Jungin Lee

Curriculum Vitae

Contact Information

- Department of Mathematics, Ajou University, Suwon 16499, Republic of Korea (Office: Paldal Hall 616)
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Education and Employment

Sep. 2023 – present **Assistant Professor**, *Department of Mathematics*, Ajou University.

Nov. 2022 – Aug. 2023 **CMC Fellow (Hyo Chul Myung Assistant Professor)**, *June E Huh Center for Mathematical Challenges*, KIAS.

Sep. 2020 – Oct. 2022 **Research Fellow**, *School of Mathematics*, KIAS.
(Mentor: Youn-Seo Choi)

Mar. 2017 – Aug. 2020 **Ph.D. in Mathematics**, POSTECH.
(Advisor: Sungmun Cho)

Mar. 2014 – Feb. 2017 **B.Sc. in Mathematics**, Seoul National University.
(Summa Cum Laude)

Publications and Preprints

1. J. Lee and M. Yu, Distribution of the cokernels of determinantal row-sparse matrices, arXiv:2505.11700, submitted.
2. B. Koo and J. Lee, Integral matrices as diagonal quadratic forms II, to appear in **Linear Multilinear Algebra**.
3. D. Y. Kang, J. Lee and M. Yu, Random p-adic matrices with fixed zero entries and the Cohen–Lenstra distribution, arXiv:2409.01226, submitted.
4. S. Coccia, D. Ghioca, J. Lee and G. Nam, Intersection of orbits for polynomials in characteristic p, **J. Number Theory** 278 (2026), 112–127.
5. J. Lee and G. Nam, A converse of dynamical Mordell–Lang conjecture in positive characteristic, **Proc. Amer. Math. Soc.** 153 (2025), no. 2, 603–609.
6. J. Jung and J. Lee, Joint distribution of the cokernels of random p-adic matrices II, **Forum Math.** 36 (2024), no. 4, 1119–1145.
7. J. Lee, Mixed moments and the joint distribution of random groups, **J. Algebra** 641 (2024), 49–84.
8. J. Lee, Universality of the cokernels of random p-adic Hermitian matrices, **Trans. Amer. Math. Soc.** 376 (2023), no. 12, 8699–8732.

9. J. Lee, Joint distribution of the cokernels of random p-adic matrices, **Forum Math.** 35 (2023), no. 4, 1005–1020.
10. J. Lee, Counting 3-dimensional algebraic tori over $\mathbb{Q}$, **J. Number Theory** 249 (2023), 49–92.
11. J. Lee, Counting algebraic tori over $\mathbb{Q}$ by Artin conductor, arXiv:2104.02855, submitted.
12. G. Cheong, J. Lee, H. Nam and M. Yu, Jordan–Landau theorem for matrices over finite fields, **Linear Algebra Appl.** 655 (2022), 100–128.
13. J. Lee, On the lower bound of the number of abelian varieties over $\mathbb{F}_p$, **Int. Math. Res. Not.** (2022), no. 6, 4290–4317.
14. J. Lee, On a number of isogeny classes of simple abelian varieties over finite fields, **Math. Z.** 296 (2020), 685–693.
15. J. Lee and J. Park, Arithmetic Chern–Simons theory with real places, **J. Knot Theory Ramifications** 32 (2023), no. 4, 2350027.
16. J. Lee, Integral matrices as diagonal quadratic forms, **Linear Multilinear Algebra** 66 (2018), no. 4, 742–747.

Teaching (Ajou University)

Fall 2025	Sets and Logic, Number Theory
Spring 2025	Calculus 1, Modern Algebra 1, Seminar in Algebra I
Fall 2024	Number Theory, Modern Algebra 2
Spring 2024	Modern Algebra 1, Algebraic Geometry 1
Fall 2023	Number Theory, Modern Algebra 2

Honors, Awards and Grants

2025–present	KIAS Associate Member
2024–2029	National Research Foundation of Korea, RS-2024-00334558
2024	Forbes Korea 30 Under 30 (Science/SW)
2021	The 11th S-Oil Excellent Dissertation Award (First Prize), The Korean Academy of Science and Technology
2021	Excellent Dissertation Award, Korean Mathematical Society
2017–2018	Kwanjeong Educational Foundation Fellowship
2014–2016	Presidential Scholarship of Science, Korea Student Aid Foundation
2014	Korea Undergraduate Math Problem Solving Contest, Gold Prize

Graduate Students and Postdoctoral Mentoring

- Sungjin Park (M.Sc.), Ajou University, 2024.03–present
- GyeongHyeon Nam (Post-Doc), Ajou University, 2024.04–2025.03

Academic Services

- *Organizer* for Department of Mathematics Colloquium, Ajou University, Fall 2024–Spring 2026
- *Organizer* for Summer School on Arithmetic Statistics, KIAS, Aug. 16–18, 2023

- *Organizer* for KIAS Number Theory Seminar, 2022
- *Problem session leader* for Winter School on Algebraic Geometry–Number Theory, Cheonan, Jan. 16–21, 2022

Invited Talks

2025 Spaces, Functions and Numbers Seminar, Online, Apr. 2025, "Distribution of the cokernels of random p-adic matrices".

2024 2024 KMS Annual Meeting, Sungkyunkwan University, Oct. 2024, "Dynamical Mordell–Lang conjecture and orbit intersection problem in positive characteristic".

The 33rd Korean Mathematical Olympiad Summer School, Ajou University, Aug. 2024, "The method of infinite descent".

The 6th Workshop on Number Theory and Algebra, Busan, Jul. 2024, "A converse of dynamical Mordell–Lang conjecture in positive characteristic".

Number Theory Seminar, KAIST, Mar. 2024, "Random p-adic matrices with given zero entries".

Annual Number Theory Workshop 2024, Yonsei University, Feb. 2024, "Distribution of the cokernels of random p-adic matrices".

2023 Department of Mathematics Colloquium, Ajou University, Sep. 2023, "Introduction to arithmetic statistics".

Second International Workshop in Analytic Number Theory, Seoul National University, Aug. 2023, "Mixed moments and the joint distribution of random p-adic matrices".

Algebra Seminar, Korea University, May. 2023, "Introduction to arithmetic statistics".

2023 KMS Spring Meeting, Daejeon Convention Center, Apr. 2023, "Universality of the cokernels of random p-adic matrices".

Number Theory Lecture Series, UNIST, Apr. 2023, "Distribution of random p-adic matrices and random groups".

Algebraic and Analytic Aspects of L-functions, Incheon, Jan. 2023, "Mixed moments and the joint distribution of random groups".

2022 The 10th NCTS-POSTECH-PMI Joint Workshop on Number Theory, Online, Dec. 2022, "Mixed moments and the joint distribution of random p-adic matrices".

Virtual Seminar on Geometry and Topology, Online, Nov. 2022, "Mixed moments and the joint distribution of random groups".

JBNU-IPAM Mini Workshop, Jeonbuk National University, Nov. 2022, "Mixed moments and the joint distribution of random groups".

Number Theory Seminar, Seoul National University, Nov. 2022, "Mixed moments and the joint distribution of random groups".

2022 UNIST Summer Workshop on Langlands Program, Gyeongju, Jul. 2022, "Universality of the cokernels of random p-adic matrices".

University of Toronto Number Theory Seminar, Online, May 2022, "Universality of the cokernels of random p-adic Hermitian matrices".

UC Irvine Number Theory Seminar, Online, Apr. 2022, "Joint distribution of the cokernels of random p-adic matrices".

Analysis, PDE $\&$ Probability Seminar, KIAS, Feb. 2022, "Joint distribution of the cokernels of random p-adic matrices".

2021 Number theory seminar, UNIST, Nov. 2021, "Distribution of the cokernels of random integral matrices".

BK21 FOUR Rookies Pitch, Seoul National University, Oct. 2021, "Counting algebraic tori over $\mathbb{Q}$ by Artin conductor".

The 9th East Asia Number Theory Conference, Online, Aug. 2021, "Counting algebraic tori over $\mathbb{Q}$ by Artin conductor".

Workshop on Arithmetic Statistics Problems, Online, Jul. 2021, "Counting algebraic tori over $\mathbb{Q}$ by Artin conductor".

2021 KMS spring meeting, Online, Apr. 2021, "Counting algebraic tori over $\mathbb{Q}$ by Artin conductor".

Build a network of young researchers in mathematics I, Online, Apr. 2021, "Counting algebraic tori over $\mathbb{Q}$ by Artin conductor".

2021 Intensive lecture series in number theory, Online, Feb. 2021, "Introduction to arithmetic statistics".

2020 Number theory seminar, KIAS, Jul. 2020, "On the number of abelian varieties over finite fields".

2020 KMS spring meeting, Online, Jul. 2020, "On the number of abelian varieties over finite fields".

Research Visits

- Feb. 28, 2022 – May 31, 2022, University of Toronto, Canada (Host: Jacob Tsimerman)
- Dec. 22, 2019 – Jan. 19, 2020, NCTS, Taiwan (Host: Chia-Fu Yu)