
Academic career

since 10/2012 Post-doctoral fellow in the group of Prof. Alán Aspuru-Guzik,
Department of Chemistry and Chemical Biology at Harvard University

Research interests

- Exciton transport in natural and artificial light-harvesting systems
- Quantum transport through semiconductor devices
- High-performance graphics processing unit (GPU) computing
- Quantum information and quantum measurement

Education

10/2012 Ph.D. in Physics, University of Regensburg
Title: *Quantum transport through complex networks - from light-harvesting proteins to semiconductor devices*
Advisor: Dr. Tobias Kramer

02/2008 Diploma in Physics, University of Augsburg
Title: *Auslesen von Ladungsqubits mit Hilfe eines Zweiniveau-Einzelelektronentransistors*
Advisor: Dr. Sigmund Kohler

Programming experience

- GPU computing, CUDA
- C/C++, Python, Fortran
- Mathematica, Matlab

Published software

- Exciton Dynamics Lab for Light-Harvesting Complexes (GPU-HEOM)
online available: <http://nanohub.org/resources/gpuheompop>

Research visits

18.04–22.04.2012 Harvard University, Cambridge, USA (Vortrag)
24.10–30.10.2011 Instituto de Estructura de la Materia, Madrid, Spanien
12.09–24.09.2010 Instituto de Estructura de la Materia, Madrid, Spanien (Vortrag)

Selected conferences and workshops

Quantum biology

- 04.06–06.06.2012 Workshop on quantum effects in biological systems (QuEBS 2012), University of California, USA (poster)
- 01.08–05.08.2011 Quantum effects in biological systems (QuEBS 2011), University of Ulm, Deutschland (poster)
- 27.06–01.07.2011 CECAM-workshop, Spectroscopy and quantum phenomena in large molecular aggregates, University of Bremen, Germany (poster)
- 17.06–20.06.2010 Workshop on quantum effects in biological systems (QuEBS 2010), Harvard University, USA (poster)

Quantum information and mesoscopic physics

- 09.05–10.05.2011 International conference: Quantum technologies in the 21st century, Deutsches Museum, Munich, Germany
- 14.12–15.12.2009 Aharonov-Bohm effect and Berry phase anniversary 50/25, University of Bristol, UK (poster)
- 25.06–27.06.2009 Workshop on semiconductor-nanobalistic, University of Bochum, Germany (talk)
- 11.08–22.08.2008 International seminar and workshop on quantum dynamical concepts: From path integrals to semiclassics, Max Planck Institute for the physics of complex systems, Dresden, Germany (poster)
- 12.02–16.02.2007 CeNS winter school, Nanosystems: From quantum devices to biological engines, Mauterndorf, Austria

List of publications

- [1] C. Kreisbeck and T. Kramer, *Long-lived electronic coherence in dissipative exciton-dynamics of light-harvesting complexes*, J. Phys. Chem. Lett., **3**, 2828 (2012)
- [2] B. Hein, C. Kreisbeck, T. Kramer and M. Rodríguez, *Modelling of oscillations in two-dimensional echo-spectra of the Fenna-Matthews-Olson complex*, New J. Phys., **14**, 023018 (2012)
- [3] C. Kreisbeck, T. Kramer, M. Rodríguez and B. Hein, *High-performance solution of hierarchical equations of motion for studying energy transfer in light-harvesting complexes*, J. Chem. Theory Comput., **7**, 2166 (2011)

- [4] C. Kreisbeck, T. Kramer, S. S. Buchholz, S. F. Fischer, U. Kunze, D. Reuter and A. D. Wieck, *Phase shifts and phase π jumps in four-terminal waveguide Aharonov-Bohm interferometers*, Phys. Rev. B, **82**, 165329 (2010)
- [5] T. Kramer, C. Kreisbeck and V. Krueckl, *Wave packet approach to transport in mesoscopic systems*, Phys. Scr., **82**, 038101 (2010)
- [6] C. Kreisbeck, F. J. Kaiser and S. Kohler, *Phase readout of a charge qubit capacitively coupled to an open double quantum dot*, Phys. Rev. B, **81**, 125404 (2010)
- [7] T. Kramer, C. Kreisbeck, V. Krueckl, E. J. Heller, R. E. Parrott and C.-T. Liang, *Theory of the quantum Hall effect in finite graphene devices*, Phys. Rev. B, **81**, 081410(R) (2010)