Anthony Hojin Lee

Curriculum Vitae

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antleee7.github.io

Personal

Citizenship: U.S.A & Republic of Korea

Education

M.Sc. Mathematics, KAIST — 2027 (Expected)

Advisor: Minju Lee

B.Sc. Mathematics,* Seoul National University — 2025

3.67 / 4.30, *cum laude*. 4th year: 4.12 / 4.30

Awards and honors

Honorable Mention, NSF GRFP, 2025

Dean's List, Seoul National University, Spring and Fall 2024

Joongdong High School Honor Graduate, 2021

Academic visits

Massachusetts Institute of Technology — Feb 2026

PI: Ju-Lee Kim

Teaching experience

Introduction to Linear Algebra (TA), KAIST — 2025

Basic Calculus I (Tutor), Seoul National University — 2022

Conferences & workshops attended

Geometric Langlands Masterclasses, University of Copenhagen — 2025

AI for Mathematics Workshop on Formalization, KIAS — 2024

Enumerative Geometry in East Asia, KIAS — 2024

Moduli spaces, virtual invariants and shifted symplectic structures, KIAS — 2024

Combinatorics related to Hessenberg varieties, Seoul National University — 2023

International Undergraduate Mathematics Summer School — 2023

Participants from Seoul National University, Peking University, University of Tokyo, and Moscow State University

KMS Annual Spring Meeting (online) — 2021

Seminar talks

Undergraduate Algebra & Geometry Seminar, Seoul National University — 2025

Abstracts and photos available on antleee7.github.io/uags. 3 talks, all given on blackboard. Selected topics: generalized Eilenberg-Steenrod axioms, complex K-theory, complex cobordism, formal group laws, A-D-E classification of simply laced simple Lie algebras, finite subgroups of $\mathrm{SO}(3)$ and du Val singularities

Graduate Algebraic Geometry Seminar, Seoul National University — 2024–2025

7 talks, all given on blackboard. Selected topics: étale cohomology, Larsen-Lunts theorem on the Grothendieck ring of varieties, Batyrev construction of Calabi-Yau hypersurfaces of toric varieties, Fourier-Mukai transforms and bounded derived category of coherent sheaves, moduli spaces of sheaves as quotients of Quot schemes, Harder-Narasimhan filtration of vector bundles on curves, stability conditions on sheaves

Nevanlinna Theory in Several Variables Seminar, KAIST — 2025

2 talks, all given online. Selected topics: Nevanlinna's first main theorem for coherent ideal sheaves, some theorems in Diophantine approximation

Undergraduate projects

Moduli spaces of sheaves and their derived categories — 2024–2025

*Initially majored in Earth science

Advised by Jeongseok Oh. Studied topics in modern enumerative geometry, especially moduli spaces of sheaves on Calabi-Yau varieties and their derived categories

Coxeter polytopes in Hyperbolic space 2023

Advised by Gye-Seon Lee. Studied the work of Vinberg *et al.* on the classification problem of Coxeter polytopes in n-dimensional hyperbolic space, for $n \geq 4$. Various models of Hyperbolic space, Coxeter groups, Schläfi matrices, and Coxeter-Dynkin diagrams

Organization

SEGL (SNU Experimental Geometry Lab) 2023–2024

Mentored by Gye-Seon Lee. Founded an undergraduate mathematics seminar focused on visual geometry projects, with 15+ active members. Directed projects such as seminars on Riemannian geometry, interactive Penrose tiling generator via N. J. de Bruijn's theory of pentagrids, Pappus theorem and the modular group, limit points of reflections in hyperbolic space. Provided financial support for students participating in the Mathematics Competition of the KMS