

Rong Zhou

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| PERSONAL | Date of Birth: 01/18/1990 Nationality: United Kingdom |
| CONTACT INFORMATION | Fuld Hall rzhou@ias.edu School of Mathematics Institute for Advanced Study 1 Einstein Drive Princeton, NJ08540 |
| RESEARCH INTERESTS | Arithmetic Geometry and Number Theory; Geometry of Shimura varieties. |
| EMPLOYMENT | Member: Institute for Advanced Study 2017-present |
| EDUCATION | Harvard University Ph.D. Candidate, Mathematics 2012- 2017 <ul style="list-style-type: none">• Dissertation Topic: Mod-p isogeny classes on Shimura varieties with parahoric level structure• Advisor: Mark Kisin University of Cambridge B.A. in Mathematics, 2008- 2011 <ul style="list-style-type: none">• First class all three years. Final mark: 100/100 (Second Wrangler) M.Math in Mathematics (Part III), 2011- 2012 <ul style="list-style-type: none">• Graduated with Distinction |
| PAPERS/ PUBLICATIONS | <ol style="list-style-type: none">1. X. He, R. Zhou and Y. Zhu <i>Component stabilizers of affine Deligne–Lusztig varieties in the affine Grassmannian</i> coming soon!2. R. Zhou <i>Motivic cohomology of quaternionic Shimura varieties and level raising</i> Submitted3. R. Zhou and Y. Zhu <i>Twisted orbital integrals and irreducible components of affine Deligne–Lusztig varieties</i> Submitted4. R. Zhou <i>Mod-p isogeny classes on Shimura varieties with parahoric level structure</i> Submitted5. X. He and R. Zhou, <i>On the connected components of affine Deligne–Lusztig varieties</i> Submitted6. A. Shankar and R. Zhou, <i>Serre-Tate theory for Hodge-type Shimura varieties</i> Submitted7. K. Ascher, K. Dasaratha, A. Perry, R. Zhou <i>Derived equivalences and rational points on K3 surfaces</i> Proceedings of the AIM workshop: Brauer groups and obstruction problems: moduli spaces and arithmetic 2016. |
| HONORS AND AWARDS | 2017 <i>New World Mathematics Award</i> –Gold Prize for Thesis 2016-2017 <i>Merit Research Fellowship</i> (Graduate School of Arts and Sciences, Harvard University) Awarded to one graduate student in the Math department each year. |

INVITED
TALKS

Component stabilizers of affine Deligne–Lusztig varieties in the affine Grassmannian

1. Yale Algebra and Number Theory seminar

Motivic Cohomology of Shimura varieties and level raising

1. University of Minnesota Lie Theory Seminar (Nov 2018)
2. Harvard University Number Theory seminar (Feb. 2019)
3. Columbia Automorphic forms seminar March (2019)

Irreducible components of affine Deligne–Lusztig varieties and orbital integrals

1. University of Minnesota Special Seminar (Nov 2018)
2. Princeton University/IAS Number Theory seminar (October 2018)

Serre–Tate theory for Shimura varieties of Hodge type

1. University of Maryland Lie Theory seminar (Oct 2017)

Mod- p isogeny classes on Shimura varieties with parahoric level structure:

1. Princeton University/IAS Number Theory seminar (April 2018)
2. Johns Hopkins Number Theory seminar (Feb 2017)
3. Columbia Automorphic forms seminar (Feb 2017)
4. Yale Algebra and Number Theory seminar (Feb 2017)
5. University of Chicago Number Theory seminar (Feb 2017)
6. Northwestern Number Theory seminar (Feb 2017)
7. Caltech Number Theory seminar (Oct 2016)
8. Harvard Number Theory seminar (Oct 2016)
9. AS-NCTS Workshop on Shimura varieties, National University of Taiwan, Taipei (June 2016)
10. Algebra and Number Theory seminar University of Maryland, College Park (Oct 2015)

TEACHING
EXPERIENCE

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| Spring | 2016 | Teaching Fellow, Math21b, Linear Algebra. |
| Fall | 2014 | Teaching Fellow, Math99x, Tutorial: Complex multiplication of Elliptic curves (with Yihang Zhu). <i>Designed and lectured a course to advanced undergraduates on the theory of Complex Multiplication.</i> |
| Fall | 2014 | Course Assistant, Math233a, Theory of Schemes. <i>Graded homeworks and held sections for graduate course on Scheme theory.</i> |
| Fall | 2013 | Teaching Fellow, Math1a, Introduction to calculus. |

SERVICE

Organizer for the following seminars:

- Co-Organizer of PU/IAS Number theory seminar 2018-19
- Co-Organizer of PU/IAS Learning seminar on the paper Cycles on Shimura varieties via local Shtukas (Spring 2018)
- Seminar on the Gross-Zagier formula (Fall 2013, with Yihang Zhu)
- Seminar on Moduli of p -divisible groups (Spring 2016, with Erick Knight)
- Kisin student research seminar on the Witt vector affine Grassmannian (Fall 2016)

Referee for the following journals:

- Algebra and Number Theory, Mathematische Annalen, Advances in Mathematics, Mathematische Zeitschrift, Astérisque, Forum of Math Sigma.