Hee-Seung Moon

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CURRENT POSITION

Chung-Ang University, Republic of Korea — September 2024 – Now
Assistant Professor — School of Computer Science and Engineering

· Leading *Computational Human–AI Interaction Laboratory (**CHAI lab**)*
· Research Interests: Human–Computer Interaction, Computational Interaction, User Behavior Modeling

EDUCATION

Yonsei University, Republic of Korea — March 2015 – August 2022
Ph.D., School of Integrated Technology, College of Engineering — Advisor: Jiwon Seo & Byungjoo Lee
· Thesis Title: Adaptation of Deep User Behavior Model for Personalized Interaction

Yonsei University, Republic of Korea — March 2012 – February 2015
B.S., School of Integrated Technology, College of Engineering

EXPERIENCE

Aalto University, Finland — September 2022 – August 2024
Postdoctoral Researcher — Computational Behavior Lab (Advisor: Antti Oulasvirta)

ETH Zürich, Switzerland — May – July 2024
Visiting Researcher — Sensing, Interaction and Perception Lab (Advisor: Christian Holz)

Aalto University, Finland — March – May 2022
Visiting Researcher — User Interfaces Research Group (Advisor: Antti Oulasvirta)

Naver AI Lab, Republic of Korea — April – October 2021
Research Intern — Mentor: Minsuk Chang

Yonsei University, Republic of Korea — March 2015 – August 2022
Doctoral Student Researcher — Intelligent Unmanned Systems Lab (Advisor: Jiwon Seo)
Esports & High-Performance HCI Lab (Co-advisor: Byungjoo Lee)

PUBLICATIONS

Point & Grasp: Flexible Selection of Out-of-Reach Objects Through Probabilistic Cue Integration
X. Luo, **H.-S. Moon***, C. Holz, and A. Oulasvirta (*Corresponding Author)
Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI 2026, To Appear)

Efficient Human-in-the-Loop Optimization via Priors Learned from User Models
Y.-C. Liao, J. Belo, **H.-S. Moon**, J. Steimle, and A. M. Feit
Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI 2026, To Appear)

Modeling User Performance in Multi-Lane Moving-Target Acquisition
J. Kim, J. Kim, J.-S. Yoon, **H.-S. Moon**, S. Kim, and B. Lee
Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI 2025)

Modeling Visually-Guided Aim-and-Shoot Behavior in First-Person Shooters
J.-S. Yoon, **H.-S. Moon**, B. Boudaoud, J. Spjut, I. Frosio, B. Lee*, and J. Kim* (*Co-corresponding Authors)
International Journal of Human-Computer Studies, vol. 199, 2025

WigglyEyes: Inferring Eye Movements from Keypress Data
Y. Zhu, D. Shi, **H.-S. Moon**, and A. Oulasvirta
Proceedings of the 2025 ACM International Symposium on Wearable Computers (ISWC 2025)

Real-time 3D Target Inference via Biomechanical Simulation
H.-S. Moon, Y.-C. Liao, C. Li, B. Lee, and A. Oulasvirta
Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI 2024)
****Best Paper Honorable Mention (Top 5%)****

Amortized Inference with User Simulations
H.-S. Moon, A. Oulasvirta, and B. Lee
Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI 2023)

Speeding up Inference with User Simulators through Policy Modulation
H.-S. Moon, S. Do, W. Kim, J. Seo*, M. Chang*, and B. Lee* (*Co-corresponding Authors)
Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI 2022)

Fast User Adaptation for Human Motion Prediction in Physical Human–Robot Interaction
H.-S. Moon and J. Seo
IEEE Robotics and Automation Letters (RA-L), vol. 7, no. 1, 2022

Sample-Efficient Training of Robotic Guide Using Human Path Prediction Network
H.-S. Moon and J. Seo
IEEE Access, vol. 10, 2022

Optimal Action-based or User Prediction-based Haptic Guidance: Can You Do Even Better?
H.-S. Moon and J. Seo
Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI 2021)

Prediction of Human Trajectory Following a Haptic Robotic Guide Using Recurrent Neural Networks
H.-S. Moon and J. Seo
2019 IEEE World Haptics Conference (WHC)

Effect of Redundant Haptic Information on Task Performance during Visuo-Tactile Task Interruption and Recovery
H.-S. Moon, J. Baek, and J. Seo
Frontiers in Psychology, vol. 7, art. 1924, 2016

GRANTS AND FELLOWSHIPS

Outstanding Young Scientist Grant 2025 - 2028
National Research Foundation of Korea
· Proposal Title: Biomechanical Simulation Intelligence for Human–AI Cooperation

International Postdoc Fellowship 2023 - 2024
National Research Foundation of Korea
· Proposal Title: Inferring User Input Intention in VR based on Biomechanical Simulation

Graduate Fellowship 2015 – 2019
ICT Consilience Creative Program, Ministry of Science and ICT, Republic of Korea

Undergraduate Fellowship 2012 – 2015
ICT Consilience Creative Program, Ministry of Science and ICT, Republic of Korea

AWARDS AND HONORS

CHI 2024 Best Paper Honorable Mention 2024
· Paper: Real-time 3D Target Inference via Biomechanical Simulation

Excellent Academic Paper Award 2022
Yonsei University, Republic of Korea
· Paper: Sample-Efficient Training of Robotic Guide Using Human Path Prediction Network (*CHI 2022)*

Minister Award *2014*
Ministry of Science and ICT, Republic of Korea

ACADEMIC SERVICE

Associate Chair (AC)
· ACM CHI 2026 (*Computational Interaction* Subcommittee)

Reviewing
· *30+* reviews on top-tier HCI venues (e.g., CHI, UIST)
· *10+ Special Recognitions for Outstanding Reviews*

TEACHING

Instructor
· Artificial Intelligence (CSE 17182, Chung-Ang Univ.) Fall 2025, Spring 2026
· Human–Computer Interaction (CSE 17130, Chung-Ang Univ.) Spring 2025, 2026
· Big Data Reinforcement Learning (CSE 58374, Chung-Ang Univ.) Fall 2024, 2025
· Compilers (CSE 52321, Chung-Ang Univ.) Spring 2025
· Automata and Formal Languages (CSE 40458, Chung-Ang Univ.) Fall 2024