

Enno Lenzmann's Curriculum Vitae

Contact Information

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Personal Data

Name: Enno Lenzmann
Date of Birth: January 6, 1977
Citizenship: German
Marital Status: Single
Date of CV: October 7, 2009

Employment

Assistant Professor	University of Copenhagen	8/2009 – present
CLE Moore Instructor	MIT	7/2006 – 7/2009
Research and Teaching Assistant	ETH Zürich	9/2002 – 6/2006

Education

Doctor of Mathematics	ETH Zürich	4/2006
Advisors: <i>Demetrios Christodoulou & Jürg Fröhlich</i>		
Diploma of Physics (with honors)	ETH Zürich	4/2002
Advisor: <i>Klaus Hepp</i>		

Research Interests

Nonlinear Partial Differential Equations, Analysis, and Mathematical Physics.

Awards and Honors

- Steno Fellowship from Danish Research Council, 2009–2012, Amount approx. \$725'000.
- NSF Grant DMS-0702492, 2007–2010, Amount \$118'732.
- ETH Medal 2007.
- Distinguished Swiss Federal Stipend, 8/1999 – 8/2000.

Visiting Appointments

- ETH Zürich, February 2009 – April 2009.
- University Cergy-Pontoise/Paris, May 2009 – July 2009.

Publications

- “Minimizers for the Hartree-Fock-Bogoliubov Theory of Neutron Stars and White Dwarfs”, with M. Lewin. *Duke Math. Journal*. To appear. 41 pages.
- “On Stability of Pseudo-Conformal Blowup for L^2 -critical Hartree NLS”, with J. Krieger and P. Raphaël. *Annales Henri Poincaré*. To appear. 39 pages.
- “Uniqueness of Ground States for Pseudo-Relativistic Hartree Equations”. *Analysis & PDE* **1** (2009), no. 3, 1–27.
- “Blowup for Nonlinear Wave Equations describing Boson Stars”, with J. Fröhlich. *Comm. Pure Appl. Math.* **60** (2007), no. 11, 1691–1705.
- “Dynamical Collapse of White Dwarfs in Hartree- and Hartree-Fock Theory”, with J. Fröhlich. *Comm. Math. Phys.* **274** (2007), no. 3, 737–750.
- “Boson Stars as Solitary Waves”, with J. Fröhlich and L. Jonsson. *Comm. Math. Phys.* **274** (2007), no. 1, 1–30.
- “Semi-Classical Dynamics in Quantum Spin Systems”, with J. Fröhlich and A. Knowles. *Lett. Math. Phys.* **82** (2007), no. 2–3, 275–296.
- “Effective Dynamics for Boson Stars”, with J. Fröhlich and L. Jonsson. *Nonlinearity* **20** (2007), no. 5, 1031–1075.
- “Well-Posedness for Semi-Relativistic Hartree Equations of Critical Type”. *Mathematical Physics, Analysis, and Geometry* **10** (2007), no. 1, 43–64.
- “Semi-Relativistic NLS of Critical Type”. Mathematisches Forschungsinstitut Oberwolfach, Report 25/2005, 1421–1422.
- “Mean-Field Limit of Quantum Bose Gases and nonlinear Hartree equation”, with J. Fröhlich. *Semin. Equ. Deriv. Partielles, Exp. No. XIX*, 26pp. Ecole Polytechnique, Palaiseau (2004). 27 pages.

Preprints

- “On Blowup for time-dependent generalized Hartree-Fock equations”, with C. Hainzl, M. Lewin, and B. Schlein. Submitted for publication. 24 pages. Preprint [arxiv:0909.3034](https://arxiv.org/abs/0909.3034)
- “Uniqueness and symmetry of ground states for the massless Boson star equation”, with R. Frank. 26 pages. Preprint available.

Collaborators

Gigliola Staffilani (MIT); Joachim Krieger (UPenn); Mathieu Lewin (CNRS); Christian Hainzl (Birmingham, USA); Rupert Frank (Princeton); Pierre Raphaël (Toulouse); Jürg Fröhlich (ETH Zürich); Lars Jonsson (KTH Stockholm); Benjamin Schlein (Cambridge/UK).

Seminar Talks and Colloquia

- Cambridge/UK, February 2008, October 2005.
- Cergy-Pointoise, June 2009.
- Copenhagen, October 2009, January 2009.
- Courant Institute/NYU, October 2004.
- ETH Zürich, November 2005.
- Harvard, September 2007, October 2006.
- Heidelberg, May 2009.
- MIT, October 2006.
- München LMU, January 2006.
- Michigan State, November 2007.
- Toronto, May 2007.
- Tübingen, February 2007.
- Princeton, December 2006.
- UC Berkeley, December 2007.
- UC San Diego, January 2009.
- UMass Amherst, February 2009, November 2007.
- UPenn, October 2007.

Invited Speaker at Conferences

- Oberwolfach Workshop on “Complex Quantum Systems”, September 2009.
- Paris IHP Workshop on “Nonlinear Wave and Dispersion”, April 2009.
- Cergy-Pontoise, Conference on “Spectral Problems in Quantum Mechanics,” January 2008.
- SIAM Conference on Analysis and PDE, invited speaker, Phoenix/AZ, December 2007.
- QMath10 Conference, Moeciu (Romania), September 2007.
- Workshop on “Multiscale problems in Quantum Mechanics,” Tübingen, February 2007.
- Workshop on “Evolution of micro- and macroscopic fields,” Banff (Canada), September 2006.
- Oberwolfach, Workshop on “Nonlinear Evolution Equations,” invited speaker, June 2005.

Teaching Experience

Lectures:

18.103 (Fourier Analysis)	MIT	Fall 2008
18.100A (Introduction to Analysis)	MIT	Spring 2008
18.152 (Introduction to PDE's)	MIT	Fall 2007
18.152 (Introduction to PDE's)	MIT	Spring 2007
18.100B (Analysis I)	MIT	Fall 2006

Recitations:

Analysis I–II, Analysis III, Methoden der mathematischen Physik I–II, Mathematik II	ETH Zürich	Fall 2002 – Spring 2006
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Other Scientific Activities

- Referee for *Journal of Functional Analysis*, *SIAM J. Math. Anal.*, *Discrete and Continuous Dynamical Systems-A*, *Nonlinearity*, and *Journal of Mathematical Physics*.
- Member of the Committee for Educational Affairs of the Departments of Mathematics and Physics at ETH Zürich, April 2004 – April 2006.

References

- Professor Demetrios Christodoulou, ETH Zürich, demetri@math.ethz.ch.
- Professor Jürg Fröhlich, ETH Zürich, juerg@phys.ethz.ch
- Professor Igor Rodnianski, Princeton, irod@math.princeton.edu
- Professor Israel Michael Sigal, Toronto and IAS, im.sigal@utoronto.ca
- Professor Jan Philip Solovej, Copenhagen, solovej@math.ku.dk
- Professor Gigliola Staffilani, MIT, gigliola@math.mit.edu