Yu Xin

CONTACT Information Department of Mathematics

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MATION Bar-Ilan University

Ramat-Gan, 200092, Israel

EMPLOYMENT

Bar-Ilan University, Oct. 2023 - Current

Postdoc in Mathematics Mentor: Eyal Kaplan

EDUCATION

Brandeis University, Aug. 2017 - Aug. 2023

Ph.D., Mathematics, August 2023

• Dissertation Title: On the Automorphic distinguished spectrum of the Pair (U_{2n}, Sp_{2n})

• Advisor: Omer Offen

Brandeis University, Aug. 2015 - May 2017

Master of Art, Mathematics, May 2017

Tongji University, Sep. 2010 - July 2015

Bachelor of Science, Mathematics and Applied Mathematics, July 2015

• Thesis Title: Some relations of multiple zeta values and their applications

• Advisor: Zhonghua Li

RESEARCH INTERESTS Publications & Preprints

- On the Rankin-Selberg gamma factor of simple supercuspidal representations of the unitary group for p-adic local fields (with Philip Barron), Journal of Number Theory **271** (2025), 526–547.

– On the Sp_{2n} -distinguished spectrum of U_{2n} (with Kewen Wang), preprint available at arXiv: 2412.05518.

- Explicit formulas for the Bessel models: odd general spin groups, preprint available at arXiv: 2509.03278.

Honors & Awards

Harold I Levine Endowed Fellowship Prize, 2022

Summer Research Funding, 2021

SELECTED TALKS Explicit formulas for Bessel models: odd general spin groups, contributed talk, NSF–CBMS Conference: Representations of p-adic Groups and Noncommutative Geometry, St. John's College, New York, USA. June 2025

On the Rankin–Selberg gamma factor of simple supercuspidal representations of the unitary group for p-adic local fields, seminar talk, p-adic Lie group representation theory seminar, Beihang University, Beijing, China. November 2024

An Introduction to the Langlands Program, seminar talk, Graduate Student Seminar of Department of Mathematics, Brandeis University, Waltham, MA, USA. November

Fall 2017

Teaching	
Experience	

At Brandeis University:

Instructor	Math 15a: Applied Linear Algebra
Instructor	Math 15a: Applied Linear Algebra
Teaching Assistant	Math 151b: Topology II
Teaching Assistant	Math 141b: Analysis II
Teaching Assistant	Math 39a: Combinatorics
Teaching Assistant	Math 26a: Logic and Proof
Instructor	Math 10a: Techniques of Calculus (a)
Instructor	Math 10a: Techniques of Calculus (a)
Instructor	Math 10b: Techniques of Calculus (b)
Instructor	Math 10a: Techniques of Calculus (a)
Teaching Assistant	Math 36b: Statistics
	Instructor Teaching Assistant Teaching Assistant Teaching Assistant Teaching Assistant Instructor Instructor Instructor Instructor

Conferences & Workshops

NSF-CBMS Conference: Representations of p-adic Groups and Noncommutative Geometry, St. John's College, New York, USA, June 9–13, 2025

Math 39a: Combinatorics

Teaching Assistant

Number Theory, Quantum Chaos and Their Interfaces, Research Workshop of the Israel Science Foundation, A Conference in Honor of Zeev Rudnick's 64th Birthday, TAU, Tel Aviv, Israel, May 18–22, 2025

Representation Theory and Algebraic Geometry, Conference on the Occasion of Joseph Bernstein's 80th Birthday, Weizmann Institute, Rehovot, Israel, May 5–8 (May 7–8 on Zoom), 2025

 $Winter\ STAR\ Workshop\ 2024,$ Weizmann Institute, Rehovot, Israel, December 24–26, 2024

The 25th Autumn Workshop on Number Theory: Representation Theory of p-adic Groups and Related Topics, Hokkaido University, Sapporo, Japan, October 28 – November 1, 2024

OTHER EXPERIENCE

Major Exam of Ph.D. program at Brandeis (October 2021)

- Lecture Topic: On the Casselman-Shalika Formula
- Advisor: Omer Offen

Minor Exam of Ph.D. program at Brandeis (May 2021)

- Lecture Topic: The Root Datum of a Reductive Group
- Advisor: Jöel Bellaïche

Instructor of Brandeis Graduate Students Prep Camp, Algebra (August 2021, 2022)

Language Proficiency

Chinese(native), English(fluent), Japanese(fluent)