

Curriculum Vitae

PERSONAL DATA

NAME: Kyung Seung LEE (ORCID) 0000-0002-7066-5935
NATIONALITY: Republic of Korea
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CURRENT POSITION

SEP. 2023 - **Post-Doctoral Researcher**, Gyeongsang National University, Jinju, Korea

RESEARCH INTERESTS

Number Theory; *especially Modular Forms, Harmonic Maass Forms, Hecke Operators*

EDUCATION

AUG. 2023 Ph.D Mathematics, **Sungkyunkwan University**, Suwon, Korea
Major: *Number Theory* | Advisor: Prof. Chang Heon KIM
Thesis: *The Recipe for Canonical Bases of Spaces of Weakly Holomorphic Modular Forms*

FEB. 2014 Bachelor's Degree in NATURAL SCIENCE, **Yonsei University**, Seoul, Korea
Major: *Astronomy* | Double Major: *Mathematics*

PUBLICATIONS

- 2026 • *Antiderivatives of Modular Integrals and the Mellin Transforms*,
(With SoYoung Choi, Chang Heon Kim)
Ramanujan Journal **70**(70) (2026), (Published online: 2026.8.10.), DOI: [10.1007/s11139-026-01447-w](https://doi.org/10.1007/s11139-026-01447-w)
- *Basis of Weakly Holomorphic Modular Form Spaces for Squarefree Level Cases*,
(With Chang Heon Kim)
Experimental Mathematics (Published online: 2026.6.2.), DOI: [10.1080/10586458.2026.2622042](https://doi.org/10.1080/10586458.2026.2622042)
- 2025 • *Rational Period Functions for $\Gamma_0^+(3)$ with Irrational Poles*,
Houston Journal of Mathematics, **51**(4) (2025), 735–748, [HJM Vol. 51, No. 4](#)
- *Rational Period Functions for $\Gamma_0^+(2)$ and $\Gamma_0^+(3)$* ,
(With So Young Choi)
Tokyo Journal of Mathematics, **48**(2) (2025), 505–516, DOI: [10.3836/tjm/1502179437](https://doi.org/10.3836/tjm/1502179437)
- 2024 • *Cycle Integrals and Rational Period Functions for $\Gamma_0^+(2)$ and $\Gamma_0^+(3)$* ,
(With SoYoung Choi, Chang Heon Kim)
Open Mathematics, **22**(1) (2024), pp.20240102, DOI: [10.1515/math-2024-0102](https://doi.org/10.1515/math-2024-0102)
- 2020 • *Congruences for Hecke Eigenvalues in Minus Spaces*,
(With SoYoung Choi, Chang Heon Kim)
Journal of Number Theory, **217** (2020), 353–375, DOI: [10.1016/j.jnt.2020.05.017](https://doi.org/10.1016/j.jnt.2020.05.017)
- 2019 • *Arithmetic Properties for the Minus Space of Weakly Holomorphic Modular Forms*,
(With SoYoung Choi, Chang Heon Kim)
Journal of Number Theory, **196** (2019), 306–339, DOI: [10.1016/j.jnt.2018.09.006](https://doi.org/10.1016/j.jnt.2018.09.006)

PREPRINTS AND SUBMITTED

- *On the Weakly Holomorphic Hecke Eigenforms on $\Gamma_0^+(p)$ (Submitted)*,
(With SoYoung Choi, Chang Heon Kim)
- *On the Interlacing of Zeros of Certain Modular Forms for $\Gamma_0(2)$ (Preprint)*,
(With SoYoung Choi, Yeong-Wook Kwon)

RESEARCH TALKS

- JUL. 2026 *Interlacing of Zeros of Modular Forms for $\Gamma_0(2)$* ,
at 2026 Summer KRIMS Workshop, Kangwon National University, Chuncheon, Korea
- JUL. 2025 *Antiderivatives of Modular Integrals and the Mellin Transforms*,
at The 7th Workshop on Number Theory and Algebra, IBS, Daejeon, Korea
- JUN. 2025 *Antiderivatives of Modular Integrals and the Mellin Transforms*,
at The 2025 International Conference of the HMS, GIST, Gwangju, Korea
- APR. 2025 *Antiderivatives of Modular Integrals and the Mellin Transforms*,
at 2025 KMS Spring Meeting, KAIST, Daejeon, Korea
- DEC. 2023 *Canonical Basis for the Space of Weakly Holomorphic Modular Forms Using Atkin-Lehner Eigenspaces*,
at Brigham Young University Number Theory Seminar, Online, USA
- JAN. 2023 *The Recipe for Finding the Basis of the Spaces of Weakly Holomorphic Modular Forms*,
at 2023 Annual Number Theory Workshop, Online, Korea
- OCT. 2022 *On the Basis for the Space of Composite Integer Level Weakly Holomorphic Modular Forms*,
at 2022 Global KMS International Conference, Online, Korea
- APR. 2017 *Basis for the Minus Space of Weakly Holomorphic Modular Forms in Certain Level Cases*,
at 2017 KMS Spring Meeting, Chosun University, Gwangju, Korea

GRANTS

- SEPT. 2023 *Post-doctoral Domestic Training Program*, (Value: 46,122.25 USD / yr)
- AUG. 2025 The National Research Foundation of Korea (NRF) grant funded by the Korea government (No. RS-2023-00275768).
- 2022 *Kovalevskaya Grant for ICM 2022*
The Local Organizing Committee of the ICM 2022
* Selected as a grant recipient (Program canceled due to ICM 2022 moving online).