

EDUCATION

University of Wisconsin - Madison Ph.D. in Mathematics, Advisor: Michael Rapoport, Tonghai Yang	Madison, WI In progress
University of Wisconsin - Madison M.A. in Mathematics	Madison, WI May 2021
Zhejiang University B.S. in Mathematics	Hangzhou, ZJ May 2020

PUBLICATIONS

1. Yu Luo, “On the moduli description of ramified unitary local models of signature $(n - 1, 1)$ ”, **Math. Ann.** (2025)
2. Qiao He, Yu Luo and Yousheng Shi, “Regular models of ramified unitary Shimura varieties at maximal parahoric level”, [preprint](#).
3. Qiao He, Yu Luo and Yousheng Shi, “The basic locus of ramified unitary Rapoport-Zink spaces at maximal vertex level”, [preprint](#).
4. Yu Luo, Andreas Mihatsch and Zhiyu Zhang, “On unitary Shimura varieties at ramified primes”, [preprint](#).
5. Yu Luo, “Kudla-Rapoport conjecture for unramified maximal parahoric level”, [preprint](#).
6. Yu Luo, Michael Rapoport and Wei Zhang, “More regular formal moduli spaces and arithmetic transfer conjectures: the ramified quadratic case”, [preprint](#).

SEMINAR TALKS

- A new proof of the arithmetic Siegel-Weil formula
Symposium on Number Theory and Representation Theory, IX, Hangzhou, China June 2025
- A new proof of the arithmetic Siegel-Weil formula
Zhejiang University May 2025
- A new proof of the arithmetic Siegel-Weil formula
University of Wisconsin - Madison Feb 2025
- Comparison of absolute and relative unitary Rapoport-Zink spaces
Massachusetts Institute of Technology (Learning seminar on Arithmetic Inner Product Formula) Oct 2024
- On the Moduli Description of a Class of Unitary Shimura Varieties
University of Wisconsin - Madison Dec 2023
- On the Moduli Description of a Class of Unitary Shimura Varieties
Zhejiang University May 2023
- On the Moduli Description of a Class of Unitary Shimura Varieties
Michigan State University May 2023

SERVICES

- Co-organizer of the Relative trace formula reading Seminar
University of Wisconsin - Madison 2024 Fall - 2025 Spring
- Organizer of the Gross-Zagier formula reading Seminar
University of Wisconsin - Madison 2024 Spring
- Co-organizer of GAGS - Graduate Algebraic Geometry Seminar
University of Wisconsin - Madison 2022 Spring–2025 Spring
- Mentor at Undergraduate Directed Reading Program
Mentor of Baoyi WANG (Currently in Columbia University) University of Wisconsin - Madison 2022 Spring
- Mentor of Master Program in Math Department
Mentor of Ruoxi LI (Currently in UIUC Math PhD), Weiman YUAN (Currently in Vanderbilt University Bio, Engineering), Aditya Phukon. 2021 Fall
- Organizer of Algebraic Geometry Learning Seminar
University of Wisconsin - Madison 2020 Spring
- Organizer of Commutative Algebra Learning Seminar
University of Wisconsin - Madison 2019 Fall
- Organizer of Undergraduate Algebraic Geometry Seminar
Zhejiang University 2019 Spring

CONFERENCES ATTENDED

- New Tools in the Local and Global Langlands Programs
Institute for Advanced Study in Mathematics (IASM), Hangzhou, China July 2025
- Modular Forms and Their Applications – Conference in Honor of Valery Gritsenko’s 70th Birthday
Wuhan University, Wuhan, China July 2025
- Beijing-Shanghai Summer School in Mathematics
Shanghai Institute for Mathematics and Interdisciplinary Sciences (SIMIS), Shanghai, China June - July 2025
- Symposium on Number Theory and Representation Theory, IX
Hangzhou, China June, 2025
- Arizona Winter School 2025: p -adic groups
University of Arizona, Arizona, USA March 2025
- Western Algebraic Geometry Symposium, Fall 2024
The University of Arizona, Tucson, Arizona, USA November 2024
- Reduction of Arithmetic Varieties
The Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany October 2024
- Summer School and Workshop on Relative Langlands Duality
University of Minnesota, Minneapolis, Minnesota, USA June 2024
- Arithmetic intersection theory on Shimura varieties
American Institute of Mathematics, Pasadena, California, USA January 2024
- Joint Mathematics Meetings 2024
San Francisco, California, USA January 2024
- Arithmetic Algebraic Geometry: A conference on the occasion of Michael Rapoport’s 75th birthday
University of Münster, Münster, Germany October 2023
- Workshop on Geometric Analysis and Complex Geometry
Tianyuan Mathematical Center in Central China, Wuhan, China August 2023
- Mini-Workshop on Topology and Arithmetic August 2023

Southern University of Science and Technology, Shenzhen, China

- Satellite Conference in Number Theory of ICBS July 2023
Morningside Center of Mathematic, Beijing, China
- Workshop on Geometric Representation Theory and Applications July 2023
Tsinghua University, Beijing, China
- MSRI workshop: Shimura Varieties and L-functions: to Shou-Wu Zhang's 60th birthday March 2023
Mathematical Sciences Research Institute, California, USA
- Arizona Winter School 2023: Unlikely Intersections March 2023
University of Arizona, Arizona, USA
- Joint Mathematics Meetings 2023 January 2023
Boston, Massachusetts, USA
- Johns Hopkins University - University of Maryland Algebra and Number Theory Day November 2022
University of Maryland, Maryland, USA
- MAGNTS: Midwest Arithmetic Geometry and Number Theory Series October 2022
University of Illinois Chicago, Illinois, USA
- Arithmetic and Topology over Global Fields October 2022
University of Wisconsin - Madison, Wisconsin, USA
- Boston College 2021 AGNES: Algebraic Geometry Northeastern Series Showcase October 2021
Boston College (Online), Massachusetts, USA
- CA+ 2021 October 2021
University of Minnesota Twin Cities, Minnesota, USA
- Theta Series: Representation Theory, Geometry and Arithmetic July 2021
The Fields Institute (Online), Toronto, Canada

TEACHING

- Math 475 - Introduction to Combinatorics - TA 2025 Summer
University of Wisconsin - Madison
- Math 435 - Introduction to Cryptography - TA 2025 Summer
University of Wisconsin - Madison
- Math 340 - Linear Algebra - TA 2025 Spring
University of Wisconsin - Madison
- Math 112 - Algebra - Lecturer 2024 Fall
University of Wisconsin - Madison
- Math 320 - Linear Algebra and ODE - TA 2024 Spring
University of Wisconsin - Madison
- Math 340 - Linear Algebra - TA 2023 Fall
University of Wisconsin - Madison
- Math 340 - Linear Algebra - TA 2023 Spring
University of Wisconsin - Madison
- Math 234 - Calculus 3 - TA 2022 Fall
University of Wisconsin - Madison
- Math 240 - Discrete Math - TA 2024 Summer
University of Wisconsin - Madison
- Math 222 - Calculus 2 - TA 2022 Spring
University of Wisconsin - Madison

- Math 221 - Calculus 1 - TA
University of Wisconsin - Madison

2021 Fall

HONORS AND AWARDS

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| • A scholarship equivalent to the Government Scholarship | 2018–2019 |
| • Government Scholarship - Zhejiang Government | 2017–2018 |
| • Government Scholarship - Zhejiang Government | 2016–2017 |