

# Lei Zhang

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EDUCATION Ph.D. in Math., The University of Minnesota 2011  
B.S. in Math., Peking University 2005

ACADEMIC • Assistant Professor, National University of Singapore 2014–present  
APPOINTMENTS • Visiting Assistant Professor, Boston College 2011–2014

RESEARCH Automorphic Forms, Number Theory and Representation Theory.  
INTERESTS

- PUBLICATIONS AND PREPRINTS
1. *Automorphic Forms on Certain Symmetric Spaces*. Ph.D. Thesis, The University of Minnesota, 2011.
  2. *Gelfand pairs*  $(\mathrm{Sp}_{4n}(F), \mathrm{Sp}_{2n}(E))$ . *J. Number Theory* 130 (2010), no. 11, 2428–2441.
  3. *Poles of certain residual Eisenstein series of classical groups*. *Pacific J. Math.* 264 (2013), no. 1, 83–123, (with Dihua Jiang and Baiying Liu).
  4.  $\mathrm{Sp}_{2n}(\mathbb{F}_{q^2})$ -invariants in irreducible unipotent representations of  $\mathrm{Sp}_{4n}(\mathbb{F}_q)$ . *J. Algebra* 395 (2013), 24–46.
  5. *A Product of Tensor Product L-functions of Quasi-splits Classical Groups of Hermitian Type*. *Geom. Funct. Anal.* 24 (2014), no. 2, 552–609, (with Dihua Jiang).
  6. *Eisenstein Series on Covers of Odd Orthogonal Groups*. *Amer. J. Math.* 137 (2015), no. 4, 953–1011, (with Solomon Friedberg).
  7. *Distinguished Tame Supercuspidal Representations of Symmetric Pairs*  $(\mathrm{Sp}_{4n}(F), \mathrm{Sp}_{2n}(E))$ . With an appendix by Dihua Jiang and Lei Zhang. *Manuscripta Math.* 148 (2015), no. 1–2, 213–233.
  8. *Tokuyama-type formulas for type B*. *Israel J. Math.* 216 (2016), no. 2, 617–655, (with Solomon Friedberg).
  9. *The Jacquet Langlands correspondence via twisted descent*. *Int Math Res Notices*, 2016 (18): 5455–5492, (with Dihua Jiang, Baiying Liu, and Bin Xu).
  10. *Arthur parameters and cuspidal automorphic modules of classical groups*. arXiv:1508.03205, (with Dihua Jiang).
  11. *Local Root Numbers and Spectrum of the Local Descents for Orthogonal Groups: p-adic case*, arXiv:1703.06451, (with Dihua Jiang).
  12. *Automorphic Integral Transforms for Classical Groups II: Twisted Descents*, accepted by Howe’s 70th birthday volume, 2016 (with Dihua Jiang).

13. *On the Non-vanishing of the Central Value of Certain L-functions: Unitary Groups*, 2017 (with Dihua Jiang).
14. *Whittaker-Shintani Functions for General Linear Groups*, appear in SCIENCE CHINA Mathematics, 2017.
15. *The Exterior Cube L-function for  $GU_6$* , preprint.
16. *Local theory of tensor product L-functions of classical groups: Bessel-Fourier type*, joint with Dihua Jiang and David Soudry, in preparation.

AWARDS AND  
HONORS

- National University of Singapore tier-1 grant, 2017–2019.
- National University of Singapore start-up grant, 2014–2017.
- Junior Research Fellowship at The Erwin Schrödinger International Institute for Mathematical Physics, Vienna, Austria, 2009.

ORGANIZING  
CONFERENCES

- On the Langlands Program: Endoscopy and Beyond, Institute for Mathematics Science, Singapore, 17 Dec 2018 – 18 Jan 2019.
- Pan Asia Number Theory Conference 2018, Institute for Mathematics Science, Singapore, 25 – 29 Jun 2018.
- New Developments in Representation Theory, Institute for Mathematics Science, Singapore, Mar. 2016.
- Workshop on automorphic kernel functions, The American Institute of Mathematics, Nov. 30 – Dec. 4, 2015.

SELECTED TALKS

- Number Theory Seminar, Chinese Academy of Sciences, Beijing, Aug. 10, 2017.
- Automorphic Representations and L-functions, Shangdong University at Weihai, Aug. 6–7, 2017.
- Workshop on Automorphic Forms and Automorphic Representations, Shanghai Center for Mathematical Sciences, Fudan University, July
- Workshop on Lie Group Representations and Automorphic Forms, Beijing International Center for Mathematical Research, July 3–8, 2017.
- New Developments in Representation Theory, Institute for Mathematics Science, Singapore, Mar. 2016.
- Workshop on automorphic kernel functions, The American Institute of Mathematics, Nov. 30 – Dec. 4, 2015.
- Automorphic Forms, Geometry and Representation Theory in Hangzhou, Zhejiang University, July 26–31, 2015.
- Pan Asia Number Theory Conference 2015 in Sanya, July 21–24, 2015.
- Workshop on Automorphic Forms and Representations in Beijing, July 1–11, 2014.
- Workshop on The Future of Trace Formulas, Banff International Research Station, Canada, Jun. 1–6, 2014.
- AMS Sectional Meeting, The University of Maryland, Jan. 15–16, 2014.
- MIT Number Theory Seminar, Dec. 3, 2013.
- Number Theory Seminar, Boston University, Nov. 18, 2013.
- Automorphic Forms and Arithmetic Seminar, Columbia University, Nov. 15,

2013.

- MIT Lie Groups Seminar, Part (II), MIT, Nov. 13, 2013.
- MIT Lie Groups Seminar, Part (I), MIT, Nov. 6, 2013.
- Advances in the theory of automorphic forms and their L-functions The Schrödinger International Institute for Math Physics (Vienna), Austria, Oct. 16–26, 2013.
- Workshop on Whittaker Functions: Number Theory, Geometry and Physics, Banff International Research Station, Canada, Oct. 13–18, 2013.
- Maine-Québec Number Theory Conference, The University of Maine, Oct. 5–6, 2013.
- Summer Workshop on Arithmetic Geometry, Tsinghua University, Jul. 22–25, 2013.
- The Sixth International Congress of Chinese Mathematicians at Taiwan, Jul. 14–19, 2013.
- Mini-Workshop on Langlands Functoriality, The University of Minnesota, May 6–10, 2013.
- ICERM Semester Program on Automorphic Forms, Combinatorial Representation Theory and Multiple Dirichlet Series, ICERM, Apr. 2013.
- Number Theory Seminar, University of Wisconsin at Madison, Nov. 2012.
- Number Theory Seminar, Peking University, China, Jul. 2012.
- Working Seminar at Morningside Center of Mathematics, Chinese Academy of Science, Beijing, Jul. 2013.
- Lie Theory Seminar, The University of Minnesota, Jun. 2012.
- Number Theory and Algebraic Geometry Seminar, Boston College, Feb. 2012.
- AMS Eastern Sectional Meeting, Cornell University, Sept. 2011.
- Midwest Number Theory Conference for Graduate Students and Recent PhD's 2010, University of Michigan, Nov. 2010.
- Conference on Automorphic Forms and Representation Theory, University of Oklahoma, Oct. 2010.
- Working Seminar on Representations of  $p$ -adic Groups, The University of Minnesota, 2009–2010.
- Midwest Conference on Automorphic Forms, Representation Theory, and Number Theory, University of Iowa, Oct. 2009.