Anthony Hojin Lee

Undergraduate Student
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Department of Mathematical Sciences

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Personal

Born August 6, 2002.

Citizenship: United States & Republic of Korea.

Education

B.Sc. Mathematics, Seoul National University. 2021–2025

Awards

NSF GRFP (Honorable Mention) 2025

Dean's List, Seoul National University. 2024 (both semesters)

Preprints and publications

Derived categories of K3 surfaces. (B.Sc. thesis, 2024)

Teaching Experience

Basic Calculus I, Seoul National University. 2022

Seminars Participated

Algebra & Geometry of Spaces of Tensors and Applications. 2025–present

Undergraduate Algebra & Geometry Seminar, Seoul National University. 2025–present

Delivered talks on: The ADE classification, cubic surfaces and pencils of plane cubics.

Webpage : https://antleee7.github.io/uags/

Algebraic Geometry Seminar, Seoul National University. 2024–present

Joint with graduate students of Professors Jeongseok Oh (SNU) and Junho Peter Whang (SNU).

Delivered talks on: the étale fundamental group of a variety over a field of characteristic zero, the Grothendieck ring of varieties and stable birational equivalence, Batyrev's construction of complete Calabi-Yau hypersurfaces of toric varieties, the Fourier–Mukai transform, moduli spaces of sheaves and related topics.

Hyperbolic Geometry Reading Seminar, Seoul National University. 2023

Joint with graduate students of Professor Gye-Seon Lee (SNU).

Texts used: Foundations of hyperbolic manifolds by John G. Ratcliffe, Geometric structures on manifolds by William M. Goldman.

Smooth Manifolds Reading Seminar, Seoul National University. 2023

Joint with graduate students of Professor Gye-Seon Lee (SNU).

Text used: Introduction to smooth manifolds by John M. Lee.

Organization

Study Group on Nevanlinna theory in Several Variables. 2025–present

Initiated a study group with graduate students of Professors Yongnam Lee (KAIST) and Ngoc Cuong Nguyen (KAIST).

Text used: Nevanlinna theory in several complex variables and Diophantine approximation, J. Winkelmann and J. Noguchi.

Study Group on Characteristic Classes in Complex and Differential Geometry. 2024

Funded KRW 500,000 via Professor Otto van Koert (SNU).

Initiated a study group with students of the Department of Economics and the Department of Physics and Astronomy.

SNU Experimental Geometry Lab. 2023–2024

Advisor: Professor Gye-Seon Lee (SNU).

Founded a student-led mathematics club focused on projects beyond the scope of undergraduate mathematics. Approximately 15 of the 40+ registered members actively participated in the activities.

Successful projects include: Interactive code for generating a Penrose tiling with a single complex input, based on N. J. de Brujn's theory of pentagrids. The visualisation of limit points of iterated hyperbolic reflections. Seminars on aperiodic tilings, matrix Lie groups and hyperbolic reflection groups.

Study Group on Point-Set Topology and Smooth Manifolds. 2023

Initiated a study group with students of the Department of Economics and the Department of Mathematics Education.

Study Group on Differential Geometry. 2023

Initiated a study group with students of the Department of Economics and the College of Liberal Studies.

Additional Experience

K–12 Private Tutor

1 student, Korean CSAT calculus, top 23% student resulted in top 4% nationwide. 2023.

Multiple students at private educational institute, 10–11$^{\text{th}}$ grade mathematics, 2022.

Seoul National University Rocket Club *Hanaro*, 2021–2023.

Electronics team co-lead, C++ implementation of Kalman filtering on gyroscope data. Participated in setting up multiple engine test fires.

Intern at the Forecast Analysis and Application Laboratory, Seoul National University, 2022.

Supervised by Professor Jung-Hoon Kim of the School of Earth and Environmental Sciences.

Retrieved Weather Research & Forecasting Model (WRF) data and implemented them on large scale Linux systems.

Student Council of the College of Natural Sciences, Seoul National University, 2022.

Amateur Guitar Player

College of Natural Sciences Band *Lyrics Above Beats*, 2021–2023.

School of Earth and Environmental Sciences Band *Jinwon* (lit. epicenter), 2022.

Last updated: May 25, 2025