

# Curriculum Vitae

Lee Tae Young 이태영

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## EMPLOYMENT

**Binghamton University, State University of New York**

Aug. 2024 -

Binghamton, New York, USA

Robert Riley Visiting Assistant Professor, Department of Mathematics and Statistics

## EDUCATION

**Rutgers, the State University of New Jersey**

Aug. 2019 - May 2024

New Brunswick, New Jersey, USA

Ph.D. in Mathematics, Advisor: Pham Huu Tiep

**KAIST: Korea Advanced Institute of Science and Technology**

Mar. 2013 - Feb. 2019

Daejeon, Republic of Korea (South Korea)

B.S. in Mathematical Sciences (*Magna Cum Laude*)

## RESEARCH INTERESTS

I am mainly interested in finite (or algebraic) group theory, representation theory and their applications in broad contexts including number theory, geometry and combinatorics. My thesis is about constructions and identifications of finite groups and representations arising in arithmetic geometric and number theoretic context, namely monodromy groups of  $\ell$ -adic local systems. Currently I am working on projects regarding characters of finite symmetric groups. I also like to think about discrete mathematics.

## PUBLICATIONS AND PREPRINTS

1. *Relations between values and zeros of irreducible characters of symmetric groups*, preprint.
2. *Hypergeometric Sheaves and Extraspecial groups in even characteristic*, to appear in J. Pure Appl. Alg. arXiv:2407.12586
3. *Hypergeometric Sheaves and Finite General Linear Groups*, Journal of Algebra 659 (2024)
4. *A question of Katz and Tiep on representations of finite general unitary groups*, Comm. Algebra 50 (2022)

## TALKS

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| 1. AMS Special Session on Groups and Representation Theory (Invited)               | Oct 2025 |
| 2. AMS Special Session on Representations of Finite and Algebraic Groups (Invited) | Aug 2025 |
| 3. Binghamton Algebra Seminar  | Nov 2024 |
| 4. KAIST Number Theory Seminar (Invited)   | May 2024 |
| 5. AMS Special Session on Groups and Representations (Invited)                     | May 2024 |
| 6. Monodromy and Its Applications (12 minute “lightning talk”)                     | Dec 2023 |
| 7. Fairfield Algebra Regional Meeting  | Dec 2023 |
| 8. Rutgers Algebra Seminar   | Nov 2023 |
| 9. Groups 2023: Northern Group Theory Conference (Poster Session)                  | Sep 2023 |
| 10. Zassenhaus Groups and Friends Conference                                       | Jun 2023 |
| 11. AMS Special Session on Excursions in Arithmetic Geometry, JMM 2023 (Invited)   | Jan 2023 |

## CONFERENCES ORGANIZED

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|--|----------|
| 1. 2025 Zassenhaus Groups and Friends Conference                 | Jun 2025 |
| 2. AMS Special Session on Group Theory and Representation Theory | Apr 2025 |

## TEACHING EXPERIENCE

### **Binghamton University, SUNY**

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|---|-------------|
| • Math 330: Number Systems (Introduction to Proofs) | Fall 2025   |
| • Math 323: Calculus III                            | Fall 2025   |
| • Math 323: Calculus III                            | Spring 2025 |
| • Math 304: Linear Algebra                          | Fall 2024   |

### **Rutgers University**

- |   |             |
|---|-------------|
| • Math 250: Introduction to Linear Algebra (Teaching Assistant)                         | Fall 2023   |
| • Directed Reading Program for undergraduates (Mentor)                                  | Summer 2023 |
| • Math 152: Calculus II for the Mathematics and Physical Sciences (Workshop Instructor) | Spring 2023 |
| • Math 250: Introduction to Linear Algebra (Teaching Assistant)                         | Fall 2020   |

## LANGUAGES AND OTHER SKILLS

- **Korean** 한국어: Native
- **English**: 6+ years of studying/lecturing in the United States
- **Japanese** 日本語: JLPT N1
- **Magma** Computer Algebra System, **Julia** Programming language and **OSCAR** Computer Algebra System: Capable of writing simple codes for mathematical research