

HEEJO JEONG

Phone number: (+82) 10-3573-6274 / Email: wjdgmlwh1629343@gmail.com

RESEARCH INTERESTS

Computer Graphics, Rendering, Physics-Based Animation, Differentiable Physics, Numerical methods, Optimization, Deformable bodies, Fluids

EDUCATION

Korea University

Seoul, Republic of Korea

M.S. in Computer Science and Engineering

Sep. 2023 - Aug. 2025

- Advisor: Prof. JungHyun Han
- GPA: 4.34 / 4.5

Korea University

Seoul, Republic of Korea

B.S. in Artificial Intelligence (Interdisciplinary Program)

Sep. 2019 - Aug. 2023

B.S. in Civil, Environmental and Architectural Engineering

Mar. 2017 - Aug. 2023

- Including 2 years of military service
- GPA: 4.06 / 4.5

PUBLICATIONS

[1] [Momentum-preserving Inversion Alleviation for Elastic Material Simulation](#)

Heejo Jeong, Seung-wook Kim, JaeHyun Lee, Kiwon Um, Min Hyung Kee, and JungHyun Han, Computer Animation and Virtual Worlds (CAVW), Vol. 35, No. 3, May 2024, pp. e2249.

- Poster version presented at Korea Computer Graphics Society (KCGS), July, 2024.

RESEARCH AND PROJECT EXPERIENCE

Learning Neural Hyper-elastic Constraints in XPBD Simulation

Research Project

Feb. 2025

- Implemented a differentiable Jacobi-style XPBD solver in PyTorch to enable learning of hyper-elastic constraints from a single motion trajectory.

LG Electronics: Real-time Air Conditioning Airflow Simulation and Visualization on Metaverse

Project Assistant

Sep. 2023

- Implemented a Python-based Poisson solver using preconditioned conjugate gradient (PCG) methods with a sparse matrix for fluid simulation.

Real-time Vision-based Human Pose Matching Framework

Research Intern

May. 2023

- Implemented a multiple human tracking module using Yolo7 and Kalman filter.

Predictive-Corrective Incompressible SPH solver

Research Intern

Jan. 2023

- Developed in C++ with OpenMP for parallelization and OpenGL for visualization.

EXPERIENCE

Research Intern, Télécom Paris, Institut Polytechnique de Paris, France *Jan 2025 – Feb 2025*
Collaborated with Prof. Kiwon Um on differentiable physics and data-driven simulation methods.

SCHOLARSHIPS

Research Assistant Scholarship, Korea University	<i>Fall 2023 – Spring 2025</i>
Research Scholarship, Korea University	<i>Fall 2023 – Fall 2024</i>
BK21 FOUR Outstanding New Student Scholarship	<i>Fall 2023</i>
National Grant	<i>Spring 2017 – Fall 2019, Fall 2022 – Spring 2023</i>
KU Alumni Scholarship, Korea University	<i>Spring 2023</i>
Work Scholarship, Korea University	<i>Fall 2022, Spring 2023</i>
POSCO Scholarship, POSCO	<i>Fall 2022</i>
Special Scholarship, Korea University	<i>Spring 2019</i>
Study Scholarships, Korea University	<i>Fall 2018, Fall 2019</i>

HONORS

Semester High Honors	<i>Spring 2018, Fall 2018, Fall 2022, Spring 2023</i>
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TECHNICAL SKILLS

Languages: C/C++, Python, Matlab
APIs: OpenGL, OpenMP, CUDA, Taichi Lang , PyTorch
Softwares: LaTeX, Blender, MS Office, Photoshop