Sunok Lee

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Research Interest

Human-centered design for emerging technologies, UX design to empower people, Human-centered AI, and art-based design methodologies.

CURRENT POSITION

Assistant Professor in the Department of Art & Technology at Sogang University.

EDUCATION

2020 - 2024	Korea Advanced Institute of Science & Technology (KAIST) Ph.D. Industrial design Daejeon. South Korea, Feb.2020- Feb. 2024 (expected) Advisor: Sangsu Lee
2018 - 2020	Korea Advanced Institute of Science & Technology (KAIST) M.S. Industrial design Daejeon, South Korea, Feb.2018-Feb.2020 Advisor: Sangsu Lee
2014	University of North Carolina at Charlotte (UNCC) Visiting student, Fine art Sculpture NC USA, Jan.2014-Dec.2014
2011 - 2016	Hongik University B.F.A. Metal arts and Design / Sculpture / Teaching profession certificate of fine art Seoul, South Korea, Feb. 2011-Feb.2016
PUBLICATION	
2025	Sunok Lee, Dasom Choi, Lucy Truong, Nitin Sawhney, and Henna Paakki. Into the Unknown: Leveraging Conversational AI in Supporting Young

Migrants' Journeys Towards Cultural Adaptation. (CHI 2025) 2024 Sunok Lee, Dasom Choi, Hyeonjeong Im, Yunjae Josephine Choi, Minha Lee, Hwajung Hong, and Sangsu Lee. Fostering School-aged Children's Critical Thinking Competency about AI Through Art-based Education. (*under review*) Lucy Truong, **Sunok Lee**, and Nitin Sawhney. Enhancing Conversations for Migrant Counseling: Designing for Trustworthy Al-mediated Collaboration between Migrants and Service Advisors. (CSCW 2024)

Minha Lee, Jian Jun, **Sunok Lee**, and Sangsu Lee. 2024. Understanding the Initial Journey of UX Designers Toward Sustainable Interaction Design: A Focus on Digital Infrastructure Energy Reduction. In Proceedings of the 2024 ACM Designing Interactive Systems Conference (DIS '24). Association for Computing Machinery, New York, NY, USA.

Fedor Vitiugin, **Sunok Lee**, Henna Paakki, Anastasiia Chizhikova, and Nitin Sawhney. Unraveling Code–Mixing Pattern in Migration Discourse: Automated Detection and Analysis of Online Conversations on Reddit. (ICWSM Workshop, accepted)

Dasom Choi, **Sunok Lee**, Sung-In Kim, Kyungah Lee, Hee Jeong Yoo, Sangsu Lee, and Hwajung Hong. Unlock Life with a Chat(GPT): Integrating Conversational AI with Large Language Models into Everyday Lives of Autistic Individuals. In Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24). Association for Computing Machinery, New York, NY, USA.

Huisung Kwon, Yunjae Josephine Choi, **Sunok Lee**, and Sangsu Lee. Unveiling the Inherent Needs: GPT Builder as Participatory Design Tool for Exploring Needs and Expectations of AI with Middle–Aged Users. In Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24). Association for Computing Machinery, New York, NY, USA.

Sunok Lee, Dasom Choi, Minha Lee, Jonghak Choi, and Sangsu Lee. Fostering Youth's Critical Thinking Competency about AI through Exhibition. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA.

> Dasom Choi, Sung–In Kim, **Sunok Lee**, Hyunseung Lim, Hee Jeong Yoo, and Hwajung Hong. Love on the spectrum: Toward Inclusive online dating experience of autistic individuals. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA.

2023

	Yeon Soo Kim, Hyeonjeong Im, Sunok Lee , Haena Cho, and Sangsu Lee. We Speak Visually": User-generated Icons for Better Video-Mediated Mixed Group Communications Between Deaf and Hearing Participants. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA.
2022	Sunok Lee, Minha Lee, and Sangsu Lee. "What If Artificial Intelligence Become Completely Ambient in Our Daily Lives?" Exploring Future Human-AI Interaction through High Fidelity Illustrations. International Journal of Human-Computer Interaction (2022): 1–19. (SCIE)
	Yeonsoo Kim, Sunok Lee , and Sangsu Lee. A Participatory Design Approach to Explore Design Directions for Enhancing Video conferencing Experience for Non-signing Deaf and Hard of Hearing Users. ACM ASSETS 2022 (Poster)
	Minha Lee, Wonyoung Park, Sunok Lee , and Sangsu Lee. Distracting Moments in Video Conferencing: A Look Back at the Pandemic Period. In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI '22). Association for Computing Machinery, New York, NY, USA.
2021	Sunok Lee and Sangsu Lee. Hey Alexa, Where are you? A Drawing Study to Understand the User's Mental Model of Environment Surrounding the Conversational Agent. International Association of Societies of Design Research Conference (IASDR'21).
2021	to Understand the User's Mental Model of Environment Surrounding the Conversational Agent. International Association of Societies of Design
2021	to Understand the User's Mental Model of Environment Surrounding the Conversational Agent. International Association of Societies of Design Research Conference (IASDR'21). Kwangmin Cho, Sunok Lee , Wonyoung Park, Minha Lee, Wooseok Kim, and Sangsu Lee. Understanding stakeholders' needs for an Emergency Mobile Hospital at an infectious disease situation. International
2021	to Understand the User's Mental Model of Environment Surrounding the Conversational Agent. International Association of Societies of Design Research Conference (IASDR'21). Kwangmin Cho, Sunok Lee , Wonyoung Park, Minha Lee, Wooseok Kim, and Sangsu Lee. Understanding stakeholders' needs for an Emergency Mobile Hospital at an infectious disease situation. International Association of Societies of Design Research Conference (IASDR'21). Juhyeong Park, Sunok Lee , and Sangsu Lee. MODU: A Story-Based Empathy Expression Training Game for Children with Mild Intellectual Disability and Borderline Intellectual Functioning. In Interaction Design

became invisible?" Comparing users' mental models according to physical entity of AI speaker. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 4.3 (2020): 1–24.

2019 **Sunok Lee**, Sungbae Kim, and Sangsu Lee. "What does your Agent look like?": A Drawing Study to Understand Users' Perceived Persona of Conversational Agent. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems.

TEACHING EXPERIENCE

COURSES TAUGHT

2025	Department of Art & Technology at Sogang University Spring Semester Speculative Design, Design Methodology
2024	Aalto University, Computer Science Department / Lecturer March 21–June 6 Conversational AI & Voice Interaction (https://aaltovai.wordpress.com)
2022	 Sangmyung University / Lecturer Feb 2021-Dec 2021 Organized curriculum and conducted a lecture on the interface

SPECIAL LECTURE

2023 Electronics and Telecommunications Research Institute / Invited talk Dec 2023 Seminar title: Understanding the Perspectives of Human Beyond What Numbers Can Show, Qualitative Research in HCI

> **Ewha Women University, Graduate School of Education / Invited talk** Aug 2023 Seminar title: *HCI X Education X Art X UX design*.

and system design for 120 design students for a year.

Aalto University, Trust–M project / Invited talk Sep 2023 Seminar title: *Participatory Design for Inclusive User Interfaces Centering on Conversational AI.*

Naver / Invited talk June 2023 Seminar title: *Designing the future: How design researchers shape user experience for emerging technologies.*

Bugok Middle School / Lecturer

May 2023 – June 2023 Fostering middle school students' Al literacy through Art X Al curriculum.

Southern University of Science and Technology / Invited talk

Feb 2023 Seminar title: *Transform the caption of your design work from "Personal project" to "Award–winning project"*

2022 Samsung Heavy Industries / Lecturer Aug 2022

• Organized curriculum and conducted a lecture on the design methodology and user experience design.

WORK EXPERIENCE

2024	Aalto University Computer Science Department / Post-doctoral
	Researcher (@ <u>Trust-M</u>)
	Jan 2024– Jan 2025
	 Integrating LLM-driven chat bots in the public services for migrants.
	 Exploring AI-mediated communication tool for supporting better
	communication between service advisor and migrants.
2023	Samsung electronics / Lead UX Researcher (@KAIST) Jul 2023- Sep 2023
	• Discovering future concepts and user scenarios for next wearable devices.
	NH Investments & Security / UX, UI designer (@KAIST)
	Jan 2023-Mar 2023
	 Designing user participatory stock-related events based on gamification.
2022	Naver (Alto) / UX designer, Research assistant (@KAIST)
	Mar 2022–Jul 2022
	 Developed use cases for real-time collaboration based on the
	Conflict-free replicated data type (CRDT) algorithm to support
	simultaneous editing of multiple users.
	 Prototyping user experience and interface design
	(https://yorkie.dev/).

NH Investments & Security / UX, UI designer (@KAIST)

Jan 2022-Mar 2022

- Revealed the usability problems of the investment app on the current foldable smartphone.
- Developed the design direction to provide a UI optimized for the foldable smartphones.
- Established design guidelines to provide a better user experience for foldable smartphones.

Al with Weird Wonderland / Chief curator

Nov 2021 - Mar 2022

- Moderated collaborative workshop with AI developers, HCI designers, and artists to design AI-related exhibits and exhibition programs.
- Designed and curated an exhibition for provoking critical thinking about AI.

2020 – 2021 KAIST MCM Research Center / Project lead (@KAIST)

Aug 2020- Nov 2021

- Conducted user research through focus group interviews and surveys to understand infectious disease situations related to stakeholders' needs and challenges.
- Created design requirements and solutions for mobile expandable negative pressure wards equipped with advanced medical facilities.
- Created scenario video production to promote design solution (https://youtu.be/x80KaTSmup8).

Samsung electronics / UX researcher (@KAIST)

Aug 2019 - Dec 2019

2019

- Conducted user study to understand users' expectations for proactive voice assistants in smart homes.
- Created user scenarios for the user-voice assistant interaction.
- Developed UX design guidelines for proactive voice assistant BIXBY.

SL / UX researcher (@KAIST)

May 2019 - Nov 2019

• Conducted user research for user-autonomous vehicle interaction. Developed user journey map of driving the autonomous vehicle.

	 Created design guidelines for better communication methods using the front display of autonomous vehicles.
2018	 Naver / UX research researcher and Project lead (@KAIST) May 2018 - Nov 2018 Conducted user research for understanding the usage pattern of voice assistants in the mobile Naver app. Developed design direction for better usage of voice assistants. Created user scenarios of new design solutions.
2017	 SWAROVSKI / Freelance Jewelry Designer Sep 2017 - Dec 2017 Mickey Mouse celebration collection for 2018 FW
2016	AGATHA Paris / Jewelry Designer and visual merchandise May 2016 –Nov 2017

AWARDS

2024	IF Design award
	[Doolpay] e-wallet service for rethinking purchase
	<u>https://ifdesign.com/en/winner-ranking/project/doolpay-e-wallet-servic</u>
	e-for-rethinking-purchase/618419
	[Evergrow] Investment Education Service
	https://ifdesign.com/en/winner-ranking/project/evergrow-investment-ed
	ucation-service/618273
2023	NRF (National Research Foundation of Korea) grants \$15,000
2022	IF Design award
	[MODU] Educational game for children with intellectual disabilities.
	https://ifdesign.com/en/winner-ranking/project/modu-a-story-based-empat hy-expression-training-game/333132
2021	IF Design award
	[KARE MCM] Control UX for mobile negative pressure isolation ward
	reflecting the needs of all healthcare professionals and patients.
	http://mcm.kaist.ac.kr/
	[Aline] Service design helps people align their investment and
	consumption with their values.
	https://ifdesign.com/en/winner-ranking/project/aline/310898
	[Aqua] Interactive banking app that takes its cues from how people do
	accounting in our heads to manage personal assets.
	https://ifdesign.com/en/winner-ranking/project/agua/312577

	[Stockbox] Stock investment platform that makes it easy for people to
	enter the stock market by utilizing a metaphor of tangible gifts.
	https://ifdesign.com/en/winner-ranking/project/stockbox/311212
	[Pinto] Investment education and experiencing service for teenagers and
	parents to develop planning habits for investment.
	https://ifdesign.com/en/winner-ranking/project/pinto/311170
	Red dot design award
	[Mobile Clinic Module Control UX] and [Aline]
2018	Red dot design award Brands & Communication
	[AI Kids edition] Voice user interface that has been developed for Naver
	Clova which can be adapted to any kind of AI speaker.
	https://www.red-dot.org/ko/project/ai-kids-edition-25994
	[AI Meeting] Meeting assisting platform helps teams work efficiently and
	productively.
	https://www.red-dot.org/ko/project/ai-meeting-assistant-25993
	[Orbit] Voice user interface provides LED lights to indicate that it has
	valuable information to share with users to start a conversation.
	https://www.red-dot.org/ko/project/orbit-25996

SERVICE

EXTERNAL REVIEWING	
2024	ACM Conference on Human Factors in Computing Systems (CHI) Papers
	and Late-Breaking Work.
	ACM Designing Interactive Systems (DIS) Papers and Pictorials.
	ACM Computer-Supported Cooperative Work and Social
	Computing(CSCW) Papers.
	Archives of Design Research (AODR).
	ACM Conversational User Interfaces (CUI).
	ACM Symposium on User Interface Software and Technology (UIST)
2023	Archives of Design Research (AODR)
	International Conference on Human-Agent Interaction (HAI) Papers.
	International Association of Societies of Design Research (IASDR)
	Papers.
	Conference on Human Factors in Computing Systems (CHI) Papers.
	Conversational User Interfaces (CUI) Papers.
2022	International Journal of Human-Computer Interaction (IJHCI).

	Designing Interactive Systems (DIS) Papers and Pictorials.
	International Conference on Human-Agent Interaction (HAI) Papers.
	International conference on tangible embedded and embodied interaction
	(TEI) Work in Progress.
	Archives of Design Research (AODR).
2021	Conference on Human Factors in Computing Systems (CHI) Case Studies. MobileHCI (human-computer interaction) Late Breaking Results.

https://breakthroughs.kaist.ac.kr/sub02/view/id/408