

A. Shadi Tahvildar-Zadeh

Curriculum Vitae

Birthdate: August 22, 1961

Birthplace: Teheran, Iran

EDUCATIONAL HISTORY

Ph.D. Courant Institute of Mathematical Sciences, May 1991
Thesis Advisor: Prof. Jalal Shatah.
Title: Harmonic Maps of the Minkowski Space

M.S. Courant Institute of Mathematical Sciences, 1989

B.S. Sharif University of Technology, Tehran, Iran, 1985

PROFESSIONAL HISTORY

Fall 2007 Guest Professor, Sharif University of Technology, Tehran

2003-2004 Member, Institute for Advanced Study

2000-present Associate Professor, Rutgers – New Brunswick

1994-2000 Assistant Professor, Princeton University

1992-1994 Assistant Professor, University of Michigan

1991-1992 Member, Institute for Advanced Study

PUBLICATIONS

1. (with M. Kiessling), *On the relativistic Vlasov-Poisson system* (2007) to appear in *Indiana University Math Journal* [arXiv:0708.1760v3]
2. (with N. Burq, F. Planchon & J. Stalker), *Strichartz estimates for wave and Schrödinger equations with potentials of critical decay*, *Indiana University Math Journal*, Vol. 53, No. 6 (2004), 1667-1682 [arXiv:math.AP/0401019].
3. (with J. Stalker), *Scalar waves on naked singularity backgrounds*, *Classical and Quantum Gravity*, Vol. 21, 2831–2848 (2004) [arXiv:gr-qc/0401011].
4. (with N. Burq, F. Planchon & J. Stalker) *Strichartz estimates for the wave and Schrödinger equations with the inverse-square potential*, *Journal of functional analysis* Vol. 203, 519–549, (2003).

5. (with J. Stalker & F. Planchon) *Dispersive Estimate for the Wave Equation with the Inverse-Square Potential*, Discrete and Continuous Dynamical Systems, Vol. 9, No. 6, 1387–1400, (2003).
6. (with J. Stalker & F. Planchon), *L^p Estimates for the Wave Equation with the Inverse-Square Potential*, Discrete and Continuous Dynamical Systems, Vol. 9, NO. 2, 427–442, (2003).
7. (with F. Majidi) *Hachtroudi*, Encyclopaedia Iranica, Vol. 12, Fascicle 1 (2003).
8. (with Yan Guo) *Formation of Singularities in Relativistic Fluid Dynamics and in Spherically Symmetric Plasma Dynamics*, Contemporary Mathematics, Vol. 238, 151–161, (1999).
9. *Relativistic and Non-relativistic Elastodynamics with Small Shear Strains*, Ann. Inst. H. Poincaré Phys. Théor., Vol. 69, No. 3, 275–307, (1998).
10. (with T. Cazenave & J. Shatah), *Harmonic Maps of the Hyperbolic Space and Development of Singularities for Wave Maps and Yang-Mills Fields*, Ann. Inst. H. Poincaré Phys. Théor. , Vol. 68, NO. 3, 315–349, (1998).
11. (with A. Schlatter & M. Struwe), *Global Existence of the Equivariant Yang-Mills Flow in Four Dimensions*, Amer. J. Math. , Vol. 120, 117–128, (1998).
12. (with J. Shatah), *On the Stability of Stationary Wave Maps*, Comm. Math. Phys., Vol. 185, 231–256, (1997).
13. *Wave Maps, or Harmonic Maps of Lorentzian Manifolds*, (in Persian), Nashr-e Riyāzi, Vol. 7, No. 1, 6–14, (1995).
14. (with J. Shatah), *On the Cauchy Problem for Equivariant Wave Maps*, Comm. Pure Appl. Math., Vol. XLVII, 719-754, (1994).
15. (with D. Christodoulou), *On the Asymptotic Behavior of Spherically Symmetric Wave Maps*, Duke Math. Jour., Vol. 71, No. 1, 31-69, (1993).
16. (with D. Christodoulou), *On the Regularity of Spherically Symmetric Wave Maps*, Comm. Pure Appl. Math., Vol. XLVI, 1041-1091, (1993).
17. (with J. Shatah), *Regularity of Harmonic Maps from the Minkowski Space into Rotationally Symmetric Manifolds*, Comm. Pure Appl. Math., Vol. XLV, 947-971, (1992).

GRANTS

7/03–7/08 National Science Foundation Grant DMS-0301207, \$102,000.

INVITED TALKS

- Summer 2008 **Mathematisches Forschungsinstitut, Oberwolfach, Germany** Meeting on Nonlinear Evolution Problems
Isfahan University of Technology, Iran 8th Seminar on Differential Equations, Dynamical Systems and Applications
Banff International Research Station for Mathematical Innovation and Discovery (BIRS), Canada Workshop on Asymptotics and Singularities in Nonlinear and Geometric Dispersive Equations
- Fall 2007 **Institute for Theoretical Physics and Mathematics, Tehran, Iran** PDE Day
- Summer 2006 **Sharif University of Technology, Tehran, Iran** Analysis Seminar
- Spring 2003 **Mathematisches Forschungsinstitut, Oberwolfach, Germany** Meeting on Mathematical Aspects of General Relativity
Mathematisches Forschungsinstitut, Oberwolfach, Germany Meeting on Nonlinear Evolution Problems

SERVICE ACTIVITIES

During the period July 2002 to the present time, I have

- helped the graduate vice-chair with the screening of applicants for admission.
- reviewed and evaluated, at the request of the chair of the math department at a US university, all the publications of a faculty member at that department who was being considered for tenure (about 26 papers).
- served as a referee for the following journals:
Communications in Partial Differential Equations,
Communications in Pure and Applied Mathematics (3 manuscripts)
Differential and Integral Equations
International Journal of Mathematics and Mathematical Sciences
SIAM Journal of Mathematical Analysis.
- reviewed a proposal for the FWF (Austrian Science Fund).
- reviewed the new edition of a differential equations textbook.
- organized a study session at the Cargèse Summer School on general relativity.