

# Curriculum Vitae for Shuanglin Shao

## Contact

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## Education

2004-2008 Ph.D., University of California, Los Angeles  
*Thesis: Restriction estimates for paraboloids and cones in the cylindrically symmetric case*  
Advisor: Terence Tao  
2001-2004 M.S., Beijing Normal University, China  
*Thesis: On the boundedness of a class of singular integrals with variable kernels*  
Advisors: Yong Ding, Shanzhen Lu  
1997-2001 B.S. (Honors) in Mathematics, Beijing Normal University, China

## Employments

Member, Institute for Mathematics and its applications, 2009-2011.  
Member, Institute for Advanced Study, 2008-2009.

## Research Interests

Harmonic Analysis, Partial Differential Equations.

## Preprints and Papers

1. *On the mass critical generalized KdV equation*, with R. Kilip, S. Kwon and M. Visan, arXiv:0907.5412.
2. *The mass-critical fourth-order Schrödinger equation in high dimensions*, with B. Pausader, arXiv:0906.1547.
3. *The linear profile decomposition for the Airy equation and the existence of maximizers for the Airy Strichartz inequality*, arXiv:0809.0157; to appear Analysis and PDE.
4. *Maximizers for the Strichartz inequalities and the Sobolev-Strichartz inequalities for the Schrödinger equation*, Electronic Journal of Differential Equations, Vol. **2009** (2009), No. 03, pp. 1-13.
5. *A note on the restriction conjecture for the cone in the cylindrically symmetric case*, Proc. Amer. Math. Soc. **137** (2009), 135-143.
6. *Sharp linear and bilinear restriction estimate for paraboloids in the cylindrically symmetric case*, arXiv:0706.3759; to appear Revista Matemática Iberoamericana.
7. *Integral operators with variable kernels on weak Hardy spaces*, with Y. Ding and S. Lu, J. Math. Anal. Appl. **317** (2006), no. 1, 127-135.
8. *On the Marcinkiewicz integral with variable kernels*, with Y. Ding and C. Lin, Indiana Univ. Math. J. **53** (2004), no. 3, 805-821.

## Awards and Fellowships

2004–2008 University Fellowships and Stipends (UCLA)  
2004–2008 UCLA Teaching/Research Assistantship (UCLA)  
1998–2000 First Prize scholarships for Academic Excellence (Beijing Normal University)

## Research Talks

- *Harmonic analysis and Mathematics Physics Seminar*, UIUC, March 30 - April 4, 2009.
- *PDE seminar*, Brown University, March 13, 2009.
- *Geometric PDE seminar*, IAS, March 3, 2009.
- *Courant Institute Analysis Seminar*, NYU, February 19, 2009.
- *The special session, Harmonic Analysis and PDE with applications, in the joint meeting of AMS and SMS*, Fudan University, Shanghai, December 2008.
- *International Workshop in Fourier Analysis and PDE*, Beijing Normal University, Beijing, December 2008.
- *Department Colloquium*, Georgia Southern University, May 2008.
- *Calderón-Zygmund Analysis Seminar*, University of Chicago, IL, November 2007.
- *Analysis and PDE seminar*, John Hopkins University, Baltimore, MD, September 2007.

#### Participating Seminar in Analysis, UCLA, 2004–2008.

- *The existence of Maximizers for the Schrödinger-Strichartz inequalities* (1 talk).
- *The profile Decomposition for the Schrödinger Equations* (1 talk).
- *Restriction estimates for paraboloids and cones in the cylindrically symmetric case* (2 talks).
- *A sharp bilinear restriction estimates for the paraboloid*, after T. Tao (2 talks).
- *Linear and bilinear endpoint Strichartz estimates*, after S. J. Montgomery-Smith, M. Keel, and T. Tao (2 talks).
- *Restriction Theorems in dimension 2*, after E. M. Stein, T. Tao, A. Vargas, and L. Vega (2 talks).
- *Restriction Conjecture implies Kakeya Conjecture*, after T. Wolff (2 talks).
- *Regularity of solutions to Schrödinger solutions*, after P. Sjölin, L. Vega (2 talks).

#### Conferences, Workshops and Summer Schools Attended

- *Clay Mathematics Institute Summer School on Evolution Equations, Eidgenössische Technische Hochschule*, Zürich, Switzerland, June 23-July 19, 2008.
- *The Summer school on Analysis and Ergodic theory*, UCLA, September 2006.
- *The Riviére-Fabes Symposium on Analysis and PDE*, University of Minnesota, Minneapolis, MN, April 2008.
- *The Riviére-Fabes Symposium on Analysis and PDE*, University of Minnesota, Minneapolis, MN, April 2007.
- *JAMI conference on nonlinear dispersive equations*, John Hopkins University, Baltimore, MD, March 2007.
- *The Riviére-Fabes Symposium on Analysis and PDE*, University of Minnesota, Minneapolis, MN, April 2006.

#### Teaching at UCLA

- 2008 Math 132 (Complex Analysis)
- 2007 Math 3C (Calculus and Probability for life science students)
- Math 131A (Real Analysis)
- Math 266B (Graduate applied PDE)
- 2006 Math 131A (Real Analysis)
- Math 31B (Integration and Infinite Series)
- Math 115A (Linear Algebra)
- Math 115A (Linear Algebra)
- 2005 Math 115A (Linear Algebra)
- Math 115A (Linear Algebra)
- Math 164 (Optimization)