Curriculum Vitae - Dyne Kim

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I Research Interests

Geometric Analysis, Complex Geometry.

II Education

1. Master of Science, Mathematics Major

August 2025 (Scheduled), Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea

2. Bachelor of Science, Mathematics and Physics Double Major

February 2024, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea
Magna Cum Laude

3. Highschool Graduate

February 2021, Seoul Science Highschool, Seoul, South Korea

All papers, articles, and seminar materials below are accessible on my webpage.

III Preprint Papers

2025 Łojasiewicz Inequality of Area-Preserving Curve Shortening Flow (Master's Advisor: Jiewon Park)

IV Teaching Experiences

2025S Teaching Assistant for *MAS102 Calculus II* and *MAS420 Analysis on Manifolds*
2024F Teaching Assistant for *MAS101 Calculus I* and *MAS321 Introduction to Differential Geometry*
2024S Teaching Assistant for *MAS102 Calculus II*
2024S Lecturer of *Helpdesks* (official supplementary lectures) for *PH231 Classical Electromagnetism I*
2023 Delivered lectures on *Functional Analysis* to fellow undergraduate students
2021 Delivered lectures on *Lebesgue Integral Theory and Introductory Complex Analysis* to highschool juniors

V Awards and Funding

2023 Young-han Kim Global Leader Scholarship (given by KAIST)
2020 Korea Physics Olympiad - One of the 12 Final Candidates of International Physics Olympiad national team

VI. Articles

Secondary author of "LaTeX: From Introduction to Application", a LaTeX guidebook for Korean LaTeX users.
Contributed articles in "Math Letter", a magazine published by KAIST Mathematics Problem Solving Group:
2024-25 Curve Shortening Flow I-II
2023 Invariance of Domain, Filters and Nets
2022-23 Separation Axioms and Spaces I - IV

VII. Seminars

2024 Area-Preserving Curve Shortening Flow and Łojasiewicz Inequalities
2024 Convergence of Curve Shortening Flow
2024 Introduction to General Relativity for Mathematics Students
2024 Several Complex Variables and Introduction to Complex Geometry
2023 Introduction to Sheaf Theory and Sheaf Cohomology
2023 Embeddings in Projective Space
2023 Scheme Theory - Comparison with Varieties
2022 Introduction to Functional Analysis and Distribution Theory

VIII. Translation

I have translated several mathematics textbooks into Korean using LaTeX, both to deepen my understanding and to support the Korean mathematics student community. After formal review, I also plan to publish these translations. Please note that, due to copyright restrictions, I am unable to share the files of these translations. Since Springer has an agreement with KAIST that allows unrestricted e-book access, I have shared translations of Springer publications exclusively with fellow students of KAIST.

2024 John M. Lee – Introduction to Complex Manifolds (AMS) (Chapters 3, 7~10)
2024 Daniel Huybrechts – Complex Geometry (Springer)
2024 John M. Lee – Introduction to Riemannian Geometry (Springer, GTM 176)
2023 Charles A. Weibel – Homological Algebra (Cambridge) (Not Complete; Chapters 2, 4~5)
2023 Peter J. Freyd – Abelian Categories (Harper and Row)
2023 David Gilbarg, Neil S. Trudinger – Elliptic Partial Differential Equations of Second Order (Springer) (Not Complete; Chapters 2~5, 9~11)
2023 Lawrence C. Evans – Partial Differential Equations (AMS) (Not Complete; Chapters 2, 5, 7~11)
2023 Daniel A. Marcus – Number Fields (Springer) (Not Complete; Chapters 1~5)
2022 Terence Tao – Nonlinear Dispersive Equations (AMS) (Not Complete; Chapters 1~3)
2022 Robin Hartshorne – Algebraic Geometry (Springer, GTM 52)
2022 James E. Humphreys – Linear Algebraic Groups (Springer, GTM 21)
2022 Glen E. Bredon - Topology and Geometry (Springer, GTM 139) (Not Complete; Chapters 1~6)
2021 John M. Lee – Introduction to Smooth Manifolds (Springer, GTM 218) (Not Complete; Chapters 1~8)
2021 John M. Lee – Introduction to Topological Manifolds (Springer, GTM 202) (Not Complete; Chapters 5~12)
2021 Thomas W. Hungerford – Algebra (Springer, GTM 73)
2020 H. Grauert, K. Fritzsche – Several Complex Variables (Springer, GTM 38) (Not Complete; Chapters 1~2)
2020 Walter Rudin – Functional Analysis (McGraw Hill)
2020 Thomas Jech – Set Theory (Springer) (Not Complete; Chapters 1~8)
2019 John L. Kelley – General Topology (Springer, GTM 27)
2019 Walter Rudin – Real and Complex Analysis (McGraw Hill)
2018 Walter Rudin – Principles of Mathematical Analysis (McGraw Hill)