

Sunwoo Kim

HomePage <https://pulsekim.github.io/>
Mobile Phone +82 10 4107 0375
Email sunwoo.pulse.kim@gmail.com

Research Interest

- Computer graphics (Physics-based Simulation, Computer Animation)
- Robotics (Deep Reinforcement Learning, Optimal Control)
- Gesture (Multimodal agents, Gesticulation)
- Converting multiple modalities to body motion (from video to motion, from text to motion)

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 cumme 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](#)

Professional Service

Reviewer: Siggraph Asia (2024)

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

2022 Best Master's Thesis Award: 2nd Prize - Korea Computer Graphics Society(KCGS)
Human Motion Control of Quadrupedal Robots using Deep RL

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

Last update: Feb. 2024.