

Martin Fraas

Curriculum Vitae

PERSONAL DETAILS

Birth August 14, 1982
Nationality Slovak
Address 524A Edgewood Lane, Blacksburg, VA 24060, U.S.
Mail fraas@vt.edu

EDUCATION

PhD 2005-2008
Department of Theoretical Physics NPI AS ČR & Charles University
Supervisor: Prof. Pavel Exner

MSc 2000-2005
Charles University in Prague
Principal subject: Theoretical physics

WORK EXPERIENCE

Assistant Professor 2017-
Mathematics Department, Virginia Tech

Visiting Professor 2016-2017
Institute for Theoretical Physics, KU Leuven, Belgium

Visiting Professor 2014-2015
Mathematisches Institute, LMU, München, Germany

Postdoctoral Fellow 2011-2014
Institute for Theoretical Physics, ETH, Zürich, Switzerland
Mentor: Prof. Gian Michele Graf

Postdoctoral Fellow 2009-2011
Physics & Mathematics Departments, Technion, Haifa, Israel
Mentors: Prof. Y. Avron & Prof. Y. Pinchover

Research Assistant, PhD student 2006-2008
Department of Theoretical Physics, Nuclear Physics Institute, AS ČR, Řež

TEACHING EXPERIENCE

Lecturer, Ordinary Differential Equations, VT	2017
Lecturer, Classical and Quantum Stochastic Calculus, KU Leuven	2016
Lecturer, Functional Analysis I, LMU	2015
Lecturer, Mathematical Statistical Physics II, LMU	2014
Supervision, Proseminar in mathematical physics, LMU	2014
Lecturer, Theory of Open Quantum Systems, ETH	2014
Head teaching assistant, Quantum mechanics I./II., ETH	2013-4
Tutor, Proseminar in theoretical physics, ETH	2012-3
Teaching assistant, Quantum information, Technion	2009
Teaching assistant, Mathematical methods for physicists, Charles University	2005

MENTORING

I am currently mentoring Lisa Hänggli (PhD. candidate)

SERVICE

Main organizer, Conference on mathematical physics and quantum mechanics, ETH	13.-17. Oct. 2014
Main organizer, Workshop on mathematical aspects of quantum field theory, ETH	28.-29. Nov. 2013
Main organizer, Workshop in mathematical physics, ETH	6.-7. March 2013
Co-organizer, Talks in mathematical physics, ETH	2012-3
Main organizer, Quantum information seminar, Technion	2010-1

2016-7 TALKS

2017

- *The Adiabatic Theorem for Many-Body Quantum Systems*, Mathematical Physics Colloquium, UC Davis
- *Adiabatic Theory: From Spinning Top to Gapped Matter*, Mathematics Colloquium, UBC Vancouver
- *On Products of Correlated Matrices Originating in the Statistical Structure of Quantum Mechanics*, Mathematical Physics Seminar, UBC Vancouver
- *Adiabatic Theory: From Spinning Top to Gapped Matter*, Mathematics Colloquium, Virginia Tech

2016

- *Perturbation Theory of Non-Demolition Measurements*, QMATH 13, Invited Talk, Atlanta
- *Repeated quantum measurements and Bubble chambers*, Working Seminar in Mathematical Physics, Montreal
- *Non-demolition measurements and their perturbations*, Theoretical Physics Seminar, University of Virginia
- *Dynamical crossing of an infinitely degenerate critical point*, Mathematical Physics Seminar, University of Virginia
- *Full statistics of erasure processes: Isothermal adiabatic theory and a statistical Landauer principle*, Theoretical Physics Seminar, Toulouse
- *Fundamental bounds on the clock time variance of atomic clocks*, Recent Advances in Quantum Metrology, Invited Talk, Warsaw

LANGUAGES

Slovak & Czech (mother tongue), English (fluent), Hebrew (advanced), German (basic)