biology
- Chaos: An Interdisciplinary Journal of Nonlinear Science
- Climate Dynamics
- Communications in Nonlinear Science and Numerical Simulation
- Computational Science & Discovery
- Computer Methods and Programs in Biomedicine
- Earth System Dynamics
- European Biophysics Journal
- European Physical Journal B
- Fluctuation and Noise Letters
- Frontiers in the Life Sciences
- IEEE Transactions on Circuits and Systems
- IEEE Transactions on Network Science and Engineering
- International Journal of Bifurcation and Chaos
- International Journal of Neural Systems
- International Journal of Nonlinear Sciences and Numerical Simulation
- Journal of Applied Analysis
- Journal of Computational and Applied Mathematics
- Journal of Computational Dynamics
- Journal of Mathematical Analysis and Applications
- Journal of Mathematical Biology
- Journal of Mathematical Neuroscience
- Journal of Nonlinear Science
- Journal of Physics A: Mathematical and Theoretical
- Journal of Physics: Conference Series
- Journal of the Royal Society Interface
- Kinetic & Related Models
- Mathematical Biosciences and Engineering
- Mathematical Methods in the Applied Sciences
- Mathematical Modelling and Analysis
- Mathematical Modelling of Natural Phenomena
- Mathematics and Computers in Simulation
- Mathematics and Mechanics of Solids
- New Journal of Physics
- Nonlinear Analysis A: Theory, Methods & Applications
- Nonlinear Differential Equations and Applications NoDEA
- Nonlinearity
- Physica A: Statistical Mechanics and its Applications
- Physica D: Nonlinear Phenomena
- Physical Review E
- Physical Review X
- Physics Letters A
- Probability, Uncertainty and Quantitative Risk
- Proceedings of the National Academy of Sciences, India A

    - Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences
    - Scientific Reports
    - SIAM Journal on Applied Dynamical Systems
    - SIAM Journal on Applied Mathematics
    - SIAM Journal on Mathematical Analysis
    - SIAM Multiscale Modeling and Simulation
    - SIAM Review
    - Theoretical Ecology
    - Theoretical Population Biology
    - Zeitschrift für angewandte Mathematik und Physik
- Reviewer (books):
    - Springer Mathematics - Applied Mathematical Sciences
    - Springer Mathematics - Monographs
    - Springer Physics - Edited Volumes
- Reviewer (funding agencies & institutes):
    - Banff International Research Station, Canada
    - Dynasty Foundation, Russia
    - German Academic Exchange Service (DAAD), Germany
    - National Science Centre, Poland

MENTORING

- Postdoctoral Researcher: Manuel Gnann
- Postdoctoral Researcher: Leonhard Horstmeyer (jointly with S. Thurner)
- Postdoctoral Researcher: Nada Sissouno (jointly with F. Krahmer)
- Postdoctoral Researcher: Sebastian Throm
- Doctoral Student: Annalisa Iuorio (jointly with P. Szmolyan)
- Doctoral Student: Anne Pein
- Doctoral Student: Lara Trussardi (jointly with A. Jüngel)
- Doctoral Student: Andreas Widder (jointly with V. Veliov)
- Master Student: Michael Klausz (jointly with K. Glau)
- Master Student: Tobias Jawecki
- Master Student: Francesco Romano
- Master Student: Elisabeth Schiessler (jointly with A. Jüngel)
- Master Student: Frieder Simon (jointly with P. Szmolyan)
- Master Student: Dominik Worf
- TopMath Student: Luca Arcidiacono

Teaching & Work Experience

2017	Lecturer: "Dynamical Systems" - TU Munich
2017	Oberseminar: "Dynamics" - TU Munich
2017	(Pro-)Seminar/Workshop: "Introduction to Network Dynamics" - TU Munich
2017	"Schülertag" - Technical University Munich
2017	Mathematische Grundlagen - Technical University Munich
2016 – 2017	Lecturer: "Interactions between Dynamics and PDE" - TU Munich
2016	Invited Lecturer: School on Multistability and Tipping (Dresden, Germany)
2016	Lecturer: "Dynamical Systems and Partial Differential Equations" - TU Munich
2016	Talk at Doctoral School Winter Workshop - Reichenau an der Rax
2015	Seminar (jointly with M. Melenk): "Computational Stochastic PDE" - TU Vienna
2015	Invited Lecturer: MURPHYS-HSFS Spring School (Levico Terme, Italy)
2015	Invited Lecturer: School on Dynamics of Multilevel Systems (MPI-PKS, Dresden)
2014 – 2015	Lecturer: "Dynamical Systems and Partial Differential Equations" - TU Vienna
2007 – 2010	Graduate Research Assistant - Cornell University
2007	Teaching Assistant Trainer - Cornell University
2006 – 2007	Teaching Assistant - Cornell University Math191 Calculus for Engineers Math424 Fourier Series and Wavelets Math428 Partial Differential Equations
2005	Student Assistant - Jacobs University Bremen
2004 – 2005	Teaching Assistant - Jacobs University Bremen 2^{nd}-year undergraduate course: Numerical Methods
2004	Internship - ONVIDA GmbH (Duisburg, Germany)
2003	Internship - EADS Space Transportation (Bremen, Germany)

Plenary Talks

2017	GAMM Annual Meeting (Weimar, Germany) *"Multiscale Dynamics near Instability"*

Invited Talks (* = upcoming)

2017	* DMV-ÖMG Annual Meeting (Salzburg, Austria)
2017	* SciCADE (Bath, UK)
2017	* The Future of Singular Perturbations Workshop (Leiden, Netherlands)
2017	* Probability Seminar, TU Munich (Munich, Germany)
2017	* Equadiff (Bratislava, Slovakia)
2017	* 9th European Nonlinear Dynamics Conference (Budapest, Hungary)

2017 * SIAM Conference on Applications of Dynamical Systems (Snowbird, USA)
2017 * Rough Paths and SPDE Seminar, TU Berlin (Berlin, Germany)
2017 * Langenbach Seminar, WIAS Berlin (Berlin, Germany)
2017 * Fractional Differential Equations Mini-Workshop (Munich, Germany)
2017 GAMM Annual Meeting, UQ Section (Weimar, Germany)
2017 Antrittsvorlesung / Hurwitz-Seminar, TU Munich (Munich, Germany)
2016 SFB/TR 109, Annual Meeting (Berlin, Germany)
2016 Workshop on Multistability and Tipping, MPI-PKS (Dresden, Germany)
2016 Conference on Complex Systems (Amsterdam, Netherlands)
2016 Critical Transitions in Complex Systems Workshop (Kulhuse, Denmark)
2016 7th International Workshop on Set-Oriented Numerics (Berlin, Germany)
2016 ESI: Entropy methods, dissipative systems, and applications (Vienna, Austria)
2016 Mathematics Colloquium, University of Oldenburg (Oldenburg, Germany)
2016 ICBM Group Seminar, University of Oldenburg (Oldenburg, Germany)
2016 Haerendel Birthday Symposium (Bremen, Germany)
2016 Jacobs University Mathematics Colloquium (Bremen, Germany)
2015 Real Algebraic Geometry Seminar, University of Constance (Constance, Germany)
2015 Minisymposium on Multiscale and Stochastic Dynamics (Munich, Germany)
2015 MBI Workshop: Uncertainty, Sensitivity and Predictability (Columbus, USA)
2015 DMV Annual Meeting, Moment Problem Minisymposium (Hamburg, Germany)
2015 SciCADE, Molecular Dynamics Minisymposium (Potsdam, Germany)
2015 Dynamical Systems Seminar, Imperial College (London, UK)
2015 Applied Mathematics Colloquium, University of Nottingham (Nottingham, UK)
2015 Workshop on Dynamics of Multilevel Systems, MPI-PKS (Dresden, Germany)
2015 SIAM Conference on Applications of Dynamical Systems (Snowbird, USA)
2015 Joint Analysis Seminar Augsburg-München (Augsburg, Germany)
2015 GAMM-Workshop: Dynamik und Regelungstheorie (Hamburg, Germany)
2014 7th Workshop on Random Dynamical Systems (Bielefeld, Germany)
2014 Seminar Talk, TU Vienna (Vienna, Austria)
2014 Mathematics Colloquium, Jacobs University (Bremen, Germany)
2014 Workshop on Rhythms in Complex Networks at NBI (Copenhagen, Denmark)
2014 Control of Self-Organizing Nonlinear Systems (Warnemünde, Germany)
2014 SIAM Nonlinear Waves and Coherent Structures (Cambridge, UK)

2014	1st Spanish-Italian Mathematics Societies Meeting (Bilbao, Spain)
2014	8th European Nonlinear Dynamics Conference (Vienna, Austria)
2014	SFB/TR Discretization in Geometry and Dynamics - Seminar (Munich, Germany)
2014	Oberseminar Differentialgleichungen (Augsburg, Germany)
2014	IST Austria - Seminar (Klosterneuburg, Austria)
2014	MURPHYS-HSFS at WIAS (Berlin, Germany)
2014	ÖAW Mathematik-Informatik Workshop (Vienna, Austria)
2014	Max Planck Institute Symposium (Munich, Germany)
2014	Workshop on Infinite-Dimensional Stochastic Systems (Wittenberg, Germany)
2013	FAM Seminar at TU Vienna (Vienna, Austria)
2013	Workshop: Dynamic Models of Economic-Population Systems (Vienna, Austria)
2013	6th Workshop on Random Dynamical Systems (Bielefeld, Germany)
2013	DK Seminar - Dissipation and Dispersion in PDEs (Vienna, Austria)
2013	ICMS Workshop on Tipping Point Theory (Edinburgh, UK)
2013	Summer School: Numerical Methods for SDEs (Vienna, Austria)
2013	Max Planck Institute DS, Advances Seminar (Göttingen, Germany)
2013	Workshop on Fast-Slow Systems at CRM (Barcelona, Spain)
2013	SIAM Conference on Applications of Dynamical Systems (Snowbird, USA)
2013	University of Warwick Complexity Forum (Coventry, UK)
2013	University of Oldenburg ICBM Colloquium (Oldenburg, Germany)
2012	Patterns, Nonlinear Dynamics and Applications, PANDA (Bath, UK)
2012	University of Exeter, Dynamics Seminar (Exeter, UK)
2012	Workshop on Random Models in Neuroscience (Paris, France)
2012	Université d'Orléans, MAPMO Seminar (Orléans, France)
2012	Vienna University of Technology, Institute-Colloquium (Vienna, Austria)
2012	Tipping Points Seminar - Northwestern University (Online Meeting)
2012	Workshop on Critical Transitions in Complex Systems (London, UK)
2012	7th MathMod Conference (Vienna, Austria)
2011	Int. Workshop on Hysteresis and Slow-Fast Systems (Wittenberg, Germany)
2011	Max Planck Institute MIS, Dynamical Systems Seminar (Leipzig, Germany)
2011	Equadiff 2011, Singular Pertubations Minisymposium (Loughborough, UK)
2011	7th Int. Congress on Industrial and Applied Math. (Vancouver, Canada)
2011	Computational Methods in Dynamics (Trieste, Italy)

2011 Workshop on Generalized Modelling [CfD] (Dresden, Germany)
2011 Max Planck Institute - PKS Biophysics Seminar (Dresden, Germany)
2011 TU Chemnitz Nonlinear Dynamics Seminar (Chemnitz, Germany)
2010 Max Planck Institute - MIS Networks Meeting (Leipzig, Germany)
2010 Max Planck Institute - PKS Time Series Seminar (Dresden, Germany)
2010 4th Workshop on Random Dynamical Systems (Bielefeld, Germany)
2010 Max Planck Institute - PKS Networks Seminar (Dresden, Germany)
2010 University of Bielefeld, Numerics Seminar (Bielefeld, Germany)
2010 SIAM Emerging Topics in Dynamical Systems & PDEs (Barcelona, Spain)
2010 8th AIMS Conference (Dresden, Germany)
2010 Boston University, Dynamics Seminar (Boston, USA)
2010 Max Planck Institute - MIS (Leipzig, Germany)
2010 University of Bristol, BCANM Seminar (Bristol, UK)
2010 TU Vienna, Analysis and Scientific Computing Seminar (Vienna, Austria)
2010 FU Berlin, Nonlinear Dynamics Seminar (Berlin, Germany)
2009 Max-Planck Institute for Physics of Complex Systems (Dresden, Germany)
2009 Jacobs University, Geometry and Dynamics Seminar (Bremen, Germany)

Contributed Talks & Poster Presentations

2016 Workshop on Numerics of SPDEs (Linz, Austria)
2015 DMV Annual Meeting (Hamburg, Germany)
2015 SciCADE (Potsdam, Germany)
2015 Equadiff (Lyon, France)
2014 3rd Austrian Stochastics Days (Leoben, Austria)
2014 SIAM Nonlinear Waves and Coherent Structures (Cambridge, UK)
2014 10th Austrian Numerical Analysis Days (Vienna, Austria)
2014 GAMM Annual Meeting (Erlangen, Germany)
2014 German Probability and Statistics Days (Ulm, Germany)
2012 TU Vienna - Graduate PDE Seminar, (Vienna, Austria)
2012 1st Austrian Stochastics Days, (Linz, Austria)
2012 Mathematical Physics of Complex Networks (Dresden, Germany)
2011 Dynamics Days Europe 2011 (Oldenburg, Germany)
2011 SIAM Conference on Applications of Dynamical Systems (Snowbird, USA)
2011 75th DPG Annual Meeting, (Dresden, Germany)

2010	Extremes 2010 Workshop, (Potsdam, Germany)
2010	Cornell University, Graduate Applied Dynamics Seminar (Ithaca, USA)
2009	Cornell University, Graduate Applied Dynamics Seminar (Ithaca, USA)
2009	Dynamics Days Europe (Göttingen, Germany)
2009	SIAM Conference on Applications of Dynamical Systems (Snowbird, USA) [Poster]
2009	Cornell University, Graduate Applied Dynamics Seminar (Ithaca, USA)
2009	Cornell University, Dynamical Systems Seminar (Ithaca, USA)
2008	Cornell University, Graduate Applied Dynamics Seminar (Ithaca, USA)
2008	10th Experimental Chaos Conference (Catania, Italy) [Poster]
2008	Cornell University, Dynamical Systems Seminar (Ithaca, USA)

Summer Schools / Special Workshops

- 2013: Selected Participant - IdeaLab for Early Career Researchers
  Institute for Computational and Experimental Research in Mathematics (ICERM, USA)
- 2007: Selected Participant - AARMS Summer School, (Dalhousie University, Canada)
  Took two graduate-level courses
- 2007: Selected Participant - NEEDS School School/Workshop (Bellaterra, Spain)
  Nonlinear Evolution Equations and Dynamical Systems
- 2006: Selected Participant - Jyväskylä Summer School (University of Jyväskylä, Finland)
  Took two graduate-level courses
- 2005: Selected Participant - AARMS Summer School, (Dalhousie University, Canada)
  Took two graduate-level courses

Memberships

- Deutsche Mathematiker-Vereinigung (DMV)
- European Mathematical Society (EMS)
- Gesellschaft für Angewandte Mathematik und Mechanik (GAMM)
- Society for Industrial and Applied Mathematics (SIAM)

Language Skills

English – fluent, French – working knowledge, German – mother tongue

Computer Skills

- *Programming*: Python, C++, Fortran77, C, Pascal
- *Operating Systems*: MS Windows, Linux, Sun Solaris
- *Mark-Up Languages*: LaTeX, html
- *Mathematical Software Packages*: Numpy/Scipy/Fenics, MatLab/Octave, Mathematica, Maple
- *Specialized Mathematical Software*: AUTO, MatCont, ESATAN, MCLite, PLTMG, pde2path
- *Other Software*: Dreamweaver, OpenOffice, MS Office, Fireworks, kompozer

BOOKS:

B2 *"PDE Dynamics: An Introduction"*
C. Kuehn, in preparation
see lecture notes on my teaching page online

B1 *"Multiple Time Scale Dynamics"*
C. Kuehn, 814 pages, Springer, 2015
in the series: Applied Mathematical Sciences

JOURNAL PUBLICATIONS (REFEREED):

[(*) denotes a publication with alphabetical author listing]

J38 *"Uncertainty transformation via Hopf bifurcation in fast-slow systems"*
C. Kuehn
Proceedings of the Royal Society A, accepted / to appear

J37 *"Continuation of probability density functions using a generalized Lyapunov approach"*
S. Baars, J.P. Viebahn, T.E. Mulder, **C. Kuehn**, F.W. Wubs and H.A. Dijkstra
Journal of Computational Physics, Vol. 336, No. 1, pp. 627643, 2017

J36 *"A meeting point of entropy and bifurcations in cross-diffusion herding"*
(*) A. Jüngel, **C. Kuehn** and L. Trussardi
European Journal of Applied Mathematics, Vol. 28, No. 2, pp. 317-356, 2017

J35 *"A dynamical systems' approach for the contact-line singularity in thin-film flows"*
(*) F.B. Belgacem, M. Gnann and **C. Kuehn**
Nonlinear Analysis A: Theory, Methods & Applications, Vol. 144, pp.204-235, 2016

J34 *"Heterogeneous population dynamics and scaling laws near epidemic outbreaks"*
A. Widder and **C. Kuehn**
Mathematical Biosciences & Engineering, Vol. 13, No. 5, pp.1093-1118, 2016

J33 *"FitzHugh-Nagumo SPDEs in three space dimensions driven by space-time white noise"*
(*) N. Berglund and **C. Kuehn**
Electronic Journal of Probability, Vol. 21, No. 18, pp. 1-48, 2016

J32 *"A remark on geometric desingularization of a non-hyperbolic point using hyperbolic space"*
C. Kuehn
Journal of Physics: Conference Series, Vol. 727, 012008, 2016

J31 *"Numerical continuation and SPDE Stability for the 2D cubic-quintic Allen-Cahn equation"*
C. Kuehn
SIAM/ASA Journal on Uncertainty Quantification, Vol. 3, No. 1, pp. 762-789, 2015

J30 *"Predictability of Critical Transitions"*
X. Zhang, S. Hallerberg and **C. Kuehn**
Physical Review E, Vol. 92, 052905, 2015

J29 *"Traveling waves for bistable evolution equations with nonlocal-diffusion"*
(*) F. Achleitner and **C. Kuehn**
Advances in Differential Equations, Vol. 20, No. 9-10, pp. 887-936, 2015

J28 *"Efficient gluing of numerical continuation and a multiple solution method for elliptic PDEs"*
C. Kuehn
Applied Mathematics and Computation, Vol. 266, pp. 656-674, 2015

J27 *"Multiscale geometry of the Olsen model and non-classical relaxation oscillations"*
(*) **C. Kuehn** and P. Szmolyan
Journal of Nonlinear Science, Vol. 25, No. 3, pp. 583-629, 2015

J26 *"Early warning signs for saddle-escape transitions in complex networks"*
C. Kuehn, G. Zschaler and T. Gross
Scientific Reports, Vol. 5, 13190, 2015

J25 *"From random Poincaré maps to stochastic mixed-mode-oscillation patterns"*
(*) N. Berglund, B. Gentz and **C. Kuehn**
Journal of Dynamics and Differential Equations, Vol. 27, No. 1, pp. 83-136, 2015

J24 *"Critical slowing down governs the transition to neuron spiking"*
C. Meisel, A. Klaus, **C. Kuehn** and D. Plenz
PLoS Computational Biology, Vol. 11, No. 2, e1004097, 2015

J23 *"Analysis and numerics of travelling waves for asymmetric fractional reaction-diffusion equations"*
(*) F. Achleitner and **C. Kuehn**
Communications in Applied and Industrial Mathematics, Vol. 6, No. 2, e-532, pp. 1-25, 2015

J22 *"On bounded positive stationary solutions for a nonlocal Fisher-KPP Equation"*
(*) F. Achleitner and **C. Kuehn**
Nonlinear Analysis A: Theory, Methods & Applications, Vol. 112, pp. 15-29, 2015

J21 *"Warning signs for pattern-formation in SPDEs"*
K. Gowda^{+} and **C. Kuehn**$^{+}$ [$^{+}$equal contribution]
Communications in Nonlinear Science & Numerical Simulation, Vol. 22, pp. 55-69, 2015

J20 *"Normal hyperbolicity and unbounded critical manifolds"*
C. Kuehn
Nonlinearity, Vol. 27, No. 6, pp. 1351-1366, 2014

J19 *"Large deviations for nonlocal stochastic neural fields"*
(*) **C. Kuehn** and M. Riedler
Journal of Mathematical Neuroscience, Vol. 4, No. 1, pp. 1-33, 2014

J18 *"Critical transitions in social network activity"*
C. Kuehn^{+}, E. Martens^{+} and D. Romero [$^{+}$equal contribution]
Journal of Complex Networks, Vol. 2, No. 2, pp. 141-152, 2014

J17 *"A mathematical framework for critical transitions: normal forms, variance and applications"*
C. Kuehn
Journal of Nonlinear Science, Vol. 23, No. 3, pp. 457-510, 2013

J16 *"Nonlocal generalized models of predator-prey systems"*
C. Kuehn and T. Gross
Discrete and Continuous Dynamical Systems B, Vol. 18, No. 3, pp. 693-720, 2013

J15 *"Warning signs for wave speed transitions of noisy Fisher-KPP invasion fronts"*
C. Kuehn
Theoretical Ecology, Vol. 6, No. 3, pp. 295-308, 2013

J14 *"Dynamical analysis of evolution equations in generalized models"*
C. Kuehn, S. Siegmund and T. Gross
IMA Journal of Applied Mathematics, Vol. 78, No. 5, pp. 1051-1077, 2013

J13 *"Deterministic continuation of stochastic metastable equilibria via Lyapunov equations and ellipsoids"*
C. Kuehn
SIAM Journal on Scientific Computing, 34(3), pp. A1635-A1658, 2012

J12 *"Time-scale and noise optimality in self-organized critical adaptive networks"*
C. Kuehn
Physical Review E, Vol. 85, No. 2, 026103, 2012

J11 *"Mixed mode oscillations with multiple time scales"*
(*) M. Desroches, J. Guckenheimer, B. Krauskopf, **C. Kuehn**, H. Osinga and M. Wechselberger
SIAM Review, Vol. 54, No. 2, pp. 211-288, 2012

J10 *"Hunting French ducks in a noisy environment"*
(*) N. Berglund, B. Gentz and **C. Kuehn**
Journal of Differential Equations, Vol. 252, No. 9, pp. 4786-4841, 2012

J9 *"Scaling effects and spatio-temporal multilevel dynamics in epileptic seizures"*
C. Meisel^{+} and **C. Kuehn**$^{+}$ [$^{+}$equal contribution]
PLoS ONE, Vol. 7, No. 2, e30371, 2012

J8 *"On decomposing mixed-mode oscillations and their return maps"*
C. Kuehn
Chaos: An Interdisciplinary Journal of Nonlinear Science, Vol. 21, No. 3, 033107, 2011

J7 *"A mathematical framework for critical transitions: bifurcations, fast-slow systems and stochastic dynamics"*
C. Kuehn
Physica D: Nonlinear Phenomena, Vol. 240, No. 12, 1020-1035, 2011

J6 *"Connecting fast-slow systems and Conley index theory via transversality"*
C. Kuehn
Electronic Journal of Differential Equations, Vol. 2010, No. 106, pp. 1-20, 2010

J5 *"From first Lyapunov coefficients to maximal canards"*
C. Kuehn
International Journal of Bifurcation and Chaos, Vol. 20, No. 5, pp. 1467-1475, 2010

J4 *"Homoclinic orbits of the FitzHugh-Nagumo equation: bifurcations in the full system"*
(*) J. Guckenheimer and **C. Kuehn**
SIAM Journal on Applied Dynamical Systems, Vol. 9, No. 1, pp. 138-153, 2010

J3 *"Computing slow manifolds of saddle-type"*
(*) J. Guckenheimer and **C. Kuehn**
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