

# Abhishek Saha

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## CONTACT INFORMATION

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## PERSONAL

Born *December 1982* in Kolkata, India. Indian citizen.

## EMPLOYMENT

**ETH Zurich**  
Postdoc, *September 2009 – present.*

## EDUCATION

- ◇ **California Institute of Technology**  
Ph.D. in Mathematics, *June 2009.*  
Thesis title: *On critical values of L-functions for holomorphic forms on  $GS(4) \times GL(2)$*   
Thesis advisor: *Dinakar Ramakrishnan*
- ◇ **Indian Statistical Institute, Bangalore**  
Bachelor (B. Math. Hons. with distinction), *June 2004.*

## HONORS AND AWARDS

- ◇ ETH Fellowship, ETH Zurich, 2009-2011.
- ◇ Scott Russell Johnson Graduate Dissertation Prize in Mathematics, California Institute of Technology, 2009.
- ◇ Scott Russell Johnson Prize for Excellence in Graduate Studies in Mathematics (research), California Institute of Technology, 2006.
- ◇ Scott Russell Johnson Prize for Excellence in Graduate Studies in Mathematics (excellent first year student), California Institute of Technology, 2005.
- ◇ Silver Medal at the 42nd International Mathematical Olympiad, USA, 2001.
- ◇ Silver Medal at the 41st International Mathematical Olympiad, Korea, 2000.
- ◇ Bronze Medal at the 40th International Mathematical Olympiad, Romania, 1999.
- ◇ Kishore Vaigyanik Protsahan Yojana fellowship, awarded by the Government of India, 1999-2004.

## RESEARCH INTERESTS

Number theory, classical and higher rank modular forms, automorphic representations.

## PUBLICATIONS (ALSO AVAILABLE ON MY HOMEPAGE AND ON THE ARXIV)

- ◇ **Hilbert Modular forms of weight  $1/2$  and Theta Functions** (with S. Achimescu), *J. Number Theory* (2008), 128(12):3037–3062.
- ◇ **L-functions for holomorphic forms on  $GS(4) \times GL(2)$  and their special values**, *Int. Math. Res. Not. IMRN* (2009), 2009(10):1773–1837.
- ◇ **Pullbacks of Eisenstein series from  $GU(3, 3)$  and critical L-values for  $GS(4) \times GL(2)$** , *Pacific J. Math.* (2010), 246(2):435–486.
- ◇ **A note on Fourier coefficients of Poincare series** (with E. Kowalski and J. Tsimerman), *Mathematika* (2011), 57(1):31–40.
- ◇ **Prime density results for Hecke eigenvalues of a Siegel cusp form**, *Int. J. Number Theory* (2011), 7(4):971–979.
- ◇ **Local spectral equidistribution for Siegel modular forms and applications** (with E. Kowalski and J. Tsimerman), *Compositio Math.*, to appear.

- ◇ **Siegel cusp forms of degree 2 are determined by their fundamental Fourier coefficients**,  
*Math. Ann.*, to appear.
- ◇ **Transfer of Siegel cusp forms of degree 2** (with A. Pitale and R. Schmidt), *Submitted*.
- ◇ **Yoshida lifts and simultaneous non-vanishing of dihedral twists of modular  $L$ -functions** (with R. Schmidt), *Submitted*.
- ◇ **Bounds for Rankin-Selberg integrals and quantum unique ergodicity for powerful levels** (with P. Nelson and A. Pitale), *Preprint*.

TEACHING  
EXPERIENCE◇ **ETH Zurich***Instructor*An introduction to adèles and  $L$ -functions, Spring 2010/2011.◇ **California Institute of Technology***Instructor*

Ma 17 How to Solve It, Fall 2007.

*Teaching Assistant (recitation sessions and grading)*

Ma 1 Calculus of One and Several Variables and Linear Algebra, Fall, Winter, Spring 2005/2006.

Ma 2 Probability and Statistics, Winter 2007.

*Teaching Assistant (grading and office hours)*

Ma 3 Number Theory for Beginners, Spring 2006/2007.

Ma 6 Introduction to Discrete Mathematics, Winter, Spring 2007/2008, Fall, Winter 2008/2009.

Ma 120 Abstract Algebra, Fall, Winter, Spring 2004/2005.

Ma 121 Combinatorial Analysis, Fall, Winter 2008/2009.

Ma 130 Algebraic Geometry, Fall, Winter 2006/2007.

## TALKS

- ◇ International Colloquium on Automorphic Representations, *TIFR*, January 9 2012.
- ◇ Seminar, *University of Zagreb*, December 8 2011.
- ◇ Seminar, *Texas A&M*, September 21 2011.
- ◇ Seminar, *Ohio State University*, September 19 2011.
- ◇ TORA conference, *University of North Texas*, September 17 2011.
- ◇ Workshop on Analytic theory of Automorphic Forms, *Oberwolfach*, August 29 2011.
- ◇ Automorphic Forms Workshop, *University of Oregon*, March 24 2011.
- ◇ Seminar, *EPFL Lausanne*, February 15 2011.
- ◇ Seminar, *University of Mannheim*, December 9 2010.
- ◇ Seminar, *ETH Zurich*, October 29 2010.
- ◇ Seminar, *EPFL Lausanne*, June 11 2010.
- ◇ Seminar, *Caltech*, May 27 2010.
- ◇ AMS Sectional meeting, *New Jersey Institute of Tech.*, May 23 2010.
- ◇ Automorphic Forms Workshop, *University of Hawaii*, March 26 2010.
- ◇ Seminar, *ETH Zurich*, November 20 2009.
- ◇ Seminar, *University of California at San Diego*, February 12 2009.
- ◇ Karcher Colloquium, *University of Oklahoma*, September 4 2008.
- ◇ Seminar, *Oklahoma State University*, September 3 2008.

CONFERENCES AND  
WORKSHOPS  
ATTENDED

- ◇ *International Colloquium on Automorphic Representations*, TIFR, India, January 2012.
- ◇ *TORA conference*, University of North Texas, September 2011.
- ◇ *The Analytic Theory of Automorphic Forms*, Oberwolfach, August 2011.
- ◇ *Automorphic forms workshop*, University of Oregon, Corvallis, March 2010.
- ◇ *Group Actions in Number Theory*, EPFL, Lausanne, January 2011.
- ◇ *ICM*, Hyderabad, August 2010.
- ◇ *ICM Satellite conference on automorphic forms and number theory*, Goa, August 2010.
- ◇ *Number theory and representation theory*, Harvard University, Cambridge, June 2010.
- ◇ *AMS sectional meeting*, NJIT, Newark, May 2010.
- ◇ *ESI seminar in number theory*, ESI, Vienna, May 2010.
- ◇ *Automorphic forms workshop*, University of Hawaii, Manoa, March 2010.
- ◇ *Arizona winter school: quadratic forms*, University of Arizona, Tucson, March 2009.
- ◇ *Analytic number theory and higher rank groups*, Courant Institute of Mathematical Sciences, New York, May 2008.
- ◇ *Summer school in Iwasawa theory*, McMaster University, Hamilton, Canada, August 2007.
- ◇ *On certain L-functions*, Purdue University, West Lafayette, July 2007.
- ◇ *The Tate conjecture*, American Institute of Mathematics, Palo Alto, July 2007.
- ◇ *Automorphic forms workshop*, University of California at Santa Barbara, Santa Barbara, March 2007.
- ◇ *Computing with modular forms*, Mathematical Sciences Research Institute, Berkeley, August 2006.
- ◇ *p-adic modular forms and applications*, Center International de Rencontres Mathematiques, Luminy, France, July 2006.

REFERENCES

Dinakar Ramakrishnan  
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University of Oklahoma  
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