Daniel Suess

Education

- Aug 2015 **Doctoral candidate**, *University of Cologne*, Germany.
 - Adviser: Prof. Dr. David Gross
- 2014 2015 **Doctoral candidate**, *University of Freiburg*, Germany.
 - o Adviser: J.-Prof. Dr. David Gross
- 2010 2013 **Diploma in Theoretical Physics**, *Technische Universität Dresden*, Germany.
 - Final grade: 1.0 (passed with distinction)
 - Thesis title: Hierarchy of Quantum Trajectories applied to Photosynthetic Complexes
 - o Adviser: Prof. Dr. Walter T. Strunz
- 2008 2010 Intermediate Diploma, Technische Universität Dresden, Germany.
 - o Grade: 1.1

Experience

- Apr Jul 2014 **Researcher in the group of A. Eisfeld**, *Max Planck Institute for the Physics of Complex Systems*, Dresden, Germany.
 - o Topic: Simulation of open quantum systems in bosonic and fermionic environments

International

- Jan Mar 2014 **Visiting researcher in the group of H. Wiseman**, *Griffith University*, Brisbane, Australia.
 - o Topic: Stochastic simulation of open quantum systems and quantum feedback.
 - 2004 2005 Student exchange, Reeltown Highschool, USA.

Teaching

- 2016 **Tutor**, *Institute of Theoretical Physics, University of Cologne*, Germany.
 - Seminar: "Disentangling quantum matter with quantum information theory"
 - supervised talk on "Hamiltonian Complexity"
- 2016 **Teaching Assistant**, *Institute of Theoretical Physics, University of Cologne*, Germany.
 - o Pre-study course: "Mathematical Methods for Physicists: Analysis"
- 2015 2016 **Teaching Assistant**, *Institute of Theoretical Physics, University of Cologne*, Germany.
 - o 1st semester course: "Mathematical Methods"
- 2014 2015 **Tutor**, *Institute of Theoretical Physics, University of Freiburg*, Germany.
 - o 1st and 2nd semester course: "Classical Mechanics"
- 2010 2013 **Tutor**, *Institute for Analysis, TU Dresden*, Germany.
 - o 3rd and 4th semester courses "Mathematics for Physicists"
 - Subjects taught: ordinary and partial differential equations, theory of distributions, functional analysis, and complex analysis

- 2009 2010 **Tutor**, *Institute for Analysis, TU Dresden*, Germany.
 - 1st semester course "Mathematics for Civil Engineering, Water Management, and Waste Management"

Scholarships

2014 **PROMOS**, DAAD (German Academic Exchange Service). Partial scholarship to promote visit to Griffith University.

Conference Presentations

April 2016 **Spring Meeting of the Rhineland Quantum Information Network**, *University of Cologne*, Germany.

Talk: Optimal error regions for quantum state estimation.

Mar 2016 **DPG Spring Meeting**, *Leibniz Universität Hannover*, Germany.

Talk: Characterising linear optical circuits using phaseless estimation techniques.

Jan 2016 Quantum Information Processing, Banff Centre, Canada.

Poster: Characterising linear optical circuits using phaseless estimation techniques.

Dez 2015 2. International Matheon Conference on Compressed Sensing and its Applications, *TU Berlin*, Germany.

Poster: Characterising linear optical circuits using phaseless estimation techniques.

Mar 2013 **DPG Spring Meeting**, *Leibniz Universität Hannover*, Germany.

Poster: Energy transfer dynamics in structured environments.

Languages

Self-assessment European level CEFR (C2 maximum evaluation)

German Mother Tongue

English Fluent (C2)

French Beginner (A1)

Publications

- D. Suess, W. T. Strunz, A. Eisfeld: Hierarchical equations for open system dynamics in fermionic and bosonic environments, J. Stat. Phys. 159, Issue 6, pp 1048–1423 (2015) (arXiv:1410.0304)
- G. Ritschel, D. Suess W. T. Strunz, A. Eisfeld: Non-Markovian Quantum State Diffusion for temperature-dependent linear spectra of light harvesting aggregates, J. Chem. Phys. 142, 034115 (2015) (arXiv:1409.1091)
- D. Suess, A. Eisfeld, W. T. Strunz: Hierarchy of stochastic pure states for open quantum system dynamics Phys. Rev. Lett. 113, 150403 (2014) (arXiv:1402.4647)