

SEHYUN PARK

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RESEARCH INTERESTS

Computer Graphics, Physics-Based Simulation (Fluids, Deformable Bodies), Differentiable Physics, Geometry Processing, Numerical Methods

EDUCATION

Korea University

Seoul, Republic of Korea

M.S. in Computer Science and Engineering

Mar. 2026 – Expected Aug. 2027

- Advisors: [Prof. JungHyun Han](#) and [Prof. Kiwon Um](#)
- Combined Bachelor's–Master's Degree Program
- GPA: 4.0/4.0 (4.5/4.5)

Korea University

Seoul, Republic of Korea

B.S. in Computer Science and Engineering

Mar. 2020 – Feb. 2026

Interdisciplinary Major in Public Governance and Leadership

Mar. 2020 – Feb. 2026

- Including mandatory military service (Jul. 2021 – Apr. 2023)
- Exchange student at University of Calgary, Canada (Jan. 2025 – Apr. 2025)
- GPA: 3.81/4.0 (4.08/4.5)
- **Graduated with Great Honors**

PUBLICATIONS

Implicit Velocity Projection Method for Incompressible SPH Fluids.

SIGGRAPH Asia 2026. [\[paper\]](#) [\[video\]](#)

Min Hyung Kee, Jinhyung Ahn, **Sehyun Park**, Kiwon Um, and JungHyun Han.

UNDER REVIEW

Data Center Alive: Interactive Design Integrated with Real-time Thermal Simulation.

Submitted to Concurrency and Computation: Practice and Experience (CCPE).

HuiSeong Lee, **Sehyun Park**, Seungdo Hong, and JungHyun Han.

EXPERIENCE

Media Lab, Korea University

Seoul, Republic of Korea

Undergraduate Research Intern

Jun. 2024 – Feb. 2026

PROJECTS

Implicit Velocity Projection Method for Incompressible SPH Fluids

Researcher

Aug. 2025 – May 2026

- Implemented and optimized GPU kernels in NVIDIA Warp for the incompressible SPH solver.
- Designed and conducted experiments to validate the robustness of the solver across challenging scenarios.
- Accepted to SIGGRAPH Asia 2026.

LG Electronics: Real-time Simulation and Visualization of Airflow in Data Center

Researcher

Jun. 2025 – Dec. 2025

- Implemented a GPU-accelerated Lattice Boltzmann Method (LBM) solver for real-time airflow and thermal simulation of data center cooling systems.

- Submitted to Concurrency and Computation: Practice and Experience (CCPE).

Incompressibility Potential for Optimization-based Strong Two-way Coupling of Lagrangian Fluids and Solids

Research Assistant

Apr. 2025 – May 2025

- Set up fluid-only and fluid–solid coupling experiments and analyzed the effects of solver parameters on convergence and stability.
- Submitted to SIGGRAPH Asia 2025.

TEACHING

Computer Graphics (COSE331)

Korea University

Teaching Assistant

Spring 2026

SCHOLARSHIPS

BK21 FOUR Combined Bachelor's–Master's Program Scholarship	<i>2026 – Present</i>
National Grant	<i>2020 – 2021, 2023 – 2025</i>
MIRERO Scholarship	<i>2024 – 2025</i>
KU Pride Club Exchange Student Scholarship	<i>2025</i>
KUPC Scholarship	<i>2021, 2024</i>
Study Scholarship	<i>2020 – 2021, 2023</i>
MegaStudy Scholarship	<i>2020</i>

SKILLS

Programming: C/C++, Python, CUDA, OpenMP, OpenGL, NVIDIA Warp

Software: $\text{\LaTeX}$, Blender, Adobe Premiere Pro, Adobe Photoshop, MS Office

LANGUAGES

Korean: Native

English: Fluent (IELTS Overall 7.5)