

# JAEHYUN LEE

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Github: [github.com/LEE-JAE-HYUN179](https://github.com/LEE-JAE-HYUN179) | Website: [leejaehyun179.com](http://leejaehyun179.com)

## RESEARCH INTERESTS

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Computer Graphics, Physics Based Animation, Deformable bodies, Fluids, Coupling, Scientific Computing, Numerical Analysis

## EDUCATION

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**Korea University** Seoul, Republic of Korea  
*M.S, Computer Science;* *Sep. 2021 – present*

- GPA: 4.24/4.5
- Research Area: Deformable body simulation.

**Korea University** Seoul, Republic of Korea  
*B.S, Mechanical Engineering (Double major in Computer Science);* *Mar. 2015 – Feb. 2021*

- GPA: 4.4/4.5
- Graduated with Great Honor

## PUBLICATIONS

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- **JaeHyun Lee**, Seung-wook Kim, Kiwon Um, Min Hyung Kee, JungHyun Han. "Inversion alleviation for stable elastic body simulation." In Computer Animation and Virtual Worlds (CAVW), Vol. 34, No. 3-4, May 2023, pp. e2183.

## EXPERIENCE

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**Dimension Expansion method** Seoul, Republic of Korea  
*Researcher* *Mar. 2023 – present*

- On going project: Dimension expansion method for mass-spring model.

**Air Conditioning Airflow Simulation Visualization System** Seoul, Republic of Korea  
*Project Assistant* *Feb. 2023 – May. 2023*

- Implemented Python, GPU based real-time air flow simulator visualized with volume rendering.

**Energy conserving Material Point Method (MPM) Framework** Seoul, Republic of Korea  
*Researcher* *Feb. 2022 – Oct. 2022*

- Implemented CUDA based MLS-MPM Framework.

**Constrained Projective Dynamics (CPD)** Seoul, Republic of Korea  
*Research Assistant* *Mar. 2021*

- Implemented Collision Detection module for ACM SIGGRAPH 2021 paper "Constrained projective dynamics: real-time simulation of deformable objects with energy-momentum conservation".

**Interactive 3D Media Lab, Korea University** Seoul, Republic of Korea  
*Teaching Assistant* *Spring 2022*

- Worked as a Teaching Assistant in the COSE331 Computer Graphics (Instructor: Dr. JungHyun Han).

## SCHOLARSHIPS

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Special Scholarships, Korea University *Spring, Fall 2018*  
National Science and Engineering Scholarship, Ministry of Science and ICT *Spring 2019 – Fall 2020*  
Research Scholarships, Korea University *Fall 2021, Fall 2022*  
Kwanjeong Educational Foundation Scholarship, Kwanjeong Educational Foundation *Spring 2022 – Fall 2023*  
Teaching Assistant Scholarship, Korea University *Spring 2022*

## HONORS AND AWARDS

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Semester High Honors, Korea University	<i>Spring 2017 – Spring 2020</i>
Dean's List, Korea University	<i>Spring 2018</i>
President's List, Korea University	<i>Fall 2018 – Spring 2019</i>
Great Honor, Korea University	<i>Graduation</i>
Best Research award, Korea Electronics Association	<i>Feb 2022</i>
Best Research award, Korea Electronics Association	<i>Aug 2023</i>

## TECHNICAL SKILLS

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**Languages:** C++, Python, Java

**Graphics APIs:** OpenGL, Cuda

**Other Tools:** Git, CMake, Taichi Lang, Blender