

Hyunsoo Lee

Usable Security & Privacy • Human-Centered AI Safety • Human-Computer Interaction
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ACADEMIC APPOINTMENTS

University of California, Berkeley • Electrical Engineering and Computer Sciences (EECS) Visiting Scholar • Berkeley, California	Oct 2026 – Present
Korea Advanced Institute of Science and Technology (KAIST), School of Computing Research Assistant Professor • Daejeon, South Korea	Aug 2025 – Sep 2026
Korea Advanced Institute of Science and Technology (KAIST) Postdoctoral Researcher • Daejeon, South Korea	Sep 2023 – Jul 2025

EDUCATION

KAIST • Ph.D. in Data Science Advisor: Uichin Lee Dissertation: Exploring User-Friendly Data Privacy Support in Multimodal Sensor-Based Digital Healthcare Contexts	2019 – 2023
KAIST • M.S. in Knowledge Service Engineering Advisor: Uichin Lee Thesis: Online Behavior Change Support Systems with Commitment Devices: A Case Study	2017 – 2019
Chungnam National University • B.A. in English Literature & International Economics Graduated first in class GPA: 4.35/4.50	2009 – 2013

PEER-REVIEWED PUBLICATIONS

Peer-reviewed conference and journal papers. **Hyunsoo Lee** is highlighted in the author list. * Corresponding author.

- [C11] **OurData: Understanding Family Privacy in Sensor-Rich Homes**
Hyunsoo Lee, Reza Ghaiumy Anaraky, Oded Nov, Uichin Lee. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) / UbiComp 2026*.
- [C10] **Mind the SIM: Awareness and Mental Models in a South Korean Case Study**
Hyunsoo Lee, Seyoung Jin, Hyoungshick Kim, Uichin Lee. *ACM CHI 2026*.
- [C9] **Why Stressed, Mom?: Exploring Family Reflection on Social and Emotional Sensor Data through Family Informatics**
Hyesoo Park, Sueun Jang, **Hyunsoo Lee***, Gahee Kim, Uichin Lee. *ACM CHI 2026*.
- [C8] **Harnessing Home IoT for Self-Tracking Emotional Wellbeing: Behavioral Patterns, Self-Reflection, and Privacy Concerns**
Youngji Koh, Chanhee Lee, Eunki Joung, **Hyunsoo Lee***, Uichin Lee. *IMWUT / UbiComp 2025*.
- [C7] **FamilyScope: Visualizing Affective Aspects of Family Social Interactions using Passive Sensor Data**
Hyunsoo Lee, Yugyeong Jung, Youwon Shin, Hyesoo Park, Woohyeok Choi, Uichin Lee. *ACM CSCW 2024*.
- [C6] **PriviAware: Exploring Data Visualization and Dynamic Privacy Control Support for Data Collection in Mobile Sensing Research**
Hyunsoo Lee, Yugyeong Jung, Emily Law, Seolyeong Bae, Uichin Lee. *ACM CHI 2024*.
- [J1] **Toward Dynamic Consent for Privacy-Aware Pervasive Health and Well-being: A Scoping Review and Research Directions**
Hyunsoo Lee, Uichin Lee. *IEEE Pervasive Computing*, 21(4), 2022.
- [C5] **Understanding Perceived Benefits and Privacy Risks in Open Dataset Collection for Mobile Affective Computing**
Hyunsoo Lee, Soowon Kang, Uichin Lee. *IMWUT / UbiComp 2022*.
- [C4] **Dynamic Consent for Sensor-Driven Research**
Hyunsoo Lee, Uichin Lee. *IEEE ICMU 2021*.
- [C3] **Sticky Goals: Understanding Goal Commitments for Behavioral Changes in the Wild**
Hyunsoo Lee, Auk Kim, Hwajung Hong, Uichin Lee. *ACM CHI 2021*.
- [C2] **GoldenTime: Exploring System-Driven Timeboxing and Micro-Financial Incentives for Self-Regulated Phone Use**
Joonyoung Park, **Hyunsoo Lee**, Sangkeun Park, Kyong-Mee Chung, Uichin Lee. *ACM CHI 2021*.
- [C1] **LocknType: Lockout Task Intervention for Discouraging Smartphone App Use**
Jaejeung Kim, Joonyoung Park, **Hyunsoo Lee**, Minsam Ko, Uichin Lee. *ACM CHI 2019*.

DEMOS, WORKSHOPS, POSTERS & DOMESTIC PUBLICATIONS

- [D1] **Demonstrating FamilyScope: Visualizing Affective Aspects of Family Social Interactions using Passive Sensor Data**
Hyunsoo Lee, Hyesoo Park. *ACM CSCW 2024, Demo.*
- [DC2] **Smart Home IoT Technology and Privacy Research Trends**
Youwon Shin, Hyunsoo Lee, Woohyeok Choi, Heebyeon Kim, Yong Jeong, Uichin Lee. *Korea Computer Congress (KCC) 2022.*
- [DC1] **Pilot System Design Study for User-Friendly Mobile/Wearable Sensor Data Collection**
Jinhyuk Jang, Hyunsoo Lee, Uichin Lee. *Korea Computer Congress (KCC) 2022.*
- [P3] **Privacy Concerns of Digital Phenotyping for Older Adults with Mental Health Issues**
Hyunsoo Lee, Uichin Lee. *ACM CHI 2020, Networked Privacy Workshop.*
- [P2] **Positive Computing for Digital Wellbeing**
Uichin Lee, Hyunsoo Lee, Joonyoung Park. *ACM CHI 2019, Designing for Digital Wellbeing Workshop.*
- [P1] **Commitment Devices in Online Behavior Change Support Systems**
Hyunsoo Lee, Hwajung Hong, Uichin Lee. *Asian CHI Symposium 2019.*

INDIVIDUALLY AWARDED RESEARCH FUNDING

Developing User-Driven Interpersonal Data Management Systems Supporting Group-Based User Privacy for Multimodal Sensor-Based Digital Healthcare Services

National Research Foundation of Korea (NRF) | Sep 2023 – Aug 2026

NYU collaboration

Led the collaboration with Oded Nov's research group at New York University (NYU) on interpersonal and group privacy.

Global Information Security Advanced Talent Development Program

Korea Institute of Information Security and Cryptology (KIISC) | Oct 2026 – Sep 2027

Research at UC Berkeley (EECS)

Selected for KIISC research support through the Global Information Security Advanced Talent Development Program.

SPONSORED RESEARCH PROJECTS

Research projects funded through grants held by supervising faculty PIs. Roles distinguish lab-level project leadership from participation as a collaborator.

Design and Simulation of Physical AI-Based Collaborative Intelligence Systems

National IT Industry Promotion Agency (NIPA) | Oct 2025 – Aug 2026 | Project lead (lab-level)

Led multi-agent AI safety research within the Physical AI collaborative-intelligence project, examining safety and security risks and safeguards for interacting AI agents.

Development of Digital Innovative Element Technologies for the Early Prediction of Complex Diseases and the Expansion of Telemedicine

Institute for ICT Planning & Evaluation (IITP) | Apr 2025 – Aug 2026 | Collaborator

Contributed to the design and simulation of multi-agent attack scenarios for mental healthcare and to the development of a framework for multi-agent system security.

Constructing Multimodal Benchmark Dataset for AI Safety

Telecommunications Technology Association (TTA) / Kakao | Oct–Dec 2024 | Project lead (lab-level)

Led privacy-aware multimodal dataset curation, security-protocol development, and risk-assessment guidelines.

Mental Health Measurement and Preemptive Care Technology Research in Smart Homes

LG Electronics | Mar 2024 – May 2025 | Collaborator

Contributed to the development of LifePensieve, a smart-home mental-health informatics system, and analyzed behavioral data in relation to emotional wellbeing.

Smart Home Technology to Support Healthy Family Life

Hanssem Co., Ltd. | Apr 2021 – Mar 2024 | Project lead (lab-level)

Led a living-lab study of in-home sensing, designed FamilyScope, and co-designed SELaD for children's social-emotional learning.

Non-Face-to-Face Treatment Platform for Depression Management

Ministry of Science and ICT | Apr–Dec 2021 | Collaborator

Designed and developed PriviAware, a mobile application supporting contextual consent and interactive data exploration for privacy-aware sensing research.

Development of Contextual Big Data Collection Technology Based on Crowdsourcing and Large-Scale Public Datasets

National Research Foundation of Korea (NRF) | Oct 2019 – Mar 2021 | Project lead (lab-level)

Led privacy-aware interaction design for data contribution and an in-the-wild study (N=100) of perceived benefits and privacy risks.

Development of Persuasive Interaction SW Source Technology and Platform for Positive Computing

National Research Foundation of Korea (NRF) | Oct 2018 – Jun 2021 | Collaborator

Participated in the development of GoldenTime and contributed to LocknType, persuasive mobile systems supporting mindful device use.

TEACHING EXPERIENCE

Instructor, KAIST School of Computing | Spring 2026

CS374: Introduction to Human-Computer Interaction

Introduced foundational HCI concepts and methods, including human cognition, usability, user research, interaction design, prototyping, and usability evaluation. In a semester-long team project, students identified user needs and designed interactive systems, developing and iterating on AI agent prototypes and evaluating their design decisions. The course integrated lectures, discussion, hands-on design exercises, and feedback on student projects.

Course evaluation: **4.76/5.00**

Instructor, KAIST School of Computing | Fall 2025

CS492: Human-Centered Security and Privacy

Taught human-centered security and privacy, including mental models, authentication, security warnings, access control, deceptive patterns, AI privacy, and privacy risks in sensing environments. For their course projects, students investigated security and privacy problems and designed usable systems or protective mechanisms, translating human factors and user needs into concrete design proposals. The course combined research-paper discussions with applied system-design work and critical evaluation of usability, privacy, and security trade-offs.

Course evaluation: **4.85/5.00**

Human-Computer Interaction · Co-Instructor, KAIST School of Computing

Fall 2023

Human-Computer Interaction · Teaching Assistant, KAIST

2021, 2022

School of Computing / Industrial & Systems Engineering

RESEARCH SUPERVISION & MENTORSHIP

Youngji Koh | Ph.D., KAIST · Currently Postdoctoral Researcher, University of Tokyo

Supervised research on smart-home informatics for emotional wellbeing, including system development, mixed-methods analysis, and research writing; coauthored IMWUT / UbiComp 2025.

Hyesoo Park | M.S. student, KAIST · Currently Ph.D. Student, Georgia Tech

Supervised research on family and child-development informatics, including system design, qualitative analysis, and research writing; coauthored CHI 2026.

Emily Law | M.S. student, KAIST · Jan–Jun 2023

Mentored privacy-aware mobile interaction design, user studies, and thesis development; CHI 2024.

Seolyeong Bae | Undergraduate researcher, GIST · Jun–Aug 2023

Mentored mobile sensing consent design and user-study methods; CHI 2024.

Youwon Shin | M.S. student, KAIST · Apr 2021–Dec 2022

Mentored FamilyScope development, user studies, and master's thesis research.

Jinhyuk Jang | Undergraduate researcher, KAIST · Jan–Jun 2022

Mentored privacy-aware sensor data visualization and research writing; KCC 2022.

Seheon Kim (KAIST) and Juhwan Yong (Kangwon National University) | Undergraduate researchers · Summer 2022

Mentored IoT sensing living-lab design and user research methods.

HONORS & AWARDS

2024 Special Recognition for Outstanding Reviews, ACM CHI

2023 Special Recognition for Outstanding Reviews, ACM CHI

2022 Outstanding Ph.D. Student of the Year, KAIST Graduate School of Data Science

2022 Outstanding Teaching Assistant, KAIST Education 4.0 Program

2021 Outstanding Ph.D. Student of the Year, KAIST Graduate School of Data Science

2020 Outstanding Ph.D. Student of the Year, KAIST Graduate School of Data Science

INVITED TALKS

Human-Centered System Design for User Security and Privacy in the Era of Multimodal Sensing (2025)

Early-Career Researcher Session, Korea Computer Congress (KCC)

An Empirical Study on LLM-Driven Privacy Attacks and Assessing Privacy Risks (2025)

Multi-Modal AI Safety Benchmark Workshop, IEEE BigComp

User-Friendly Privacy Design in Ubiquitous Computing (2024)

Ph.D. Forum, Korea Computer Congress (KCC)

Supporting User Data Privacy in Digital Healthcare Systems (2024)

Yonsei University, Graduate School of Information Science

Enhancing Security & Privacy for Multimodal Environments (2023)

Samsung Research, Security & Privacy Team

Applying Human-Centered Design to Security & Privacy Research (2023)

Sungkyunkwan University, Graduate School of Convergence Security

Privacy and Security in Ubiquitous Computing Contexts (2022)

Chungnam National University, Graduate School of Computing

Understanding User Experiences in Behavior Change Support Systems (2022)

HCI Korea 2022, Outstanding Paper Presentation

ACADEMIC & COMMUNITY SERVICE

Conference Reviewing

ACM CHI 2021–2026

ACM UbiComp / IMWUT 2024–2026

ACM CSCW 2023–2024

ACM HRI 2025

ECSCW 2025

ACM MobileHCI 2020

Journal Reviewing

ACM Transactions on Computing for Healthcare 2025

Human–Computer Interaction 2022

Committees, Session Chair & Community Service

ACM UbiComp/ISWC Poster & Demo Track Committee Member (2025)

Session Chair, ACM CHI: Privacy in Real Contexts (2024)

HCI@KAIST Committee (2022)

Contributor, AIAAIC: AI, Algorithmic and Automation Incidents and Controversies (2024-2025)

EARLIER RESEARCH & INDUSTRY EXPERIENCE

Researcher, KAIST | 2015–2016

Education-platform content design and database analysis.

Research Intern, KIRD | 2014–2015

R&D platform database analysis.

Intern, TripVi (startup) | 2013

Mobile UI/UX design and market-data analysis.

RESEARCH METHODS & TECHNICAL SKILLS

Research methods Usability evaluation, qualitative interviews and thematic coding, experimental/user studies, statistical analysis (SPSS, R).

Programming and tools Python, R, LLM prompting, Figma.