

Chen Wan

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Citizenship: China
Year of Birth: 1994

Education

- **B.S.** Department of Mathematics, Nanjing University. 2009-2013
- **Ph.D.(Advisor: Dihua Jiang)** School of Mathematics, University of Minnesota. 2013-2017

Research Interests

Automorphic Forms, Representation Theory, Trace Formula, L-Functions.

Employment

- Member, Institute for Advanced Study 2017-2018
- C.L.E. Moore Instructor, Massachusetts Institute of Technology 2018-2020
- Assistant Professor, Rutgers University-Newark 2020-present

Publications

- [1] *A local relative trace formula for the Ginzburg-Rallis model: the geometric side.* **Memoirs of the AMS** Volume 261, Number 1263.
- [2] *Multiplicity one theorem for the Ginzburg-Rallis Model: the tempered case.* **Trans. Amer. Math. Soc.** 371 (2019), 7949-7994.
- [3] *The local Ginzburg-Rallis model over complex field.* **Pacific Journal of Mathematics** 291-1 (2017), 241-256.
- [4] *A Local Trace Formula and the Multiplicity One Theorem for the Ginzburg-Rallis Model.* Ph.D. thesis, 2017. 226 pages
- [5] *A Local Trace formula for the Generalized Shalika Model*, with Raphael Beuzart-Pleassis. **Duke Mathematical Journal** Volume 168, Number 7 (2019), 1303-1385.
- [6] *The Local Ginzburg-Rallis Model for Generic Representations.* **J. Number Theory** 198 (2019), 74-123.

- [7] *A G_2 -period of a Fourier coefficient of an Eisenstein series on E_6* , with Aaron Pollack and Michal Zydor. **Israel Journal of Mathematics** **234** (2019), 229–279.
- [8] *The multiplicity problems for the unitary Ginzburg-Rallis models*, with Lei Zhang. Accepted by **Israel Journal of Mathematics**, 50 pages.
- [9] *On the residue method for period integrals*, with Aaron Pollack and Michal Zydor. **Duke Mathematical Journal** Volume 170, Number 7 (2021), 1457-1515.
- [10] *On multiplicity formula for spherical varieties*. Accepted by **Journal of the European Mathematical Society**, 51 pages.
- [11] *Periods of automorphic forms associated to strongly tempered spherical varieties*, with Lei Zhang. Submitted, 2021. 75 pages. arXiv:2102.03695
- [12] *A multiplicity formula of K -types*. Submitted, 2021. 41 pages. arXiv:2110.10744

Grants

2020-2023 National Science Foundation DMS-2000192 (later transferred to DMS-2103720) “Multiplicities and Period Integrals for Spherical Varieties”, amount \$159,159

Honors and Awards

- 2017 Silver medal, New World Mathematics Award, Doctoral Thesis Award.
- 2017 IAS membership for academic year 2017-2018.
- 2013 First prize of Bachelor Thesis in Nanjing University.
- 2011,2012 Mount Everest Plan Scholarship in Nanjing University.

Journal Referee

Advances in Mathematics, Algebra & Number Theory, Compositio Mathematica, Crelles Journal, Documenta Mathematica, Duke Mathematical Journal, International Mathematics Research Notices, Manuscripta Mathematica, Memoirs of the American Mathematical Society, Notices of the American Mathematical Society, Simons Proceedings Volume, Transactions of the American Mathematical Society.

Teaching experience

- Fall 2020 Calculus I and Calculus II (Rutgers University-Newark)
- Spring 2020 18.781: Theory of Numbers (Massachusetts Institute of Technology)
- Fall 2019 18.02: Calculus (Massachusetts Institute of Technology)
- Spring 2019 18.03: Differential Equations (Massachusetts Institute of Technology)

- Fall 2018 18.02: Calculus (Massachusetts Institute of Technology)
- Fall 2016 Math 1371: CSE Calculus I (University of Minnesota)
- Spring 2016 Math 1372: CSE Calculus II (University of Minnesota)
- Fall 2015 Math 1371: CSE Calculus I (University of Minnesota)
- Spring 2015 Linear Algebra and Differential Equations (University of Minnesota)
- Fall 2014 Multivariable Calculus (University of Minnesota)
- Spring 2014 Calculus I (University of Minnesota)
- Fall 2013 Calculus I (University of Minnesota)

Invited Talks

- November 2021 Number theory seminar at Rutgers-New Brunswick (online).
- November 2021 Lecture series at Academy of Mathematics and Systems Science (online), Beijing, China.
- November 2021 Basic Functions, Orbital Integrals, and Beyond Endoscopy, BIRS workshop (online), Banff, Canada.
- May 2021 Relative Aspects of the Langlands Program, L-Functions and Beyond Endoscopy, CIRM (online), Luminy, France
- March 2021 Special Session on Recent Developments in Automorphic Representations, AMS Section Meeting (online)
- September 2020 Representation Theory and Number Theory seminar (online) at National University of Singapore, Singapore.
- January 2020 Mathematics Colloquium at Rutgers-Newark, Newark.
- November 2019 Number Theory Seminar, Cornell University, Ithaca.
- October 2019 Duke Number Theory Seminar. Duke University, Durham.
- October 2019 New Developments in Representation Theory of p-adic Groups, MFO, Oberwolfach.
- September 2019 Special Session on Automorphic Forms and L-Functions. AMS Section Meeting, University of Wisconsin-Madison.
- June 2019 The 8th International Congress of Chinese Mathematicians, Beijing, China.
- January 2019 On the Langlands Program: Endoscopy and Beyond, Institute for Math. Sciences, National University of Singapore, Singapore.
- November 2018 BC Number Theory/Algebraic Geometry Seminar, Boston College, Boston.
- October 2018 Number Theory / Representation Theory Seminar, University of Wisconsin-Madison.
- June 2018 Number Theory Seminar at Nanjing University, Nanjing, China.

- June 2018 Workshop on Automorphic Forms, Geometry and Representation Theory. Zhejiang University, Hangzhou, China.
- May 2018 Lie Theory Seminar. University of Minnesota, Minneapolis.
- January 2018 Harvard Number Theory Seminar. Harvard University, Boston.
- October 2017 The 2017 Paul J. Sally, Jr. Midwest Representation Theory Conference, in honor of Freydoon Shahidi on the occasion of his 70th birthday. Purdue University.
- October 2017 University of Chicago Number Theory Seminar.
- October 2017 Northwestern Number Theory Seminar. Northwestern University, Evanston.
- August 2017 Shanghai Center for Mathematical Science, Fudan University, Shanghai.
- May 2017 Harmonic Analysis and the Trace Formula. MFO, Oberwolfach, Germany.
- March 2017 MIT Lie Groups Seminar. Massachusetts Institute of Technology, Boston.
- February 2017 Number Theory Seminar at Ohio State University. Columbus.
- February 2017 Duke Number Theory Seminar. Duke University, Durham.
- November 2016 Rutgers-Newark Junior Number Theory Days, 2016. Rutgers University-Newark
- November 2016 Automorphic Forms and Arithmetic Seminar. Columbia University, New York.
- October 2016 Special Session on Representation Theory, Automorphic Forms and Related Topics. AMS Section Meeting, University of St. Thomas, Minneapolis.
- May 2016 Relative Trace Formula, Periods, L-functions and Harmonic Analysis. CIRM, Luminy, France.
- March 2016 30th Automorphic Forms Workshop. Wake Forest University, Winston-Salem.
- December 2015 Workshops on Automorphic Kernel Functions. American Institution of Mathematics, San Jose.