Daniel Suess

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Education

Aug 2015 –   **Doctoral candidate**, *University of Cologne*, Germany.
- Adviser: Prof. Dr. David Gross

2014 – 2015   **Doctoral candidate**, *University of Freiburg*, Germany.
- 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*
- Adviser: Prof. Dr. Walter T. Strunz

2008 – 2010   **Intermediate Diploma**, *Technische Universität Dresden*, Germany.
- Grade: 1.1

Experience

Nov 2016 –   **Visiting researcher in the group of S. Flammia and S. Bartlett**, *University of Sydney*, Sydney, Australia.

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

Jan – Mar 2014   **Visiting researcher in the group of H. Wiseman**, *Griffith University*, Brisbane, Australia.
- 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.
- Pre-study course: "Mathematical Methods for Physicists: Analysis"

2015 – 2016   **Teaching Assistant**, *Institute of Theoretical Physics, University of Cologne*, Germany.
- 1st semester course: "Mathematical Methods"

2014 – 2015   **Tutor**, *Institute of Theoretical Physics, University of Freiburg*, Germany.
- 1st and 2nd semester course: "Classical Mechanics"

2010 – 2013   **Tutor**, *Institute for Analysis, TU Dresden*, Germany.
- 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

Sep 2016	**Theory of Quantum Computation, Communication and Cryptography**, *Berlin*, Germany.
	Poster: *Error regions in quantum state estimation: computational complexity caused by the geometry of states.*
Apr 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, L. Rudnicki, D. Gross: *Error regions in quantum state tomography: computational complexity caused by geometry of quantum states*, arXiv:1608.00374

○ 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)