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Yong-Gyu Choi

Education

- 2019–2025 **Ph.D. in Mathematics**, KAIST, Daejeon
Advisor: Prof. Wansu Kim.
Dissertation: “On degenerations of D^* -shtukas over ramified legs”
2015–2019 **B.S. in Mathematics**, KAIST, Daejeon, *magna cum laude*

Experience

- 2026– **Postdoctoral Researcher**, POSTECH, Pohang, South Korea
2025–2026 **Postdoctoral Researcher**, UNIST, Ulsan, South Korea

Research Interests

- Moduli stacks of shtukas and Shimura varieties, and their arithmetic applications
- Geometric and categorical Langlands program
- Formalization of mathematics in proof assistants

Award

- 2019 **Best Teaching Assistant Awards**, Spring 2019, Department of Mathematical Sciences, KAIST

Preprint

- 2025 Y.-G. Choi, Wansu Kim, and Junyeong Park, *On properness of moduli stacks of $D^\times$ -shtukas over ramified legs*, arXiv:2505.18977

Talks

- 2026 *Degenerations of D -shtukas over ramified legs*, France-Korea Webinar in Number Theory, April 2026
Degenerations of D -shtukas over ramified legs, Workshop on Automorphic forms, Arithmetic, and Geometry (WAAG-I), Korea Institute of Advanced Study, March 2026
Degenerations of D -shtukas over ramified legs, 2026 Annual Number Theory Conference, Pusan National University, February 2026
2025 *Degenerations of $D^\times$ -shtukas over ramified legs*, G-BRL Number Theory Seminar at CNU, Chonnam National University, May 2025
Degenerations of $D^\times$ -shtukas over ramified legs, PMI Number Theory Seminar, Postech, May 2025
Degenerations of $D^\times$ -shtukas over ramified legs, 2025 KMS(Korean Mathematical Society) Spring Meeting, KAIST, April 2025

2023 *On Degenerations of D -shtukas over ramified legs*, Mini-workshop for young number theorists, KIAS, November 2023

2022 *Introduction to prismatic cohomology*, 2022 UNIST Summer Workshop on Langlands Program, UNIST, July 2022

■ Teaching assistantships

(All of my teaching assistantships were at KAIST.)

Fall 2023 Calculus II (MAS102) and Linear Algebra (MAS212)

Spring 2023 Calculus II (MAS102) and Linear Algebra (MAS212)

Fall 2022 Calculus I (MAS101) and Calculus II (MAS102)

Spring 2022 Modern Algebra (MAS311)

Fall 2021 Calculus II (MAS102) and Linear Algebra (MAS212)

Spring 2021 Calculus I (MAS101) and Calculus II (MAS102)

Fall 2020 Introduction to Algebraic Geometry (MAS441)

Spring 2020 Introduction to Linear Algebra (MAS109) and Algebra I (MAS511)

Fall 2019 Calculus II (MAS102)

Spring 2019 Calculus I (MAS101)