Curriculum Vitae

Personal Details

Name:	Benjamin Schlein
Address:	Institute of Mathematics, University of Zurich Winterthurerstrasse 190 8057 Zurich, Switzerland
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URL:	http://www.math.uzh.ch/index.php?professur&key1=1831
Date of Birth:	May 28, 1975
Place of Birth:	Lugano, Switzerland
Citizenship:	Italy
Languages:	Italian (mother-tongue), English (fluent), German (fluent)

Education

04/2002	:	Ph.D. from Institute of Theoretical Physics, ETH-Zurich.
10/1999–03/2002	:	Graduate studies in mathematical physics. Supervisor: Prof. Jürg Fröhlich.
09/1999	:	Diploma in Theoretical Physics, ETH-Zurich. Willy Studer Prize for best diploma in the Department of Mathematics and Physics.
10/1994–03/1999	:	Undergraduate studies in theoretical physics at ETH-Zurich.

Professional History

02/2014–	:	Professor, University of Zurich.
04/2010–01/2014	:	Hausdorff Chair (W3 professorship), University of Bonn
09/2007–03/2010	:	University Lecturer, Cambridge University.
07/2007–08/2008	:	Research fellow at LMU Munich, supported by Kovalevskaja Award.
07/2006–06/2007	:	Assistant Professor (tenure-track) at UC Davis.
09/2005–07/2006	:	NSF postdoctoral fellow at Harvard University.
09/2004–08/2005	:	NSF postdoctoral fellow at Stanford University.
09/2003–08/2004	:	Instructor at Stanford University.
09/2002–08/2003	:	Courant Instructor at the Courant Institute, New York University.

Honors and Awards

2026: Leroy P. Steele Prize for Seminal Contribution to Research, assigned by the American Mathematical Society.
2025: Frontiers of Science Award, assigned by the International Congress of Basic Science.
2022: Tullio Levi-Civita Prize for the Mathematical and Mechanical Sciences.
2021: Grant "Bogoliubov theory for bosonic systems" of the Swiss National Science Foundation (4 years).
2019: ERC Advanced Grant "Correlations in Large Quantum Systems" (5 years).
2018: Invited speaker in the Mathematical Physics section at the International Congress of Mathematics (ICM) in Rio de Janeiro.
2017: Grant "Dynamical and energetic properties of Bose-Einstein condensates" of the Swiss National Science Foundation (4 years).
2014: Grant "Effective equations from quantum dynamics" of the Swiss National Science Foundation (3 years).
2012: Plenary speaker at the International Congress on Mathematical Physics ICMP 2012, Aalborg.
2009: Young Scientist Prize in Mathematical Physics, awarded by the International Union of Pure and Applied Physics (IUPAP).
2009: ERC Starting Independent Researcher Grant (5 years).
2007: Swiss National Science Foundation SNSF-Professorship (declined to accept offer from University of Cambridge).
2006: Sofja Kovalevskaja Award from the Alexander von Humboldt foundation.
2004: Two year NSF Postdoctoral Research Fellowship in Mathematical Sciences.
1999: Willy Studer Prize for best Diploma at the Department of Mathematics and Physics of ETH-Zurich.

Teaching Experience

Spring 2026 : Methods in Analysis, University of Zurich.
Fall 2025 : Mathematical Theory of Many-Body Quantum Systems 2, UZH.
Spring 2025 : Mathematical Theory of Many-Body Quantum Systems, UZH.
Fall 2024 : Functional Analysis, University of Zurich.
Fall 2023 : Functional Analysis, University of Zurich.
Spring 2023 : Methods in Analysis, University of Zurich.
Fall 2022 : Analysis 3, University of Zurich.
Spring 2022 : Analysis 2, University of Zurich.
Fall 2021 : Analysis 1, University of Zurich.
Fall 2020 : Stability of quantum mechanical matter, University of Zurich.
Spring 2020 : Methods in Analysis, University of Zurich.
Fall 2019 : Analysis 3, University of Zurich.

Spring 2019	:	Analysis 2, University of Zurich.
Fall 2018	:	Analysis 1, University of Zurich.
Spring 2018	:	Mathematical aspects of quantum mechanics, University of Zurich.
Fall 2017	:	Seminar on harmonic analysis, University of Zurich.
Fall 2017	:	Functional Analysis, University of Zurich.
Spring 2017	:	Analysis 2 for physics students, University of Zurich.
Fall 2016	:	Analysis 3, University of Zurich.
Spring 2016	:	Analysis 2, University of Zurich.
Fall 2015	:	Analysis 1, University of Zurich.
Spring 2015	:	Probability 1, University of Zurich.
Fall 2014	:	Analysis 3, University of Zurich.
Spring 2014	:	Thomas-Fermi and Hartree-Fock theory for atoms and molecules, University of Zurich.
Winter 2013/2014	:	Analysis 3, University of Bonn.
Summer 2013	:	Analysis 2, University of Bonn.
Winter 2012/2013	:	Analysis 1, University of Bonn.
Winter 2011/2012	:	Partial Differential Equations and Functional Analysis, University of Bonn.
Summer 2011	:	Selected Topics in Analysis - Atoms and Molecules in Quantum Mechanics, University of Bonn.
Winter 2010/2011	:	Advanced Topics in Analysis - Stability of Matter, University of Bonn.
Lent 2010	:	Linear Analysis, Part II, University of Cambridge.
Michaelmas 2009	:	Methods in Analysis, Part III, University of Cambridge.
Lent 2009	:	Linear Analysis, Part II, University of Cambridge.
Michaelmas 2008	:	Methods in Analysis, Part III, University of Cambridge.
Spring 2007	:	Measure Theory, UC Davis.
Winter 2007	:	Linear Algebra, UC Davis.
Spring 2004	:	Integral Calculus of Several Variables, Stanford University (twice).
Spring 2003	:	Probability and Statistics, New York University.
Fall 2002	:	Calculus 1, New York University.

Editorial Work

- Editor in Chief of *Probability and Mathematical Physics*, since 01/2024.
- Member of Editorial Board of *Probability and Mathematical Physics*, since 09/2019.
- Member of Editorial Board of *Journal of Functional Analysis* since 04/2013.
- Associate Editor of *Journal of Mathematical Physics*, since 07/2017.
- Editor in Chief of *Journal of Functional Analysis*, 01/2021-12/2023.
- Editor of *Mathematical Physics, Analysis and Geometry*, 02/2014 - 12/2020.

Organization of Scientific Events

2025 : Coorganizer of Oberwolfach Arbeitsgemeinschaft "Analysis of Many-body Quantum Systems".
2024 : Coorganizer of Summer School "Current Topics in Mathematical Physics", Zurich.
2023 : Coorganizer of Oberwolfach workshop "Many-Body Quantum Systems".
2023 : Coorganizer of conference "Analysis and Hamiltonian PDEs: remembering Thomas Kappeler", Zurich.
2021 : Co-convenor of International Congress on Mathematical Physics (ICMP), Geneva.
2021 : Co-convenor of Young Researcher Symposium, Geneva.
2021 : Coorganizer of Summer school "Current Topics in Mathematical Physics", Zurich.
2019 : Coorganizer of 8-th Strasbourg-Zurich meeting "Frontiers of Analysis and Probability", Zurich.
2019 : Coorganizer of Oberwolfach workshop "Many-Body Quantum Systems".
2019 : Coorganizer of Mittag-Leffler program "Spectral Methods in Mathematical Physics", Mittag-Leffler Institute.
2018 : Coorganizer of workshop "Many-body quantum mechanics", CRM Montreal.
2018 : Coorganizer of Oberwolfach mini-workshop "Gibbs Measures for Nonlinear Dispersive Equations".
2017 : Coorganizer of Oberwolfach workshop "Reflection positivity".
2017 : Coorganizer of Summer School "Current topics in Mathematical Physics", held at the University of Zurich.
2016 : Coorganizer of section "Many-body systems and statistical mechanics", in conference QMath 13, held at GeorgiaTech.
2016 : Coorganizer of Oberwolfach workshop "Many-body quantum systems and effective theories".
2016 : Coorganizer of workshop "Geometry and topology in mathematical physics", held at ETH Zurich.
2016 : Coorganier of workshop "Quantum many-body problem and its mean-field approximations", held in Zurich.
2014 : Coorganizer of the workshop "Scaling limits and effective theories in classical and quantum mechanics" held at the Schrödinger Institute.
2013 : Director of Advanced School and Workshop on "Random Matrices and Growth Models" held at ICTP (Trieste).
2012 : Coorganizer of workshop "Random Matrices", held in Bonn.
2012 : Coorganizer of program "Mathematical challenges of materials science and condensed matter physics", held at Hausdorff Institute, Bonn.
2008 : Coorganizer of the Oberwolfach Seminar "Feynman Diagrams in Quantum Mechanics".

Other Services

08/2025 - 07/2027	:	Director Institute of Mathematics, University of Zurich
2025	:	Chair of International Scientific Committee, QMath 16 Munich.
08/2023 - 07/2025	:	Deputy director Institute of Mathematics, University of Zurich
01/2015 - 12/2020	:	Secretary of the International Association of Mathematical Physics (IAMP).
09/2018 - 08/2026	:	Director of Zurich Graduate School in Mathematics.
01/2013 - 01/2014	:	Deputy director of SFB 1060 "Mathematics of emergent effects".
10/2012 - 09/2013	:	Deputy director of Institute for Applied Mathematics, Bonn.
2014 -	:	Coorganizer of the Basel-Zurich Seminar in Analysis.
2014 -	:	Coorganizer of the weakly "PDE and mathematical physics seminar", at the University of Zurich.
2011 - 2013	:	Coorganizer of the Hausdorff Colloquium in Bonn.
2010 - 2013	:	Coorganizer of the weakly "Oberseminar Analysis" in Bonn.
2006 - 2007	:	Organizer of "Mathematical Physics and Probability Seminar", at UC Davis.
2002 -	:	Referee for several peer reviewed journals in mathematics and physics.

Selected Talks at Conferences and Research Seminars

08/2026:	Summer School "Quantum Theory On All Scales", Les Houches. Minicourse.
12/2025:	Conference "Emergent phenomena in many-body quantum systems", CIRM Marseille. Invited talk.
11/2025:	Workshop "Quantum Many-body Systems and Bose-Einstein Condensation", Schrödinger Institute Vienna. Invited talk.
06/2025:	Workshop "Effective theories in classical and quantum particle systems", SISSA Trieste. Invited talk
06/2025:	Peking University. Invited talks.
05/2025:	Spring School and Workshop "Spectral Theory, Fourier Analysis and PDEs", Bilbao. Minicourse.
04/2025:	IST Austria, Seminar in mathematical physics.
02/2025:	Winter School "Statistical Mechanics, Nonequilibrium Processes and Probability", Roma. Minicourse.
01/2025:	Colloquium, Torino.
12/2024:	Conference "Mathematical Physics and PDEs", Herrsching (Germany). Invited talk.
05/2024:	Mathematical Physics Seminar, Genova.
05/2024:	Colloquium, Roma Tor Vergata.
05/2024:	Levi Civita Lecture, Roma.

01/2023: Conference "Numerical and theoretical advances in quantum mechanics", Toulouse. Invited talk.
12/2022: Conference "Coulomb gases and universality", Paris. Invited talk.
09/2022: Conference "QMath 15", UC Davis. Plenary talk. Invited talk.
09/2022: Workshop "Solid Math 2022", SISSA (Trieste). Invited talk.
07/2022: Conference "Advances in mathematical physics", Harvard University. Invited talk.
07/2022: Conference "A celebration of mathematical physics", Zurich. Invited talk.
06/2022: Conference "Probability and mathematical physics", Helsinki. Invited talk.
06/2022: Conference "Quantum many body system and interacting particles", Münster. Invited talk.
06/2022: Conference "Mathematical results of many-body quantum systems", Herrsching (Germany). Invited talk.
04/2022: Workshop "Model Reduction in Quantum Mechanics", IPAM, UCLA. Online talk.
06/2021: Conference "Emergent theories for wave turbulence and particle dynamics", SwissMAP research station, Diablerets (Switzerland). Invited talk.
09/2020: Conference "Calculus of Variations, Homogenization and Disorder". Online talk.
06/2020: Summer school "Applications of Bogoliubov theory for quantum many-body systems". Online talk.
12/2019: Conference "From semi-classical to quantum many body through normal forms", Milano. Minicourse.
10/2019: Conference "The analysis of complex quantum systems", CIRM, Marseille. Invited talk.
09/2019: Conference "Dynamics, Equations and Applications", Krakow. Invited talk.
08/2019: Conference "From Many Body Problems to Random Matrices", Banff. Invited talk.
06/2019: Workshop "Effective equations: frontiers in classical and quantum systems". Hausdorff Institute, Bonn. Invited talk.
05/2019: Workshop "Mean-field and other effective models in mathematical physics". Treilles (France). Invited talk.
02/2019: Workshop "Hamiltonian PDEs and nonlinear waves", La Thuile (Italy). Minicourse.
12/2018: Workshop "Conclusions and future directions", Newton Institute, Cambridge. Invited talk.
08/2018: International Congress of Mathematics. Invited talk in the "Mathematical Physics" section.
07/2018: International Congress of Mathematical Physics, Montreal. Invited talk in the "Partial differential equations" section.
06/2018: Conference "An analyst, a geometer and a probabilist walk into a bar.", Cardiff. Invited talk.

05/2018: Conference "Recent Results on Quantum Many-Body Systems", Herrsching (Germany). Invited talk.
03/2018: Queen Mary, Probability Seminar.
03/2018: Annual meeting of the DMV (German Mathematical Society), Paderborn. Invited talk in the section on mathematical physics.
02/2018: Workshop "Mathematical Challenges in Quantum Mechanics", Roma. Mini-course.
08/2017: Conference "Quantissima in the Serenissima II", Venezia. Invited talk.
08/2017: Workshop "Derivation of effective equations and their mathematical properties", Munich. Invited talk.
07/2017: Conference "Mathematical Congress of Americas 2017", Montreal. Invited talk in mathematical physics section.
06/2017: Worskhop "Mean field an Relate problems", Paris. Invited talk.
06/2017: French-American Conference on Nonlinear Dispersive PDEs. CIRM (Marseille). Invited talk.
04/2017: Conference "Spectral Days 2017", Stuttgart. Invited talk.
03/2017: Workshop on "Macroscopic limits of quantum systems", Munich. Invited talk.
01/2017: GSSI L' Aquila. Mini-course.
10/2016: Conference "Kinetic Theory and its neighbours", GSSI L' Aquila. Invited talk.
09/2016: Workshop "Condensed Matter and Critical Phenomena", Frascati. Invited talk.
08/2016: Young Researchers Symposium "Methods in Modern Mathematical Physics", Toronto. Invited talk.
08/2016: Summer school on "Randomness in physics and mathematics", Bielefeld. Mini-course.
07/2016: Workshop in honor of Jürg Fröhlich, Zurich. Invited talk.
06/2016: Conference "Nonlinear waves", IHES. Invited talk.
06/2016: Summer school "Methods and Models of Kinetic Theory", Porto Ercole. Mini-course.
05/2016: Workshop "Hilbert's sixth problem", Leicester. Invited talk.
12/2015: Conference "Localization and reducibility in Hamiltonian PDEs and quantum mechanics", Milano. Invited talk.
11/2015: University of Geneva, Mathematical Physics seminar.
07/2015: LMU Munich, Colloquium.
06/2015: SISSA (Trieste), Colloquium.
06/2015: Conference "Quantum many-body systems, random matrices, and disorder", Schrödinger Institute (Vienna). Invited talk.

06/2015: RWTH Aachen, Colloquium.
01/2015: Workshop "Itinerant meeting in PDEs", Trieste. Invited mini-course.
11/2014: Caltech, mathematical physics seminar.
10/2014: Exploratory seminar on "Randomness and long-time dynamics in nonlinear evolution differential equations", Radcliffe.
09/2014: Conference on mathematical physics, Jena. Invited talk.
06/2014: Workshop on "Effective equations in mathematical physics", Mittag-Leffler Institute (Stockholm). Invited talk.
06/2014: Workshop on "Geometry and semiclassical analysis in interaction with spectral theory and physics", Madrid. Invited talk.
06/2014: Warwick, mathematical colloquium.
06/2014: Conference on "Non-equilibrium problems in physics and mathematics", Ascona (Switzerland). Invited talk.
05/2014: Bristol, mathematical physics seminar.
03/2014: Institute of Advanced Studies, seminar.
03/2014: Brown University, analysis seminar.
02/2014: Workshop "Annual western states mathematical physics meeting", Caltech. Invited talk.
02/2014: Caltech/UCLA, joint analysis seminar.
12/2013: Hannover, Colloquium in mathematics and physics.
09/2013: Workshop "Dispersive pdes': models and dynamics", Pisa. Mini-course.
09/2013: International conference on applied mathematics (ICAM 2013), Heraclion (Greece). Plenary talk.
09/2013: Conference "QMath12. Mathematical results in quantum physics", Berlin. Invited talk.
07/2013: 29th European meeting of statisticians (EMS), Budapest. Invited speaker.
06/2013: Conference "Mathematical properties of large quantum systems", Institut Henri Poincaré (IHP), Paris. Invited talk.
05/2013: Workshop "Nonlinear Schrödinger equation: theory and applications", Heraclion (Greece). Invited talk.
03/2013: Minicourse "Spectral properties of random matrices", CIRM (Marseille).
10/2012: Conference on "Recent developments in the mathematical analysis of large systems", Schrödinger Institute, Vienna.
09/2012: Workshop on "Collective quantum operations: mean field, control, estimation", ISI Foundation, Torino. Invited speaker.
08/2012: International congress on mathematical physics (ICMP), Aalborg (Denmark). Plenary speaker.
07/2012: 6th European congress of mathematics (ECM), Krakow. Invited speaker.
05/2012: NTH-Mathematical Colloquium, University of Braunschweig.
05/2012: Workshop in honor of Jürg Fröhlich. Invited talk.
05/2012: Workshop on "Nonlinear evolution problems", Oberwolfach.
04/2012: Conference "Spectral days 2012", Munich. Invited Talk.

03/2012: School in analysis and applications. Tucson, Arizona. Main speaker.
02/2012: Workshop on "Quantum mechanics: from foundations to quantum information science", ZiF Bielefeld. Invited talk.
02/2012: Mathematical colloquium, University of Regensburg.
01/2012: Probability seminar, ENS Lyon.
12/2011: Workshop on "Random matrix theory and applications in theoretical sciences", ZiF Bielefeld. Invited talk.
11/2011: Mathematical colloquium, University of Stuttgart.
11/2011: Video seminar Berkeley/Bonn/Paris/Zurich.
10/2011: School on "Operator algebras and mathematical physics", Kyoto. Course on random matrices.
09/2011: Annual meeting of the DMV (German Mathematical Society), Cologne. Invited talk in the section on mathematical physics.
08/2011: School on mathematical statistical physics, Prague. Course on random matrices.
07/2011: International congress on industrial and applied mathematics (ICIAM), Vancouver. Invited talk in the mini-symposium on mathematical physics.
06/2011: Conference "Days on PDEs", Biarritz (France). Invited talk.
03/2011: Workshop on "The renormalization group". Oberwolfach.
12/2010: Workshop on "Random matrices". AIM, Palo Alto.
12/2010: Statistical mechanics seminar, Queen Mary, University of London.
12/2010: Mathematical physics seminar, University of Tübingen.
11/2010: Berlin-Leipzig seminar in analysis and probability.
11/2010: Mathematical colloquium. University of Paderborn.
11/2010: Workshop on "Bose-Einstein Condensation". University of Marseille.
10/2010: Workshop on "Physics and mathematics of random matrices". Copenhagen. Main talk.
09/2010: QMath 11. Conference on "Mathematical results in quantum physics", Hradec Kralove (Czechia). Plenary talk.
09/2010: Workshop on "Nonlinear waves and dispersive equations", Oberwolfach.
07/2010: Summer school "Current topics in mathematical physics", Aarhus. Course on random matrices.
06/2010: Workshop on "Matter and radiation". Schrödinger Institute, Vienna.
06/2010: Conference on random matrices. Paris 6. Invited talk.
04/2010: Workshop in random matrices. University of Zürich. Invited talk
03/2010: Annual meeting of DPG (German Physics Society). Main talk in the "Theoretical and mathematical physics" section.
03/2010: Conference on "Perspectives in quantum statistics and correlations". Heidelberg. Invited talk.
03/2010: Workshop on "Optical lattices and Bose gases: the mathematics and physics of clean and disordered systems", Warwick. Invited talk.

02/2010: Mathematical physics seminar. University of Bristol.
01/2010: Colloquium. University of Warwick.
01/2010: London analysis seminar.
12/2009: 5th Brunel workshop on random matrix theory. Invited talk.
12/2009: Zurich theoretical physics colloquium.
12/2009: Mathematical physics seminar. University of Grenoble.
09/2009: Conference on "Probabilistic and analytical methods in mathematical physics." Tsaghkadzor, Armenia. Invited talk.
09/2009: Workshop on "Mathematics of Complex Quantum Systems", Oberwolfach.
08/2009: Workshop on "Analysis of nonlinear wave equations and applications in engineering", BIRS, Banff, Canada.
08/2009: International congress on mathematical physics (ICMP), Prague. Invited talk in the session "Non-equilibrium statistical mechanics".
07/2009: Conference on "Constructive and multiscale methods in quantum theory", Heidelberg. Invited talk.
06/2009: Workshop on "Open quantum systems". ETH, Zürich. Invited talk.
06/2009: 25-th Nordic and 1-st British-Nordic congress of mathematics, Oslo. Invited talk in the session "Mathematical physics and spectral theory".
05/2009: Mathematical physics seminar. ETH-Zurich.
05/2009: Mathematical physics seminar. University of Hamburg.
05/2009: Applied analysis seminar. University of Bonn.
03/2009: Colloquium. Centre for Mathematical Sciences, Cambridge.
02/2009: Probability seminar, DPMMS, University of Cambridge.
11/2008: Probability seminar, University of Bielefeld.
11/2008: Mathematical physics seminar, University of Nottingham.
10/2008: Mathematical physics seminar, University of Helsinki.
10/2008: Mathematical physics seminar, DAMTP, University of Cambridge.
10/2008: Talk in the program "Mathematics and physics of Anderson localization", Newton Institute, Cambridge.
10/2008: Workshop on "Quantum many-body systems". University of Montreal. Invited talk.
09/2008: Annual meeting of the DMV (German Mathematical Society), Erlangen. Invited talk in the section on random matrices.
08/2008: Mini-workshop "Mathematical approaches to collective phenomena in large quantum systems", Oberwolfach.
07/2008: Summer school of the Clay Mathematics Institute on "Evolution equations", ETH Zurich. Mini-course.
06/2008: Workshop on "Non-equilibrium systems", Schrödinger Institute, Vienna. Invited talk.
04/2008: Analysis seminar. University of Zurich.
03/2008: Annual meeting of DPG (German Physics Society). Main talk in the mathematical physics section.
02/2008: Analysis seminar. Princeton University.

11/2007: Meeting on "Theoretical aspects of open quantum systems", Leuven. Invited talk.
11/2007: Mathematical colloquium, Technical University Clausthal.
10/2007: Workshop on "Interacting particle systems", University of Milano. Invited talk.
09/2007: Analysis seminar, MIT.
08/2007: Workshop in applied analysis, University of Copenhagen. Invited talk.
07/2007: Joint meeting of the American and Polish Mathematical Societies, Warsaw. Invited talk in the mathematical physics section.
07/2007: Birthday conference of Jürg Fröhlich, ETH-Zürich. Invited talk.
05/2007: Workshop on "Analysis and stochastic in quantum many body systems", Max-Planck Institute, Leipzig. Invited talk.
05/2007: 97th Statistical mechanics conference at Rutgers University. Invited talk.
04/2007: PDE seminar, UC San Diego.
02/2007: Western states mathematical physics meeting, Caltech. Invited talk.
11/2006: Colloquium, University of Alabama at Birmingham.
09/2006: Analysis seminar, Princeton University.
09/2006: Workshop on "Evolution of microscopic and macroscopic fields", Banff. Invited talk.
08/2006: International congress on mathematical physics (ICMP), Rio de Janeiro. Invited talk in the session "Non-equilibrium statistical mechanics".
06/2006: Program on "Complex quantum systems", Schrödinger Institute, Vienna. Invited talk.
12/2005: Analysis seminar, Princeton University.
12/2005: Mathematical physics seminar, Rutgers University.
10/2005: PDE/Applied math/Analysis seminar, University of Toronto.
07/2005: Mathematical physics seminar, ETH-Zurich.
06/2005: Analysis seminar, University of Stuttgart.
03/2005: Applied mathematics seminar, Stanford University.
02/2005: Analysis seminar, Stanford University.
02/2005: Workshop on "Open quantum systems". Schrödinger Institute, Vienna. Invited talk.
10/2004: PDE seminar, University of California at Berkeley.
09/2004: QMath9. Conference on "Mathematical results in quantum physics", Giens (France). Invited talk.
01/2004: Mathematical physics seminar, ETH-Zurich.
12/2003: Analysis seminar, University of Munich.
03/2003: Conference on "Non-equilibrium statistical mechanics" at CPT, Marseille. Invited talk.
11/2002: Analysis seminar, GeorgiaTech.
02/2002: Analysis seminar, University of Mainz.
01/2002: Analysis seminar, University of Munich.
01/2001: Mathematical physics seminar, ETH-Zurich.

List of Publications and Preprints

1) J. Fröhlich, M. Griesemer, and B. Schlein. Asymptotic electromagnetic fields in models of quantum-mechanical matter interacting with the quantized radiation field. *Adv. Math.* **164** (2001), no. 2, 349–398.

2) J. Fröhlich, M. Griesemer, and B. Schlein. Asymptotic completeness for Rayleigh scattering. *Ann. Henri Poincaré* **3** (2002), no. 1, 107–170.

3) A. Elgart and B. Schlein. Adiabatic charge transport and the Kubo formula for Landau type Hamiltonians. *Comm. Pure Appl. Math.* **57** (2004), no. 5, 590–615.

4) J. Fröhlich, M. Griesemer, and B. Schlein. Asymptotic completeness for Compton scattering. *Comm. Math. Phys.* **252** (2004), 415–476.

5) A. Elgart, L. Erdős, B. Schlein, and H.-T. Yau. Nonlinear Hartree equation as the mean field limit of weakly coupled fermions. *J. Math. Pures Appl.* (9) **83** (2004), no. 10, 1241–1273.

6) A. Elgart, L. Erdős, B. Schlein, and H.-T. Yau. Gross-Pitaevskii equation as the mean field limit of weakly coupled bosons. *Arch. Ration. Mech. Anal.* **179** (2006), no. 2, 265–283.

7) B. Schlein. Derivation of the Gross-Pitaevskii hierarchy. *Mathematical Physics of Quantum Mechanics, 279–293.* Proceedings of the conference QMath 9, Gien. Lecture Notes in Phys., 690, Springer, Berlin, 2006.

8) L. Erdős, B. Schlein, and H.-T. Yau. Derivation of the Gross-Pitaevskii hierarchy for the dynamics of Bose-Einstein condensate. *Comm. Pure Applied Math.* **59** (2006), no. 12, 1659–1741.

9) A. Elgart and B. Schlein. Mean field dynamics for boson stars. *Comm. Pure Applied Math.* **60** (2007), no. 4, 500–545.

10) C. Albert, L. Ferrari, J. Fröhlich, and B. Schlein. Magnetism and the Weiss exchange field: a theoretical analysis of recent experiments. *J. Statist. Phys.* **125** (2006), no. 1, 77–124.

11) L. Erdős, B. Schlein, and H.-T. Yau. Derivation of the cubic non-linear Schrödinger equation from quantum dynamics of many-body systems. *Invent. Math.* **167** (2007), no. 3, 515–614.

12) J. Fröhlich, M. Griesemer, B. Schlein. Rayleigh scattering at atoms with dynamical nuclei. *Comm. Math. Phys.* **271** (2007), no. 2, 387–430.

13) L. Erdős, B. Schlein, and H.-T. Yau. Derivation of the Gross-Pitaevskii equation for the dynamics of Bose-Einstein condensates. *Ann. of Math. (2)* **172** (2010), no. 1, 291–370.

14) L. Erdős, B. Schlein, and H.-T. Yau. Rigorous derivation of the Gross-Pitaevskii equation. *Phys. Rev. Lett.* **98** (2007), no. 4, 040404.

15) B. Schlein. Dynamics of Bose-Einstein Condensates. *New Trends in Mathematical Physics*. Selected contributions of the XVth International Congress on Mathematical Physics, edited by V. Sidoravicius, Springer Verlag, 2009, 565-589.

16) L. Erdős, B. Schlein, and H.-T. Yau. Semicircle law on short scales and delocalization of eigenvectors for Wigner random matrices. *Ann. Probab.* **37** (2009), no. 3, 815–852.

17) I. Rodnianski and B. Schlein. Quantum fluctuation and rate of convergence towards mean field dynamics. *Comm. Math. Phys.* **291** (2009), no. 1, 31–61.

18) B. Nachtergaele, H. Raz, B. Schlein, and R. Sims. Lieb-Robinson bounds for harmonic and anharmonic lattice systems. *Comm. Math. Phys.* **286** (2009), no. 3, 1073–1098.

19) L. Erdős, B. Schlein, and H.-T. Yau. Rigorous derivation of the Gross-Pitaevskii equation with a large interaction potential. *J. Amer. Math. Soc.* **22** (2009), no. 4, 1099-1156.

20) L. Erdős, B. Schlein, and H.-T. Yau. Local semicircle law and complete delocalization for Wigner random matrices. *Comm. Math. Phys.* **287** (2009), no. 2, 641–655.

21) C. Hainzl and B. Schlein. Stellar collapse in the time dependent Hartree-Fock approximation. *Comm. Math. Phys.* **287** (2009), no. 2, 705-717.

22) L. Erdős and B. Schlein. Quantum dynamics with mean field interactions: a new approach. *J. Statist. Phys.* **134** (2009), no. 5, 859–870.

23) L. Erdős, B. Schlein, and H.-T. Yau. The ground state energy of a low density Bose gas: a second order upper bound. *Phys. Rev. A* **78** (2008), no. 5, 053627.

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