

Daniel Stilck França

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Personal Profile

Born on the 13th of December 1991 in São Paulo, Brazil.
Brazilian and German citizen.

Education

since 2015 Dr. rer. nat.- Technical University of Munich, Germany
Thesis Irreversibility in Quantum Information Theory
Supervisor Prof. Dr. Michael M. Wolf
Expected to finish June 2018

2014-2015 M.Sc. in Mathematics (with honors) - Technical University of Munich, Germany

2011-2013 B. Sc. (with honors) - Technical University of Munich, Germany
Major Mathematics
Minor Physics

2010-2011 Studies of Applied Mathematics - University of São Paulo, Brazil

2005-2009 International Baccalaureate Diploma - Swiss-Brazilian School of São Paulo, Brazil

Research Interests

- Quantum Shannon Theory
- Quantum Algorithms

Employment History

Since 2013 Technical University of Munich, Germany
Teaching Assistant

Teaching assistant for different lectures given by the Mathematical Physics Department at the Technical University of Munich. These included Markov Chains, Analysis and Mathematical Modeling. Responsibilities encompassed all different aspects of university lectures, from preparing exercise classes and marking exams to managing other teaching assistants.

Research Visits

02.2018-04.2018 California Institute of Technology, under the supervision of Prof. Fernando Brandão (planned).

Awards, Grants and Scholarships

2011-2016 Full DAAD (German Foreign Exchange Service) Scholarship
since 2014 Member of the Elite Network of Bavaria
2016 Hurwitz Society Prize for exceptional Master Thesis

Publications

- A. Bluhm and D. Stilck França, Dimensionality reduction of SDPs through sketching, *arXiv:1707.09863v1* (2017).
- D. Stilck França, Perfect Sampling for Quantum Gibbs States, *arXiv:1703.05800* (2017).
- A. Müller-Hermes and D. Stilck França, Sandwiched Rényi Convergence for Quantum Evolutions, *arXiv:1607.00041v1* (2016).
- A. Müller-Hermes, D. Stilck França, and M.M. Wolf, Entropy-production of Doubly-Stochastic Quantum Channels, *Journal of Mathematical Physics*, 57, 022203 (2016).
- A. Müller-Hermes, D. Stilck França, and M.M. Wolf, Relative entropy convergence for depolarizing channels, *Journal of Mathematical Physics*, 57, 022202 (2016).

You may find preprints of all my publications on the arXiv.

Selected Contributions to Workshops and Conferences

- Dimensionality reduction of SDPs through sketching (talk), *Workshop on Probabilistic Techniques and Quantum Information Theory*, Paris, France, 23-27 October.
- Perfect Sampling for Quantum Gibbs States (talk), *3rd International Conference for Young Quantum Information Scientists*, Erlangen, Germany, 3-6 October 2017.
- Hypercontractivity and convergence in Rényi Divergences for quantum Semigroups (talk), *First meeting of the MISTEQ project*, Toulouse, France, 25-27 May 2016.
- Logarithmic Sobolev Inequalities for Entropy Production (talk), *12th Central European Quantum Information Processing Workshop*, Telč, Czech Republic, 18-21 June 2015.
- Log-Sobolev inequalities for unital Liouvillians (poster), *Hypercontractivity and Log Sobolev Inequalities in Quantum Information Theory Workshop*, Banff, Canada, 22-27 February 2015.

Service Work

Referee for *Communications in Mathematical Physics*.

Languages

German, Portuguese (native), English (full professional proficiency), French and Spanish (elementary proficiency).

Volunteer Work

Mentoring Brazilian high school students applying to university in Germany for the Brazilian Student Association (BRASA).

Updated November 2017.