

## EDUCATION

<b>University of Wisconsin - Madison</b>	Madison, WI
Ph.D. in Mathematics, Advisors: Michael Rapoport (primary), Tonghai Yang (secondary)	May 2026 (expected)
<b>University of Wisconsin - Madison</b>	Madison, WI
M.A. in Mathematics	May 2021
<b>Zhejiang University</b>	Hangzhou, ZJ
B.S. in Mathematics	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”, [submitted](#)
3. Qiao He, Yu Luo and Yousheng Shi, “The basic locus of ramified unitary Rapoport-Zink spaces at maximal vertex level”, [submitted](#)
4. Yu Luo, Andreas Mihatsch and Zhiyu Zhang, “Unitary Shimura varieties at ramified primes and arithmetic transfer”, [submitted](#)
5. Yu Luo, “Kudla-Rapoport conjecture for unramified maximal parahoric level”, [submitted](#)
6. Yu Luo, Michael Rapoport and Wei Zhang, “More regular formal moduli spaces and arithmetic transfer conjectures: the ramified quadratic case”, [submitted](#)

## SEMINAR TALKS

- A new proof of the arithmetic Siegel-Weil formula Jan 2026  
*Joint Mathematics Meetings 2026, Washington, D.C., USA*
- TBA Nov 2025  
*Universität Münster, Münster, Germany*
- A new proof of the arithmetic Siegel-Weil formula Sept 2025  
*POSTECH, Pohang, South Korea*
- A new proof of the arithmetic Siegel-Weil formula June 2025  
*Symposium on Number Theory and Representation Theory, IX, Hangzhou, China*
- A new proof of the arithmetic Siegel-Weil formula May 2025  
*Zhejiang University*
- A new proof of the arithmetic Siegel-Weil formula Feb 2025  
*University of Wisconsin - Madison*
- Comparison of absolute and relative unitary Rapoport-Zink spaces Oct 2024  
*Massachusetts Institute of Technology (Learning seminar on Arithmetic Inner Product Formula)*
- On the Moduli Description of a Class of Unitary Shimura Varieties Dec 2023

*University of Wisconsin - Madison*

- On the Moduli Description of a Class of Unitary Shimura Varieties May 2023  
*Zhejiang University*
- On the Moduli Description of a Class of Unitary Shimura Varieties May 2023  
*Michigan State University*

## SERVICES

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- Referee for journals  
*Advances in Mathematics, Memoirs of the AMS*
- Peer mentor for graduate student Lark Song 2025 Fall - 2026 Spring  
*University of Wisconsin - Madison*
- Co-organizer of the Langlands-Kottwitz method reading Seminar 2025 Fall - 2026 Spring  
*University of Wisconsin - Madison*
- Co-organizer of the Relative trace formula reading Seminar 2024 Fall - 2025 Spring  
*University of Wisconsin - Madison*
- Organizer of the Gross-Zagier formula reading Seminar 2024 Spring  
*University of Wisconsin - Madison*
- Co-organizer of GAGS - Graduate Algebraic Geometry Seminar 2022 Spring–2025 Spring  
*University of Wisconsin - Madison*
- Mentor at Undergraduate Directed Reading Program 2022 Spring  
*Mentor of Baoyi WANG (Currently in Columbia University) University of Wisconsin - Madison*
- Mentor of Master Program in Math Department 2021 Fall  
*Mentor of Ruoxi LI (Currently in UIUC Math PhD), Weiman YUAN (Currently in Vanderbilt University Bio, Engineering), Aditya Phukon.*
- Organizer of Algebraic Geometry Learning Seminar 2020 Spring  
*University of Wisconsin - Madison*
- Organizer of Commutative Algebra Learning Seminar 2019 Fall  
*University of Wisconsin - Madison*
- Organizer of Undergraduate Algebraic Geometry Seminar 2019 Spring  
*Zhejiang University*

## CONFERENCES ATTENDED

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- New Tools in the Local and Global Langlands Programs July 2025  
*Institute for Advanced Study in Mathematics (IASM), Hangzhou, China*
- Modular Forms and Their Applications – Conference in Honor of Valery Gritsenko's 70th Birthday July 2025  
*Wuhan University, Wuhan, China*
- Beijing-Shanghai Summer School in Mathematics June - July 2025  
*Shanghai Institute for Mathematics and Interdisciplinary Sciences (SIMIS), Shanghai, China*
- Symposium on Number Theory and Representation Theory, IX June, 2025  
*Hangzhou, China*
- Arizona Winter School 2025:  $p$ -adic groups March 2025  
*University of Arizona, Arizona, USA*
- Western Algebraic Geometry Symposium, Fall 2024 November 2024  
*The University of Arizona, Tucson, Arizona, USA*

• Reduction of Arithmetic Varieties <i>The Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany</i>	October 2024
• Summer School and Workshop on Relative Langlands Duality <i>University of Minnesota, Minneapolis, Minnesota, USA</i>	June 2024
• Arithmetic intersection theory on Shimura varieties <i>American Institute of Mathematics, Pasadena, California, USA</i>	January 2024
• Joint Mathematics Meetings 2024 <i>San Francisco, California, USA</i>	January 2024
• Arithmetic Algebraic Geometry: A conference on the occasion of Michael Rapoport's 75th birthday <i>University of Münster, Münster, Germany</i>	October 2023
• Workshop on Geometric Analysis and Complex Geometry <i>Tianyuan Mathematical Center in Central China, Wuhan, China</i>	August 2023
• Mini-Workshop on Topology and Arithmetic <i>Southern University of Science and Technology, Shenzhen, China</i>	August 2023
• Satellite Conference in Number Theory of ICBS <i>Morningside Center of Mathematic, Beijing, China</i>	July 2023
• Workshop on Geometric Representation Theory and Applications <i>Tsinghua University, Beijing, China</i>	July 2023
• MSRI workshop: Shimura Varieties and L-functions: to Shou-Wu Zhang's 60th birthday <i>Mathematical Sciences Research Institute, California, USA</i>	March 2023
• Arizona Winter School 2023: Unlikely Intersections <i>University of Arizona, Arizona, USA</i>	March 2023
• Joint Mathematics Meetings 2023 <i>Boston, Massachusetts, USA</i>	January 2023
• Johns Hopkins University - University of Maryland Algebra and Number Theory Day <i>University of Maryland, Maryland, USA</i>	November 2022
• MAGNTS: Midwest Arithmetic Geometry and Number Theory Series <i>University of Illinois Chicago, Illinois, USA</i>	October 2022
• Arithmetic and Topology over Global Fields <i>University of Wisconsin - Madison, Wisconsin, USA</i>	October 2022
• Boston College 2021 AGNES: Algebraic Geometry Northeastern Series Showcase <i>Boston College (Online), Massachusetts, USA</i>	October 2021
• CA+ 2021 <i>University of Minnesota Twin Cities, Minnesota, USA</i>	October 2021
• Theta Series: Representation Theory, Geometry and Arithmetic <i>The Fields Institute (Online), Toronto, Canada</i>	July 2021

## TEACHING

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• Math 221 - Calculus 1 - TA <i>University of Wisconsin - Madison</i>	2025 Fall
• Math 475 - Introduction to Combinatorics - TA <i>University of Wisconsin - Madison</i>	2025 Summer
• Math 435 - Introduction to Cryptography - TA <i>University of Wisconsin - Madison</i>	2025 Summer
• Math 340 - Linear Algebra - TA	2025 Spring

<i>University of Wisconsin - Madison</i>	
• Math 112 - Algebra - Lecturer	2024 Fall
<i>University of Wisconsin - Madison</i>	
• Math 320 - Linear Algebra and ODE - TA	2024 Spring
<i>University of Wisconsin - Madison</i>	
• Math 340 - Linear Algebra - TA	2023 Fall
<i>University of Wisconsin - Madison</i>	
• Math 340 - Linear Algebra - TA	2023 Spring
<i>University of Wisconsin - Madison</i>	
• Math 234 - Calculus 3 - TA	2022 Fall
<i>University of Wisconsin - Madison</i>	
• Math 240 - Discrete Math - TA	2024 Summer
<i>University of Wisconsin - Madison</i>	
• Math 222 - Calculus 2 - TA	2022 Spring
<i>University of Wisconsin - Madison</i>	
• Math 221 - Calculus 1 - TA	2021 Fall
<i>University of Wisconsin - Madison</i>	

## 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