

# Seungwoo Yoo

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## ACADEMIC INTERESTS

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

## EDUCATION

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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

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

## PUBLICATIONS

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- DiffusionRollout: Uncertainty-Aware Rollout Planning in Long-Horizon PDE Solving  
**Seungwoo Yoo\***, Juil Koo\*, Daehyeon Choi\*, Minhyuk Sung  
*TMLR*
- 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*
- BézierFlow: Learning Bézier Stochastic Interpolant Schedulers for Few-Step Generation  
Yunhong Min\*, Juil Koo\*, **Seungwoo Yoo**, Minhyuk Sung  
*arXiv preprint*
- Proxy-Free Gaussian Splats Deformation with Splat-Based Surface Estimation  
Jaeyeon Kim, **Seungwoo Yoo**, Minhyuk Sung  
*3DV 2026*
- Neural Green's Functions  
**Seungwoo Yoo**, Kyeongmin Yeo, Jisung Hwang, Minhyuk Sung  
*NeurIPS 2025*
- Neural Pose Representation Learning for Generating and Transferring Non-Rigid Object Poses  
**Seungwoo Yoo**, Juil Koo, Kyeongmin Yeo, Minhyuk Sung  
*NeurIPS 2024*
- 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*
- 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

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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

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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

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Reviewer	
ECCV	2026
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
<a href="#">Pacific Graphics 2023</a>	
Student Delegate	Fall 2023

# SKILLS

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