Yong-Gyu Choi

Room 3423, E6-1 building, KAIST
291 Daehak-ro, Yuseong-gu
Daejeon, Republic of Korea (34141)
yonggyuchoimath@gmail.com
yonggyuchoimath.github.io

Last update: 27th June, 2025

Education

2019– **Ph.D. in Mathematics**, *KAIST*, Daejeon
Advisor: Prof. Wansu Kim.
Degree to be conferred August 2025.
Dissertation: On degenerations of $D^\times$-shtukas over ramified legs, defended May 2025

2015–2019 **B.S. in Mathematics**, *KAIST*, Daejeon, *magna cum laude*

Research Interests

- Arithmetic geometry
- Algebraic number theory
- Moduli stacks of shtukas and Shimura varieties
- Langlands program
- Trace formula

Award

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

Preprint

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

Talks

May 2025 *Degenerations of $\mathcal{D}^\times$-shtukas over ramified legs*, G-BRL Number Theory Seminar at CNU, Chonnam National University

May 2025 *Degenerations of $\mathcal{D}^\times$-shtukas over ramified legs*, PMI Number Theory Seminar, Postech

April 2025 *Degenerations of $\mathcal{D}^\times$-shtukas over ramified legs*, 2025 KMS(Korean Mathematical Society) Spring Meeting, KAIST

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

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

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)