

Curriculum Vitae

Name	Univ.-Prof. Dipl. Ing. Dr. techn. Klemens Fellner
Date/place of birth	11.Aug.1973, Bad Ischl, Austria
Citizenship/status	Austrian, married to Tamara Friebe: www.tamarafriebe.com
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Education

Habilitation – Faculty of Mathematics – 03/2010, University of Vienna

Dr. techn. – Applied Mathematics with highest distinction – 11/2002, TU Vienna
Thesis *On two models for charged particle systems: The cometary flow equation and the Burgers-Poisson system* Wissenschaftskolleg W008, FWF,
advisor Prof. Dr. Christian Schmeiser, coadvisor Prof. Dr. Peter Markowich

Dipl. Ing. – Technical Mathematics with highest distinction – 03/1998, TU Vienna
Thesis *Transmission-line simulation of my bassoon*

Prediploma – Technical Physics with highest distinction – 10/1997, TU Vienna

Bassoon masterclass Prof. Werba 1992 - 1998, Vienna Conservatory

Current Position

Professor of applied PDE-Analysis since 06/2011, University of Graz

Former Positions

Senior Research Associate DAMTP – 10/2007 - 05/2011, University of Cambridge

Universitätsassistent, Faculty of Maths – 07/2005 - 05/2011, University of Vienna
How do cells move? Mathematical modelling of cytoskeletal dynamics and cell migration WWTF, 07/2005-01/2007, Wolfgang Pauli Institut

Wittgenstein Award 2000 Peter A. Markowich – 07/2004 - 06/2005, Uni. Vienna

Nonlinear Waves in Kinetic and Macroscopic Models FWF – 07/2003 - 06/2004,
TU-Vienna

Differential Equation Models in Science and Engineering Wissenschaftskolleg FWF
– 01/2002 - 12/2002, TU-Vienna

Fokker-Planck and Mean-Field Equations FWF – 03/2001 - 12/2001, Uni. Vienna

Universitätsassistent (replacement) – 03/1999 - 09/1999, Kepler University Linz

Expansion Methods for the Semiconductor Boltzmann Equation – 04/1998 - 02/1999,
TU-Vienna

Teaching

Lectures *ODEs, PDEs, Reaction-Diffusion Equations, Pattern, Cluster and Collective Aggregation, Mathematical Modelling, ...* since 2011, University of Graz
Exercise classes in *Analysis 1, Analysis 2, PDEs, Applied Mathematics* since WS 2011/12, University of Graz
Seminars in *Applied Mathematics, Mathematics for Teachers in Training* since WS 2011/12, University of Graz
Lecture *Reaction-Diffusion Equations* (MT 2009, 2010), University of Cambridge
Lecture *Selected Topics PDE: Reaction-Diffusion Equations* (SS 2007), Uni. Vienna
Introductory Seminars *Analysis 1/2 for Physics* (WS 2006, SS 2007), *ODE 1* (SS 2006), *ODE 2* (WS 2005/2006), *Applied Analysis* (SS 2005) – Uni. Vienna
Applied Mathematics (SS 1999) – Johannes Kepler University Linz
Tutor *Numeric for Computer-engineers* (WS 2001) – TU-Vienna
Mathematical Methods in Theoretical Physics, (WS 1996/97/98) - TU-Vienna

Supervision

PhD supervisor of Michael Kniely, PhD (2015–), University of Graz
PhD supervisor of Stefan Rosenberger, PhD (2013–2014), University of Graz, CERN
PhD supervisor of Tang Quoc Bao, PhD (2012–2015), University of Graz
PhD co-supervisor of Andreas Rainer, PhD (2011–2014), University of Graz
Master supervisor of Michael Kurzemann, LAK Masters (2013), University of Graz
Master supervisor of Stefan Rosenberger, Masters (2013), University of Graz
PhD supervisor of Daniel Brinkman, PhD (2013), DAMTP, University of Cambridge
partial supervision of Alexander Lorz, PhD, DAMTP, University of Cambridge
partial supervision of Vera Miljanovic, former PhD, WK, University of Vienna
partial supervision of Mario Aigner, master student, University of Vienna

Longterm invitations & Postdoc/Predoc Stays

Professeur invité *Institut Elie Cartan* – 05/2011, 05/2012, Université Nancy 2, France
invited researcher within the thematic program “Partial Differential Equations in Kinetic Theories” *Isaac Newton Institute* – 09-12/2010, Cambridge, UK
research visit “Deterministic and Stochastic Non-local Aggregation Pattern” *University of Melbourne* – 04/2011, 04/2010, Melbourne, Australia
invited researcher within the thematic program “Mathematical Biology: Modelling and Differential Equations” *CRM, Barcelona* – 04/2009, Catalonia, Spain
invited Maître de Conférence *Ecole Normale Supérieure de Cachan* – 03/2008, 07/2006, ENS Cachan, France

Post-Doc *Baker Heart Research Institute, University of Melbourne*, Wittgenstein Award Markowich – 07-08/2004, Melbourne, Australia

Post-Doc *Ecole Normale Supérieure de Cachan*, EU Network HYKE – 05/2005, 04-05/2004, 04-06/2003, ENS Cachan, France

Post-Doc *Universidad de Granada, Universitat Autònoma de Barcelona*, EU Network HYKE – 01-03/2003, Granada, Barcelona, Spain

Pre-Doc *Centre de Mathématique et Informatique* – 07-08/2001, Université Aix-Marseille 1, Marseille, France

Pre-Doc *Laboratoire Dieudonné*, EU Network TMR – 10/2000 - 02/2001, Université de Nice, France

Projects / Organiser

Principle Investigator, Unconventional Research: “Beyond the conventions of mathematics and art: Towards a balance of artistic intuition and mathematics”, 2014 – 2017, University of Graz

Principle Investigator, International Research Training Group IGDK 1754 *Optimization and Numerical Analysis for Partial Differential Equations with Nonsmooth Structures*, FWF-DFG, 2012-2020, University of Graz, Technical University of Graz, Bundeswehr University Munich, Technical University of Munich

Workshop Co-organiser *Emerging mathematical Models in Biology and Life Sciences*, Core Research Area Models and Simulation, FSB Mobis, University of Graz, 05/2015

Workshop organiser *Mathematical Modelling in Biology and Physiology*, WPI Vienna and DK Vienna, 09/2014

Organiser Summer School *Analysis and Applications of Partial Differential Equations*, IGDK Graz-Munich and DK Vienna, 09/2014

Organiser of Thematic Program *PDE-Models in Biology*, Wolfgang Pauli Institute, 2013

Workshop Co-organiser *Mathematical Modelling in Biology*, Core Research Area Models and Simulation, 01/2014, University of Graz

Workshop Organiser *First Graz-Wien Bio-PDE Day*, 05/2012, 05/2013, University of Graz, University of Vienna

Workshop Organiser *Mathematical Modelling of Organic Photovoltaic Devices*, Robinson College 06/2011, University of Cambridge, UK

Workshop Organiser *Evolutionary Dynamics of Structured Populations* part of the PDE's in Kinetic Theory programme of the Newton Institute, 11/2010, Cambridge, UK

Workshop Organiser *Applied Differential Equations in Physics, Biology and Life Sciences*, 03/2010, University of Cambridge, UK

Project Coordinator *Acciones Integradas 2007-2008*, ÖAD ES 04/2007 Austria-Spain

Project Coordinator *Amadée 2007-2008*, ÖAD FR 05/2007 Austria-France

Civil (alternative military) service, Austrian Multiple Sclerosis Society

Caring and helping of Multiple Sclerosis patients – 10/1999 - 09/2000, Vienna

Reviewer for Communications in Mathematical Physics, Annales de l'Institut Henri Poincaré (C) Analyse Non Linéaire, Kinetic and Related Models, Computer and Fluids, SIAM Journal on Mathematical Analysis, SIAM Journal on Applied Mathematics, SIAM Journal on Multiscale Modeling and Simulation, Journal of Differential Equations, BMC Biophysics, Discrete and Continuous Dynamical Systems - Series B, Journal of Physics A, Nonlinearity, Physica A , Physica D, Acta Applicanda Mathematicae, Journal de Mathématiques Pures et Appliquées, Asymptotic Analysis, Bulletin of the London Mathematical Society, Journal of Mathematical Analysis and Applications, International Journal of Heat and Mass Transfer, Zeitschrift für angewandte Mathematik und Physik, Mathematical and Computer Modelling, Mathematical Methods in the Applied Sciences, Nonlinear Analysis Series A: Theory, Methods & Applications, Communications in Computational Physics, Communications in Pure and Applied Analysis, Mathematical Modelling and Analysis, Journal of Computational and Applied Mathematics

Refereed papers & proceedings / preprints / theses

- R** K. Fellner, B.Q. Tang, *Explicit exponential convergence to equilibrium for nonlinear reaction-diffusion systems with detailed balance condition*, preprint.
- R** M. Breden, L. Desvillettes, K. Fellner, *Smoothness of moments of the solutions of discrete coagulation equations with diffusion*, preprint.
- R** K. Fellner, E. Latos, T. Suzuki, *Global classical solutions for mass-conserving, (super)-quadratic reaction-diffusion systems in three and higher space dimensions*, preprint.
- R** H. Egger, K. Fellner, J.-F. Pietschmann, B.Q. Tang, *Analysis and Numerical Solution of Coupled Volume-Surface Reaction-Diffusion Systems*, preprint.
- R** K. Fellner, W. Prager, B.Q. Tang, *The entropy method for reaction-diffusion systems without detailed balance: first order chemical reaction networks*, preprint.
- R** T.Q. Bao, K. Fellner, E. Latos, *Well-posedness and exponential equilibration of a volume-surface reaction-diffusion system with nonlinear boundary coupling*, preprint.
- R** T.Q. Bao, K. Fellner, S. Rosenberger, *A reaction-diffusion system modelling asymmetric stem-cell division: existence, uniqueness, numerical simulation and rigorous quasi-steady-state approximation*, to appear in Comm. Math. Sci.
- R** K. Fellner, E.-H. Laamri, *Exponential decay towards equilibrium and global classical solutions for nonlinear reaction-diffusion systems*, appeared online first in Journal of Evolution Equations.

- R** K. Fellner, V. Kovtunenکو, *A discontinuous Poisson–Boltzmann equation with interfacial transfer: homogenisation and residual error estimate*, published open access online in *Applicable Analysis*.
- R** K. Fellner, V. Kovtunenکو, *A singularly perturbed nonlinear Poisson–Boltzmann equation: uniform and super-asymptotic expansions*, *Mathematical Methods in the Applied Sciences*, **38** no. 16 (2015) 3575–3586.
- R** L. Desvillettes, K. Fellner, *Duality- and Entropy Methods for Reversible Reaction-Diffusion Equations with Degenerate Diffusion*, *Mathematical Methods in the Applied Sciences*, **38** no. 16 (2015) pp. 3432–3443.
- R** K. Fellner, E. Latos, G. Pisante, *On finite time blow-up for filtration problem with nonlinear reaction*, *Applied Mathematical Letters* **42** (2015) pp. 47–52.
- P** L. Desvillettes, K. Fellner, *Exponential Convergence to Equilibrium for a Nonlinear Reaction-Diffusion Systems Arising in Reversible Chemistry*, to appear in the Proceedings of the IFIP 2013.
- R** J.A. Canizo, L. Desvillettes, K. Fellner, *Improved duality estimates and applications to reaction-diffusion equations*, *Communications in Partial Differential Equations*, **39**, no. 6 (2014) pp. 1185–1204.
- S** L. Desvillettes, K. Fellner, *Duality- and Entropy Methods in Coagulation-Fragmentation Models*, *Revista di Matematica della Universita di Parma* **4** no.2 (2013) pp. 215–263
- R** B. Hughes, K. Fellner, *Continuum models of cohesive stochastic swarms: the effect of motility on aggregation patterns*, *Physica D* **260** (2013) pp. 26–48.
- R** D. Brinkman, K. Fellner, P. Markowich, M.-T. Wolfram, *A drift-diffusion-reaction model for excitonic photovoltaic bilayers: asymptotic analysis and a 2-D HDG finite-element scheme*, *Math. Models and Methods in Applied Sciences* **23** (2013) pp. 839–872.
- R** E. Hackett-Jones, K. Landman, K. Fellner, *Aggregation patterns from non-local interactions: discrete stochastic and continuum modelling*, *Phys. Rev. E* **85**, no. 4 (2012) 041912.
- R** A. Chertock, K. Fellner, A. Kurganov, A. Lorz, P. Markowich, *Sinking, merging and stationary plumes in a coupled chemotaxis-fluid model: a high-resolution numerical approach*, *Journal of Fluid Mechanics*, **694** (2012) pp. 155–190.
- P** L. Desvillettes, K. Fellner, *Entropy Methods for Reaction-Diffusion Equations with Degenerate Diffusion Arising in Reversible Chemistry*, accepted in the likely to be never printed Proceedings of the Equadiff 2007.
- R** K. Fellner, G. Raoul, *Stability of stationary states of non-local equations with singular interaction potential*, *Mathematical and Computer Modelling* **53** (2011), pp. 1436–1450.
- R** K. Fellner, G. Raoul, *Stable stationary states of non-local interaction equations*, *Mathematical Models and Methods in Applied Sciences* **20** no.12 (2010) pp. 2267–2291.

- R** R. Duan, K. Fellner, C. Zhu, *Energy Method for Multi-dimensional Balance Laws with Non-local Dissipation*, J. Math. Pures Appl. **93** no.6 (2010) pp. 572–598.
- R** J. A. Cañizo, L. Desvillettes, K. Fellner, *Regularity and mass conservation for discrete coagulation-fragmentation equations with diffusion*, Ann. Inst. H. Poincaré (C) Anal. Non Linéaire, **27** no.2 (2010) pp. 639–654.
- P** J. A. Cañizo, L. Desvillettes, K. Fellner, *Absence of Gelation for Models of Coagulation-Fragmentation with Degenerate Diffusion*, Il Nuovo Cimento, Proceedings of the ICTT **33**, no.1 (2010) pp. 79–86.
- R** J. Carrillo, L. Desvillettes, K. Fellner, *Rigorous Derivation of a Nonlinear Diffusion Equation as Fast-Reaction Limit of a continuous Coagulation-Fragmentation Model with Diffusion*, Comm. Partial Differential Equations **34** no.10-12 (2009) pp. 1338–1351.
- R** L. Desvillettes, K. Fellner, *Large time asymptotics for a Continuous Coagulation-Fragmentation Model with Degenerate Size-dependent Diffusion*, SIAM J. Math. Anal. **41** no.6 (2009) pp. 2315–2334.
- R** M. Di Francesco, K. Fellner, P. Markowich, *The entropy dissipation method for inhomogeneous reaction-diffusion systems*, Proc. R. Soc. A **464** (2008) pp. 3273–3300.
- R** L. Desvillettes, K. Fellner, *Entropy Methods for Reaction-Diffusion Equations: Slowly Growing A-priori Bounds*, Revista Matemática Iberoamericana **24**, no. 2 (2008) pp. 407–431.
- R** M. Di Francesco, K. Fellner, H. Liu, *A non-local conservation law with nonlinear "radiation" inhomogeneity*, Journal of Hyperbolic Differential Equations **5** no.1 (2008) pp. 1–23.
- R** J. Carrillo, L. Desvillettes, K. Fellner, *Fast-Reaction Limit for the Inhomogeneous Aizenman-Bak Model*. Kinetic and Related Models **1** no. 1 (2008) pp. 127–137.
- R** J. A. Carrillo, L. Desvillettes, K. Fellner, *Exponential Decay Towards Equilibrium for the Inhomogeneous Aizenman-Bak Model*, Communications in Mathematical Physics **278**, no. 2 (2008), pp. 433–451.
- P** L. Desvillettes, K. Fellner, *Entropy Methods for Reaction-Diffusion Equations: Degenerate Diffusion*, Discrete and Continuous Dynamical Systems, Supplements Special (2007) pp. 304-312.
- R** K. Fellner, C. Schmeiser, *Classification of equilibrium solutions of the cometary flow equation and explicit solutions of the Euler equations for monatomic ideal gases*, J. Stat. Phys. **129** no. 3 (2007), pp. 493-507.
- R** L. Desvillettes, K. Fellner, M. Pierre, J. Vovelle *About Global Existence for Quadratic Systems of Reaction-Diffusion*, J. Advanced Nonlinear Studies **7** no 3. (2007) pp. 491–511.

- P** K. Fellner, V. Miljanovic, C. Schmeiser *Entropy Method for the Linearized Cometary Flow Equation*, Proceedings of the Tenth International Conference on Hyperbolic Problems, Editors F. Asakura, S. Kawashima, A. Matsumura, S. Nishibata, K. Nishihara Yokohama Publishers (2006).
- R** K. Fellner, V. Miljanovic, C. Schmeiser, *Convergence to equilibrium for the linearised cometary flow equation*, Trans. Theory Stat. Phys. **35**, no. 3-4 (2006), pp.109-136.
- R** L. Desvillettes, K. Fellner *Exponential Decay towards Equilibrium via Entropy Methods for Reaction-Diffusion Equations*, J. Math. Anal. Appl. **319**, (2006), pp. 157–176.
- R** J. A. Carrillo, K. Fellner *Long-time Asymptotics via Entropy Methods for Diffusion Dominated Equations*, Asympt. Ana. Vol. **42**, no. 1-2 (2005), pp. 29–54.
- R** K. Fellner, F. Poupaud, C. Schmeiser, *Existence and convergence to equilibrium of a kinetic model for cometary flows*, J. Stat. Phys. Vol. **114**, no. 5-6 (2004), pp. 1481–1499.
- R** K. Fellner, L. Neumann, C. Schmeiser, *Convergence to global equilibrium for spatially inhomogeneous kinetic models of non-micro-reversible processes*, Monatsh. d. Math. Vol. **141**, no. 4 (2004), pp. 289–299.
- R** K. Fellner, C. Schmeiser, *Burgers–Poisson: A nonlinear dispersive model problem*, SIAM J. Appl. Math. **64**, no. 5 (2004), 1509–1525 (electronic).
- PhD thesis** K. Fellner, *On two models for charged particle systems: The cometary flow equation and the Burgers-Poisson system*
- Master thesis** K. Fellner, *Transmission-Line Simulation of my Bassoon*
- Talks / seminars since 2003
- Braga 12/2015** invited talk *Continuum and Discrete Models of Cohesive Aggregation Pattern*. University of Braga, Portugal.
- Caserta 09/2015** invited seminar *Entropy- and Duality Methods for nonlinear Reaction-Diffusion Systems*. University of Neaples II, Caserta, Italy
- Anacapri 09/2015** invited talks *The Collaborative Mind* and *On Reaction-Diffusion Systems with Volume-Surface Coupling and beyond Detailed Balance Equilibria*, University of Neaples, Anacapri, Italy
- Lyon 07/2015** invited talk *On Volume-Surface Reaction-Diffusion Systems and Applications in Cell-Biology*, Equadiff 2015, University of Lyon, France
- Techendorf 06/2015** invited compact course *Entropy- and Duality Methods for Reaction-Diffusion-type Systems I: Detailed Balance Systems and II: Complex Balance Systems*. Techendorf, University of Vienna, Austria
- L’Aquila 06/2015** invited talk *The Entropy-Method for Reaction-Diffusion Systems and Applications in Biology*, Gran Sasso Science Institute, L’Aquila, Italy

- Darmstadt 05/2015** invited compact course *An Introduction to Entropy-Methods for Reaction-Diffusion-type Models*. Technical University Darmstadt, Germany
- Paris 04/2015** invited talk *Volume-Surface Reaction-Diffusion Systems with Applications in Biology*, Ecole Normale Supérieure de Cachan, France
- Munich 02/2015** invited seminar *Volume-Surface Reaction Diffusion Systems Modelling Asymmetric Protein Localisation*. Technical University Munich, Germany
- Rust 01/2015** invited talk *Entropy- and Duality methods for Nonlinear Dissipative PDE Models*. DK Vienna, Rust, Austria
- Kyoto 01/2015** invited seminar talk *On Coagulation-Fragmentation Models with Spatial Diffusion*, University of Kyoto, Japan
- Osaka 01/2015** invited talk *Entropy Structures of RD systems and the Algebra of Linear Reaction Networks*, University of Osaka, Japan
- Berlin 12/2014** invited talk *On a Poisson-Boltzmann model for batteries: asymptotic expansion and homogenisation*, Technical University Berlin, Germany
- Mannheim 11/2014** invited talk *On Systems of Reaction-Diffusion Equations: Global Existence and Large-Time-Analysis*, University of Mannheim, Germany
- Novi Sad 09/2014** invited talk *Convergence to Equilibrium for a Coagulation-Fragmentation Model with Degenerate Spatial Diffusion* University of Novi Sad, Serbia
- Vienna 09/2014** invited talk *On Reaction-Diffusion Systems: Global Existence, Convergence to Equilibrium and Quasi-Steady-State-Approximation*, Wolfgang Pauli Institute Vienna, Austria
- Granada 09/2014** invited talk *Asymmetric Protein Localisation and Networks of Reaction-Diffusion Equations*, University of Granada, Spain
- Hanoi 08/2014** invited talk *Entropy- and Duality Methods for Dissipative PDE Models*, HUST, Hanoi, Vietnam
- Madrid 07/2014** invited talk *Continuum Models of Cohesive Stochastic Swarms*, AIMS Conference 2014, Madrid, Spain
- Madrid 07/2014** invited talk *On Coagulation-Fragmentation Models with Spatial Diffusion*, AIMS Conference 2014, Madrid, Spain
- Banff 07/2014** invited talk *Towards Global Existence and Optimal Equilibration Rates for Reaction-Diffusion Models*, BIRS, Banff, Canada
- ENS Cachan 05/2014** invited talk *Volume-Surface Reaction-Diffusion Systems Describing Asymmetric Protein Localisation*, Ecole Normale Supérieure de Cachan, France
- Waterloo 04/2014** seminar talk *Entropy- and Duality Methods for Reaction-Diffusion Systems*, University of Waterloo, Canada

- Munich 03/2014** seminar talk *Excitonic Organic Photovoltaic Devices*, Technical University of Munich, Germany
- Graz 01/2014** talk *On Mixed Volume-Surface Reaction-Diffusion Systems*, workshop on Mathematical Modelling in Biology, University of Graz
- Oxford 12/2013** invited talk *Drift-Diffusion Modelling of a Organic Photovoltaic Bilayer*, University of Oxford, UK
- Oberwolfach 12/2013** invited talk *Entropy- and Duality Methods for Systems of Reaction-Diffusion Equations*, Oberwolfach, Germany
- Innsbruck 09/2013** invited talk *Oscillatory Solutions of Non-local Models of Cell Aggregation*, ÖMG-DMV Meeting, University of Innsbruck
- Innsbruck 09/2013** invited talk *Mixed Volume-Surface Reaction-Diffusion Systems Describing Asymmetric Protein Localisation*, ÖMG-DMV Meeting, University of Innsbruck
- Osaka 09/2013** invited talk *Entropy- and improved duality methods for reaction-diffusion systems*, University of Osaka, Japan
- Graz 07/2013** invited talk *Entropy methods and the large-time-behaviour of dissipative dynamical systems*, Summer School of the Schumpeter Centre, Mariatrost, Austria
- Havana 06/2013** invited talk *Aggregation patterns in non-local equations with repulsive-aggregating potential*, CIMPA Summer School, Havana, Cuba
- Snowbird 05/2013** invited talk *The Mathematical Modelling and Numerical Simulation of Excitonic Organic Photovoltaic Devices*, SIAM DS 2013, Snowbird, Utah, USA
- Munich 11/2012** lecture series *Reaction-Diffusion Systems and Coagulation-Fragmentation Models*, TU Munich, Germany
- Berlin 09/2012** invited talk *Drift-Diffusion-Recombination Models for Excitonic Organic Photovoltaic Devices*, WIAS Berlin, Germany
- Nancy 09/2012** invited talk *The Role of Entropy and Duality Methods in the Theory of Reaction-Diffusion and Coagulation-Fragmentation Models*, Institute Elie Cartan, Nancy, France
- Graz 06/2012** inaugural lecture *PDEs with Entropies*, University of Graz, Austria
- Porto Ercole 06/2012** summer school course seminar *Coagulation-Fragmentation Models I-V*, Politecnico di Torino, Italy
- Barcelona 04/2012** invited seminar *Organic Photovoltaic Devices, Drift-Diffusion Systems and Entropy Methods*, University Autònoma Barcelona, Spain
- Oxford 04/2012** invited talk *Asymptotics for a Drift-Diffusion-Recombination Model of an Excitonic Organic Photovoltaic Bilayer*, University of Oxford, UK

- Melbourne 02/2012** invited seminar *Drift-Diffusion-Recombination Processes in Excitonic Organic Photovoltaic Devices*, University of Melbourne, Australia
- Banff 01/2012** invited talk *Aggregation Pattern in Non-local Equations: Discrete Stochastic and Continuum Modelling*, BIRS, Banff, Canada
- Singapore 01/2012** invited talk *Drift-Diffusion-Recombination Processes in Excitonic Organic Photovoltaic Devices*, IMS, National University of Singapore, Singapore
- Vienna 11/2011** invited talk *Aggregation patterns in non-local interactions: discrete stochastic and continuum modelling*, WPI, University of Vienna, Austria
- Berlin 09/2011** invited Langenbach seminar *Organic Photovoltaic Devices: Drift Diffusion Systems and Entropy Methods*, WIAS Berlin, Germany
- Nancy 09/2011** invited seminar *Duality and Entropy Methods for Systems of Reaction-Diffusion Equations*, University of Nancy, France
- Munich 09/2011** IGDK school hearing *Organic Photovoltaics and Mixed Surface/Volumn Reaction-Diffusion Modelling Asymmetric Stem-Cell Division*, Technical Univeristy of Munich, Germany
- Loughborough 08/2011** invited talk *On spatial inhomogeneous coagulation-fragmentation models with diffusion*, EquaDiff 2011, University of Loughborough, UK
- Hong Kong 05/2011** invited talk *Entropy- and Duality Methods for Coagulation-Fragmentation Models with Diffusion*, Conference Recent Developments in Nonlinear PDEs, Chinese University of Hong Kong, China
- Oxford 04/2011** invited talk *Discrete and Continuous Coagulation-Fragmentation Models with Diffusion*, Oxbridge PDE days, University of Oxford, UK
- Melbourne 04/2011** invited seminar talk *Coagulation-fragmentation Models*, University of Melbourne, Australia
- Sydney 04/2011** invited colloquium talk *The dynamics of non-local interaction equations with repulsive-aggregating potentials*, University of Sydney, Australia
- KAUST 03/2011** invited seminar talk *Drift-Diffusion type models for Organic Photovoltaic Devices*, King Abdullah University of Science and Technology, Saudi Arabia
- Linz 01/2011** invited seminar talk *Drift-Diffusion type models of Organic Photovoltaic Devices*, RICAM, Linz, Austria
- Munich 12/2010** invited seminar *Aggregation pattern of gradient flows with repulsive-aggregating interaction potential*, Technical University Munich, Germany
- Oberwolfach 12/2010** workshop on Classical and Quantum Mechanical Models of Many-Particle Systems, Oberwolfach, Germany
- Edinburgh 11/2010** invited talk *Aggregation-pattern due to repulsive-aggregating interaction potentials*, Edinburgh, UK

- Southampton 09/2010** workshop on the Mathematical Model in Photovoltaic Devices, Southampton, UK
- Newton Institute 09/2010** invited talk *Aggregation-pattern due to repulsive-aggregating interaction potentials*, Cambridge, UK
- Graz 07/2010** invited interview talk *The Entropy Method in Non-linear Dissipative Partial Differential Equations* Graz, Austria
- Weissensee 07/2010** invited short course on *Coagulation-Fragmentation Models* WK-Summer Camp, Techendorf, Austria
- Barcelona 06/2010** invited minisymposium talk *Entropy Methods for Semiconductors and Related Drift-Diffusion-Reaction Models*, SIAM DSPDE's Conference, Barcelona, Spain
- Barcelona 06/2010** invited minisymposium talk *Discrete and Continuous Coagulation-Fragmentation Models with Diffusion*, SIAM DSPDE's Conference, Barcelona, Spain
- Barcelona 05/2010** invited minisymposium talk *Aggregation-pattern in non-local interaction equations with repulsive-aggregating potentials*, SIAM DSPDE's Conference, Barcelona, Spain
- Banff 05/2010** invited talk *Aggregation-pattern in locally repulsive interaction equations: Stability and Limiting Behaviour*, BIRS on Nonlinear Diffusion and Entropy Dissipation, Banff, Canada
- Melbourne 04/2010** invited colloquium talk *Aggregation-pattern in non-local equations with locally repulsive interaction potentials*, University of Melbourne, Australia
- KAUST 03/2010** invited seminar talk *The repulsive-aggregating dynamics in non-local interaction equations*, King Abdullah University of Science and Technology, Saudi Arabia
- Vienna 03/2010** Habilitation lecture *Entropy methods in reaction-diffusion systems and coagulation-fragmentation models*, University of Vienna, Austria
- Havanna 02/2010** invited talk *Stationary states of non-local interaction equations*, 9th ICOR, Havanna, Cuba
- Cambridge 09/2009** invited talk *Stationary states of non-local interaction equations*, Universitat Autònoma de Madrid - CMS Cambridge Days, Cambridge
- Alba Adriatica 09/2009** invited six hour course *The many sides of reaction-diffusion systems: An introduction*, Mathmods Intensive Programme, University of L'Aquila, Italy
- Edinburgh 07/2009** invited talk *On non-local interaction equations*, workshop Kinetic and Mean-field Models, ICMS, Edinburgh

- Victoria 07/2009** invited talk *Coagulation-Fragmentation Models with Diffusion*, workshop Topics in Kinetic Theory, University of Victoria, Canada
- Barcelona 05/2009** invited Biomathematical Seminar *Non-local evolution equations with repulsive-aggregating potentials*, Universitat Autònoma de Barcelona, Spain
- Southampton 05/2009** invited Applied Math Colloquium *The dynamics of non-local evolution equations*, University of Southampton, UK
- Angra dos Reis 03/2009** invited talk *On a non-local repulsion-aggregation model*, workshop on Mathematical Methods and Modeling of Biophysical Phenomena, Angra dos Reis, Brazil
- Paris 02/2009** invited lecture *Introduction to Reaction-Diffusion Equations*, University Paris IX, Dauphine, France.
- Berlin 10/2008** study group on Thin Film Solar Cells, WWAS, Matheon
- Mantova 05/2008** invited talk *A nonlocal repulsion-aggregation model: Steady States, Stability, Bifurcations*, Conference on Kinetic Equations: Direct and Inverse Problems, Italy
- UCLA 03/2008** invited talk *The inhomogeneous Aizenman-Bak model and a nonlocal repulsion-aggregation model* IPAM, workshop OTWS1, California
- L'Aquila 12/2007** invited seminar *Entropy methods for Systems Combining Diffusion and Nonlinear Reaction*, Italy
- Vienna 08/2007** invited talk *The Inhomogeneous Aizenman-Bak model: Convergence to Equilibrium and Fast-Reaction Limit*, EQUADIFF 2007, Austria
- Oberwolfach 12/2006** invited talk *The Inhomogeneous Aizenman-Bak model: Convergence to Equilibrium and Fast-Reaction Limit*, workshop *Classical and Quantum Mechanical Models of Many-Particle Systems*, Germany
- Weissensee 07/2006** shortcourse *Diffusive Coagulation-Fragmentation Systems*, WK--Summercamp, Austria
- Poitiers 06/2006** invited talk *Convergence to Equilibrium for the inhomogeneous Aizenman-Bak model*, 6th AIMS Conference, University of Poitiers, France
- Banff 04/2006** invited talk *Entropy Methods for Systems Combining Diffusion and Nonlinear Reaction*, BIRS workshop on Nonlinear diffusions, Canada
- Barcelona 11/2005** seminar talk *Entropy in Systems Combining Diffusion and Reaction*, Barcelona, Spain
- Klagenfurt 09/2005** talk *Entropy Methods in Systems Combining Diffusion and Nonlinear Reaction* SIAM, DMV, ÖMG Conference, Klagenfurt, Austria
- Vienna 10/2004** WK-seminar talk *Entropy Methods in Diffusive Systems*, University of Vienna, Austria

- Melbourne 08/2004** seminar *Explicit Convergence to Equilibrium in Diffusive Equations*, University of Melbourne, Australia
- Paris 05/2004** seminar talk, *Convergence to Equilibrium for Reaction-Diffusion Systems*, Université Paris Dauphine, France
- Oberwolfach 11/2003** invited talk *Convergence to Equilibrium for Reaction-Diffusion Systems* at the Conference *Classical and Quantum Mechanical Models of Many-Particle Systems*, Germany
- Bolzano 09/2003** talk *Applying Entropy Entropy-Dissipation Methods* at the bilateral ÖMG meeting 2003, Italy
- Paris 05/2003** seminar talk *A Kinetic Equation Modelling Cometary Flow*, Université Paris Dauphine
- Barcelona 03/2003** seminar talk *Convergence to global equilibrium for spatially inhomogeneous kinetic models*, Universitat Autònoma de Barcelona, Spain
- Granada 02/2003** seminar talk *Burgers-Poisson: A nonlinear dispersive model*, Universidad de Granada, Spain

Skills / Achievements / Hobbies

Languages German (native), English (fluently), French (Pas mal), Spanish (basics)

Music Bassonist of the Grazer University Orchestra

Sport Tai Chi, Vienna City marathon 2002, Graz marathon 2001

Theatre founding member of the *Kleine Bühne Ebensee*

Management 2001-2005 member of the committee of the Orchestra of the Vienna University of Technology (responsible for finances)

IT C, Fortran, Excel, Matlab, Maple, Mathematica, Maya, 3DMax, ... Linux, MAC & Windows