

Monica Vişan

PERSONAL INFORMATION:

Born: August 5, 1979, in Drobeta-Tr-Severin, Romania
Citizenship: Romanian
Current Address: 103 Goldman Lane
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EDUCATION AND EMPLOYMENT:

2002 B.A. (with highest honors) in Mathematics,
University of Bucharest, Romania.
2004 Advanced to Candidacy.
University of California, Los Angeles.
2006 Ph.D. in Mathematics,
University of California, Los Angeles.
Thesis title: The defocusing energy-critical nonlinear Schrödinger
equation in dimensions five and higher.
Advisor: Terence Tao.

2006–2008 Member of the Institute for Advanced Study, Princeton, NJ.

2008– Assistant Professor at the University of Chicago.

RESEARCH INTERESTS:

Nonlinear Partial Differential Equations, Harmonic Analysis.

PUBLICATIONS:

- *Characterization of minimal-mass blowup solutions to the focusing mass-critical NLS*, R. Killip, D. Li, M. Visan, and X. Zhang, preprint [math.AP/0804.1124](#).
- *The focusing energy-critical nonlinear Schrödinger equation in dimensions five and higher*, R. Killip and M. Visan, preprint [math.AP/0804.1018](#).
- *The mass-critical nonlinear Schrödinger equation with radial data in dimensions three and higher*, R. Killip, M. Visan, and X. Zhang, preprint [math.AP/0708.0849](#).
- *The cubic nonlinear Schrödinger equation in two dimensions with radial data*, R. Killip, M. Visan, and T. Tao, preprint [math.AP/0707.3188](#).
- *Global existence and scattering for rough solutions to generalized nonlinear Schrödinger equations on \mathbb{R}* , J. Colliander, J. Holmer, M. Visan, and X. Zhang, (to appear CCAA).
- *The energy-critical NLS with quadratic potential*, R. Killip, M. Visan, and X. Zhang, (to appear Comm. PDE).

- *Global well-posedness and scattering for the mass-critical nonlinear Schrödinger equation for radial data in higher dimensions*, T. Tao, M. Visan, and X. Zhang, *Duke Math. J.* **140** (2007), 165–202.
- *Minimal-mass blowup solutions of the mass-critical NLS*, T. Tao, M. Visan, and X. Zhang (to appear *Forum Mathematicum*).
- *On the blowup for the L^2 -critical focusing nonlinear Schrödinger equation in higher dimensions below the energy class*, M. Visan and X. Zhang, *SIAM J. Math. Anal.* **39** (2007), 34–56.
- *Global well-posedness and scattering for a class of nonlinear Schrödinger equations below the energy space*, M. Visan and X. Zhang, preprint [math.AP/0606611](#).
- *The Schrödinger equation with combined power-type nonlinearities*, T. Tao, M. Visan, and X. Zhang, *Comm. PDE* **32** (2007), 1281–1343.
- *The defocusing energy-critical nonlinear Schrödinger equation in higher dimensions*, M. Visan, *Duke Math. J.* **138** (2007), 281–374.
- *Stability of energy-critical nonlinear Schrödinger equations in high dimensions*, T. Tao and M. Visan, *Electron. J. Diff. Eqns.* **118** (2005), 1–28.
- *A counterexample to dispersive estimates for Schrödinger operators in higher dimensions*, M. Goldberg and M. Visan, *Comm. Math. Phys.* **266** (2006), 211–238.
- *Global well-posedness and scattering for the defocusing energy-critical nonlinear Schrödinger equation in \mathbb{R}^{1+4}* , E. Ryckman and M. Visan, *Amer. J. Math.* **129** (2007), 1–60.

AWARDS, HONORS:

- 2006 Clay Liftoff Fellowship.
- 2003 Horn-Moez Prize for Excellence in First-Year Graduate Studies (UCLA).
- 2002–06 Pauly Fellowship (UCLA).
- 2002 Honorary Member of Henri Coanda Foundation.
- 2002 Dean’s Award for Excellence (Univ. Bucharest).
- 1999–00 Erasmus Fellowship awarded by the University Tor Vergata, Rome.
- 1998–02 Honors Fellowship (Univ. Bucharest).
- 1998 Third prize at the international Physics contest ‘Schwartz’.
- 1998 Award for Excellence (Trajan College).
- 1994–98 Honors Fellowship (Trajan College).
- 1992–98 First, second and third prizes at national and international contests of Mathematics and Physics.

TEACHING EXPERIENCE:

UCLA:

- 2004 T.A., Math 131BH (Real Analysis, Honors). {Winter}
- T.A., Math 133 (Fourier Analysis). {Winter}
- T.A., Math 131C (Topics in Real Analysis). {Spring}
- T.A., Math 32B (Multi-variable Calculus). {Spring}
- T.A., Math 132 (Complex Analysis). {Fall}

- 2003 T.A., Math 31B (Calculus). {Fall}
 T.A., Math 131AH (Real Analysis, Honors). {Fall}
 T.A., Math 32A (Multi-variable Calculus). {Fall}

RESEARCH TALKS:

- Peking University, Beijing, China, 2008.
- Clay Mathematics Institute Summer School, Zürich, Switzerland, 2008. (Mini-course)
- Riviere-Fabes Symposium, Univ. of Minnesota, MN, 2008.
- Analysis seminar, Univ. of Rochester, NY, 2007.
- Nonlinear Waves and Dispersive Equations, Workshop, Oberwolfach, Germany, 2007.
- Analyse des Equations aux Dérivées Partielles, Evian, France, 2007.
- Academy of Mathematics and Systems Science, Beijing, China, 2007.
- Analysis seminar, Kansas State Univ., KS, 2007.
- Midwest Partial Differential Equations Seminar, Univ. of Kentucky, KY, 2007.
- Kyoto University, Japan, 2007.
- Special Session on Nonlinear Schrödinger Equations, Winter Meeting of the Canadian Mathematical Society, Toronto, Canada, 2006.
- Global Harmonic Analysis and its Applications, Workshop, Johns Hopkins Univ., Baltimore, MD, 2006.
- Calderon-Zygmund Analysis Seminar, Univ. of Chicago, IL, 2006.
- Analysis Seminar, Princeton University, NJ, 2006.
- Mathematical Physics Seminar, Caltech, CA, 2006.
- Schrödinger Evolution Equations, BIRS, Banff, Canada, 2006.
- Mathematical Physics Seminar, Caltech, CA, 2006.
- PDE Seminar, Northwestern Univ., IL, 2006.
- Calderon-Zygmund Analysis Seminar, Univ. of Chicago, IL, 2006.
- Special Session on Harmonic Analysis and PDEs, AMS Meeting, Eugene, OR, 2005.
- Biweekly Seminar, MSRI, Berkeley, CA, 2005.
- Analysis/PDE Seminar, MIT, Cambridge, MA, 2005.
- Analysis Seminar, UCLA, Los Angeles, CA, 2005.

EXPOSITORY TALKS:

Participating Seminar in Analysis, UCLA:

- Dispersive Estimates for Schrödinger Operators (2 talks).
- Endpoint Strichartz Estimates, by M. Keel and T. Tao (2 talks).
- The Stein-Tomas Restriction Theorem (1 talk).
- L^p Limiting Absorption Principle, by M. Goldberg and W. Schlag (2 talks).
- The Limiting Absorption Principle and Unique Continuation (2 talks).
- Oscillatory Integrals and Their Applications to the Circle Problem (1 talk).

Summer schools:

- Approximations of solutions of the cubic nonlinear Schrödinger equations by finite-dimensional equations and nonsqueezing properties, by J. Bourgain (2 talks). Lake Arrowhead Summer School on Hamiltonian Dynamics and Integrable Systems, 2004.

- Discrete analogues in harmonic analysis. Spherical averages, by A. Magyar, E. Stein, S. Wainger (2 talks). Catalina Summer School on Harmonic Analysis and Number Theory, 2003.