

Sunwoo Kim

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Research Interest

- Computer graphics (Physics-based Simulation, Computer Animation)
- Robotics (Deep Reinforcement Learning, Optimal Control)
- Intelligent Virtual Agent (Embodied Conversational Agent)
- Multi-modality to Body motion (Video to motion, Text to motion)

Portfolio

To view my portfolio since my undergraduate years, please visit my [homepage](#)

Work Experience

Aug 2022- Present **NCSoft**
 Graphics AI Lab

Education

Sep 2022 **Seoul National University**
 Master Degree in Computer Science
 Advisor: [Jehee Lee](#)

Feb 2019 **Pohang University of Science and Technology**
 BSc in Creative IT Engineering
 Magna cum laude (GPA: 3.88)

Publication

“Human Motion Control of Quadrupedal Robots using Deep RL”

Sunwoo Kim, Maksim Sorokin, Jehee Lee, Sehoon Ha

Robotics: Science and Systems (RSS), 2022

[Project Site](#) [Supplementary video.](#) [arXiv](#)

“HumanConQuad: Human Motion Control of Quadrupedal Robots using Deep RL”

Sunwoo Kim, Maksim Sorokin, Jehee Lee, Sehoon Ha

Emerging Technologies, Siggraph Asia, 2022.

[ACM site](#)

“Towards Natural Prosthetic Hand Gestures: A Common-Rig and Diffusion Inpainting Pipeline”

Seungyup Ka, Taemoon Jeong, **Sunwoo Kim**, Sankalp Yamsani, Joohyung Kim, Sungjoon Choi

IEEE Engineering in Medicine and Biology Society (EMBC), 2024.

[Project Page](#)

Teaching Experience

Mar 2021 - Teaching Assistant
Aug 2021 Head TA of *Core Computing: Thinking with Computers*

Mar 2018 - Undergraduate Tutor
Aug 2018 Head Tutor of *Digital system and Micro-processor*

Awards

2018 Creative IT Convergence Korea Grand prize - Ministry of Science and ICT, Korea
[Improved Color Palette Extraction from Pictures \(presentation 4:12, awarded 1:38:00\)](#)

2017 Grand prize - Pohang University of Science and Technology
Creative Design III - Improved Color Palette Extraction from Pictures

2016 Grand prize - Pohang University of Science and Technology
[Creative Design II - Artistic Video Transfer using Deep Learning](#)

Lab Internship

Feb 2019 - **Movement Research Lab**
Aug 2019 *Trajectory optimization, Dexterous hand research*
Advisor: Jehee Lee

Nov 2017 - **Design Intelligence Lab**
July 2018 *Sensor communication and sensing, Interactive space design, Hazardous environment alarm system*
Advisor: Juhong Park

June 2016 - **Sport Engineering Lab**
Dec 2016 *First person view sports broadcasting in Pyongchang with KBS*
Advisor: Young-seok Kim

English Skills

- TOEFL IBT- 101

Last update: Feb. 2024.