

Curriculum Vitae
Wei Zhang
09/2016

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BIRTH YEAR/PLACE 1981
Sichuan, China.

CITIZENSHIP P.R. China, and US permanent resident.

RESEARCH INTERESTS Number theory, automorphic forms and related area in algebraic geometry.

EDUCATION

09/2000-06/2004 B.S., Mathematics, Peking University, China.
08/2004-06/2009 Ph.D, Mathematics, Columbia University.
Advisor: Shouwu Zhang

EMPLOYMENT

07/2015–Now, Professor, Columbia University.
01/2014-06/2015 Associate professor, Columbia University.
07/2011-12/2013 Assistant professor, Columbia University.
07/2010-06/2011 Benjamin Peirce Fellow, Harvard University.
07/2009-06/2010 Postdoctoral fellow, Harvard University.

AWARD,HONOR

The 2010 SASTRA Ramanujan Prize.
2013 Alfred P. Sloan Research Fellowship.
2016 Morningside Gold Medal of Mathematics of ICCM.

GRANTS

07/2010 - 06/2013: PI, NSF Grant DMS 1001631, 1204365.
07/2013 - 06/2016: PI, NSF Grant DMS 1301848.
07/2016 - 06/2019: PI, NSF Grant DMS 1601144.

SELECTED RECENT
INVITED LECTURES

Automorphic Forms, Galois Representations and L-functions, Rio de Janeiro, July 23-27, 2018

The 30th Journées Arithmétiques, July 3-7, 2017, Caen, France.

Workshop, June 11-17, 2017 Weizmann, Israel.

Arithmetic geometry, June 5-9, 2017, BICMR, Beijing

Co-organizer (with Z. Yun) Arbeitsgemeinschaft: Higher Gross Zagier Formulas, 2 Apr - 8 Apr 2017, Oberwolfach

AIM Dec. 2016, SQUARE, March 2017

Plenary speaker, ICCM Beijing Aug. 2016

Number theory conference, MCM, Beijing, July 31-Aug 4, 2016

Luminy May 23-27 2016

AMS Sectional Meeting Invited Addresses, Fall Eastern Sectional Meeting, Nov. 2015.

Clay conference, Sep 2015/2016

Oberwolfach, Aug 2012, Aug 2015, May 2017.

SOUTHERN CALIFORNIA NUMBER THEORY DAY, U.C. SAN DIEGO, May 23, 2015

CRM, Montreal, Kudla's programme, 04/2015

MSRI Automorphic forms, Shimura varieties, Galois representations and L-functions 12/2014

CRM, Montreal, Counting arithmetic objects (Ranks of elliptic curves), 11/2014

BC-MIT number theory seminar, 10/2014.

6-hour lecture series in Paris summer school on Gan-Gross-Prasad conjectures, June 18-27, 2014.

Harvard-MIT "Current Developments in Mathematics" lecture series, Nov 2013.

Plenary speaker, International Congress of Chinese Mathematicians (ICCM), Taipei, July 2013

International Colloquium on "Automorphic Representations and L -Functions", TIFR, Mumbai, India, Jan 2012.

Invited speaker, International Congress of Chinese Mathematicians (ICCM), Beijing, Dec 2010.

Pan Aisa Number Theory Conference, Kyoto, Japan, Sep , 2010.

PREPRINTS

1. *Regular formula moduli spaces and arithmetic transfer conjectures.*
(with M. Rapoport, B. Smithling). Submitted, arxiv.1604.02419
2. *Shtukas and the Taylor expansion of L-functions*
(with Zhiwei Yun), submitted arxiv.1512.02683
3. *On p-adic Waldspurger formula.*
(with Y. Liu, S. Zhang). submitted arXiv:1511.08172
4. *A majority of elliptic curves over \mathbb{Q} satisfy the Birch and Swinnerton-Dyer conjecture.*
(with M. Bhargava, C. Skinner) 2014, arxiv.1407.1826.
5. *Indivisibility of Heegner points in the multiplicative case.*
(with C. Skinner) submitted, arxiv.1407.1099.
6. *On the arithmetic transfer conjecture for exotic smooth formal moduli spaces.*
(with M. Rapoport, B. Smithling). submitted arXiv:1503.06520

PUBLICATION

1. *Selmer groups and the indivisibility of Heegner points.*
Cambridge Journal of Math., Volume 2 (2014) Number 2, 191–253
2. *The Birch–Swinnerton-Dyer conjecture and Heegner points: a survey.*
Current Developments in Mathematics, Volume 2013, 169–203.
3. *Fourier transform and the global Gan-Gross-Prasad conjecture for unitary groups.*
Ann. of Math., Vol. 180 (2014), Issue 3, 971–1049.
4. *Spherical characters for a strongly tempered pair.*
(Atsushi Ichino and Wei Zhang), appendix to *Fourier transform and the global Gan-Gross-Prasad conjecture for unitary groups.*
5. *Automorphic period and the central value of Rankin–Selberg L-function.*
J. Amer. Math. Soc. 27 (2014), 541–612.
6. *On the arithmetic fundamental lemma in the minuscule case.*
(with M. Rapoport, U. Terstiege), Compositio Math., 2013, volume 149, issue 10, pp. 1631–1666.
7. *Harmonic analysis for relative trace formula.*
in “Automorphic Representations and L-Functions”, edited by: D. Prasad, C. S. Rajan, A. Sankaranarayanan, and J. Sengupta, Tata Institute of Fundamental Research, 2013, Mumbai, India. ISBN-10: 93-80250-49-5, ISBN-13: 978-93-80250-49-6
8. *On the smooth transfer conjecture of Jacquet–Rallis for $n = 3$.*
The Ramanujan Journal, (*Ramanujan’s 125th anniversary special volume*), Volume 29, Issue 1 (2012), 225–256.
9. *The Gross–Zagier formula on Shimura curves.*
(with Xinyi Yuan, Shou-Wu Zhang), 266 pp., *Annals of Mathematics Studies* #184, Princeton University Press, 2012, ISBN: 9781400845644.
10. *On arithmetic fundamental lemmas.*
Inventiones Mathematicae, Volume 188 (2012), Number 1, 197–252.

11. *Gross-Zagier formula and arithmetic fundamental lemma.*
in Fifth International Congress of Chinese Mathematicians Part 1, AMS/IP Studies in Advanced Mathematics, vol. 51, Amer. Math. Soc., Providence, RI, 2012, pp. 447-459.
12. *The Gross-Kohnen-Zagier theorem over totally real fields.*
(with Xinyi Yuan, Shou-Wu Zhang), Compositio Math. 145 (2009), no. 5, 1147-1162.