Yutaro Mikami

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EDUCATION

- Doctor course, Mathematical Science, The University of Tokyo, April 2023-present (expected to graduate in March 2026)
  Supervisor: Yoichi Mieda
- Master, Mathematical Science, The University of Tokyo, April 2021-March 2023
- Bachelor, Science, The University of Tokyo, April 2017-March 2021

Grants/Fellowship

- JSPS Research Fellow (DC1), Japan Society for the Promotion of Science, April 2023-March 2026

Awards

- Dean's Award (Master Course, valedictorian), Graduate school of Mathematical Science, The university of Tokyo, March 2023

Papers

1. "Faithfully flat descent of quasi-coherent complexes on rigid analytic varieties via condensed mathematics." Int. Math. Res. Not. IMRN 2024, no. 8, 7099–7128.
2. "Fppf-descent for condensed animated rings." *arXiv preprint arXiv:2311.13408* (2023)
3. "(φ,Γ)-modules over relatively discrete algebras. " *arXiv preprint arXiv: 2409.14145* (2025)
4. "Finiteness and duality of cohomology of (φ,Γ)-modules and the 6-functor formalism of locally analytic representations." *arXiv preprint arXiv:2504.01780* (2025)
5. "On the relative Nullstellensatz in nonarchimedean geometry." with Kiran S. Kedlaya, *arXiv preprint arXiv:2503.18183* (2025)

Talks in Seminars/Workshops/Conferences

1. "Faithfully flat descent of quasi-coherent complexes on rigid analytic varieties over non-archimedean local fields via condensed mathematics", 21st Sendai-Hiroshima Workshop on Number theory, Tohoku University, July 14, 2022.
2. "Faithfully flat descent of quasi-coherent complexes on rigid analytic varieties via condensed mathematics", Number Theory Seminar, Kyoto University, July 29, 2022.
3. "Faithfully flat descent of quasi-coherent complexes on rigid analytic varieties via condensed mathematics", Number Theory Seminar, The University of Tokyo, May 24, 2022.
4. "Descent theory in condensed mathematics", NTU-UTokyo Joint Conference: Number theory and arithmetic geometry, National Taiwan University, December 7-8, 2023.

5. “Finiteness of (φ,Γ)-cohomology”, 23rd Sendai-Hiroshima Workshop on Number theory, Tohoku University, July 11, 2024.
6. “(φ,Γ)-modules over relatively discrete algebras”, Workshop on Shimura varieties, representation theory and related topics, The University of Tokyo, October 10, 2024.
7. “(φ,Γ)-modules over relatively discrete algebras”, Algebraic Number Theory and Related Topics 2024, RIMS, January 6, 2025.
8. “Cohomology of (φ, Γ)-modules and duality”, 2025 Lyon-Tokyo conference in Number Theory and Arithmetic Geometry, ÉNS de Lyon, March 25, 2025.
9. “Finiteness and duality of cohomology of (φ,Γ)-modules and the 6-functor formalism of locally analytic representations, I”, Mittagsseminar zur Arithmetik, The University of Münster, April 29, 2025.
10. “Finiteness and duality of cohomology of (φ,Γ)-modules and the 6-functor formalism of locally analytic representations, II”, Mittagsseminar zur Arithmetik, The University of Münster, May 6, 2025.
11. “Cohomology of (φ, Γ)-modules and duality”, Workshop on Frontiers in Number Theory, Tianyuan Mathematics Research Center, May 12, 2025.
12. “Cohomology of (φ, Γ)-modules and duality”, Oberseminar Arithmetic Geometry and Representation Theory, Max Planck Institute for Mathematics, May 23, 2025.

Survey Talks in Seminars/Workshops/Conferences

1. Kurashiki Number Theory Meeting, Kurashiki Seaside Hotel, September 6-7, 2022.
2. Kurashiki Number Theory Meeting, Kurashiki Seaside Hotel, February 6-10, 2023.
3. "The solid structure on a Huber pair", Yatsugatake workshop on Condensed Mathematics, Haramura, Japan, September 7, 2023.
4. Kurashiki Number Theory Meeting, Kurashiki Seaside Hotel, September 11-18, 2023.
5. Kanazawa Arithmetic Geometry Meeting, Ishikawa Prefectural bunkyo hall, March 25-29, 2024.

Teaching

1. Winter 2023, Teaching assistant, “Algebra and Geometry”, The University of Tokyo.
2. Winter 2024, Teaching assistant, “Algebra and Geometry”, The University of Tokyo.