

Seungwoo Yoo

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ACADEMIC INTERESTS

AI for Science, Generative Modeling, Diffusion/Flow Models, 3D Machine Learning, Geometry Processing

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST)	Feb. 2025 -
Ph.D. in Computer Science	Advisor: Minhyuk Sung
Korea Advanced Institute of Science and Technology (KAIST)	Aug. 2023 - Feb. 2025
M.S. in Computer Science	Advisor: Minhyuk Sung
Korea Advanced Institute of Science and Technology (KAIST)	Feb. 2019 - Aug. 2023
B.S. in Computer Science (Major) & Electrical Engineering (Minor)	
<i>Summa Cum Laude</i> (GPA: 4.01 / 4.3)	

WORK EXPERIENCE

KAIST Visual AI Group, School of Computing, KAIST	Jun. 2021 - Aug. 2023
Undergraduate Intern	Advisor: Minhyuk Sung

PUBLICATIONS

1. DiffusionRollout: Uncertainty-Aware Rollout Planning in Long-Horizon PDE Solving
Seungwoo Yoo*, Juil Koo*, Daehyeon Choi*, Minhyuk Sung
TMLR
2. PairFlow: Closed-Form Source-Target Coupling for Few-Step Generation in Discrete Flow Models
Mingue Park*, Jisung Hwang*, **Seungwoo Yoo***, Kyeongmin Yeo, Minhyuk Sung
arXiv preprint
3. BézierFlow: Learning Bézier Stochastic Interpolant Schedulers for Few-Step Generation
Yunhong Min*, Juil Koo*, **Seungwoo Yoo**, Minhyuk Sung
arXiv preprint
4. Proxy-Free Gaussian Splats Deformation with Splat-Based Surface Estimation
Jaeyeong Kim, **Seungwoo Yoo**, Minhyuk Sung
3DV 2026
5. Neural Green's Functions
Seungwoo Yoo, Kyeongmin Yeo, Jisung Hwang, Minhyuk Sung
NeurIPS 2025
6. Neural Pose Representation Learning for Generating and Transferring Non-Rigid Object Poses
Seungwoo Yoo, Juil Koo, Kyeongmin Yeo, Minhyuk Sung
NeurIPS 2024
7. As-Plausible-As-Possible: Plausibility-Aware Mesh Deformation Using 2D Diffusion Priors
Seungwoo Yoo*, Kunho Kim*, Vladimir G. Kim, Minhyuk Sung (* denotes equal contribution.)
CVPR 2024
8. SALAD: Part-Level Latent Diffusion for 3D Shape Generation and Manipulation
Juil Koo*, **Seungwoo Yoo***, Minh Hieu Nguyen*, Minhyuk Sung (* denotes equal contribution.)
ICCV 2023

TEACHING EXPERIENCE

CS479: Machine Learning for 3D Data Course Assistant	School of Computing, KAIST Spring 2026
CS492(C): Diffusion and Flow Models Course Assistant	School of Computing, KAIST Fall 2025
CS479: Machine Learning for 3D Data Course Assistant	School of Computing, KAIST Spring 2025
CS492(D): Diffusion Models and Their Applications Course Assistant	School of Computing, KAIST Fall 2024
CS580: Computer Graphics Course Assistant	School of Computing, KAIST Spring 2024
URP490: Undergraduate Research Participation Program Graduate Assistant	School of Computing, KAIST Spring 2024
CS479: Machine Learning for 3D Data Course Assistant	School of Computing, KAIST Fall 2023
CS380: Introduction to Computer Graphics Course Assistant	School of Computing, KAIST Spring 2023
CS492(A): Machine Learning for 3D Data Course Assistant	School of Computing, KAIST Spring 2022

SCHOLARSHIPS AND ACHIEVEMENTS

Graduate School National Presidential Science Scholarship Korea Student Aid Foundation (KOSAF)	2024
National Presidential Science Scholarship Korea Student Aid Foundation (KOSAF)	2019 - 2022
KAIST Global Leadership Award KAIST	2025
Outstanding TA Award School of Computing, KAIST	Spring 2024, Fall 2024, Spring 2025
Outstanding Thesis Award School of Computing, KAIST	2025
CoE Leadership Award College of Engineering, KAIST	Spring 2023
Grand Prix (1st place), Undergraduate Research Participation (URP) Program Associate Vice President of Research, KAIST	Winter/Spring 2022
Dean's List College of Engineering, KAIST	Spring 2020, Fall 2020, Fall 2021
Department Honors Scholarship College of Engineering, KAIST	Fall 2020

ACADEMIC SERVICE

Reviewer

ICLR	2026
CVPR	2026
ICML	2025
NeurIPS	2025
SIGGRAPH	2025
SIGGRAPH Asia	2025
3DV	2026
Eurographics	2025
IEEE Transactions on Visualization and Computer Graphics (TVCG)	2025
IEEE Transactions on Multimedia	2024

Pacific Graphics 2023

Student Delegate	Fall 2023
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SKILLS

Programming Languages	C, C++, Python
Deep Learning Frameworks	PyTorch
Languages	Korean (Native), English (Fluent)