

Changmin Kim

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RESEARCH INTERESTS

As a Design / HCI researcher, I integrate technology and design to address emerging challenges in interactive systems. My research explores **encounters with artificial intelligence (AI)** in their many forms, across products, spaces, and everyday life, with a vision to expand how AI can take part in human experience. My past and ongoing research and design initiatives center on building within this domain, developing a series of novel interactive systems and artifacts, and examining their human and societal impact.

Artificial Intelligence (AI)
Smart Environment
Human-Computer Interaction
Hardware/Software Prototyping
Interaction Design
Research Through Design
Speculative Design

EDUCATION

2023	Korea Advanced Institute of Science and Technology (KAIST) Ph.D. of Engineering, Department of Industrial Design Dissertation: "Utilizing Everyday Objects for End-User IoT Coordination"
2016	Korea Advanced Institute of Science and Technology (KAIST) M.S. of Engineering, Department of Industrial Design Thesis: "TransLayer: Exploring the Layered Use of Transparent Display on a Large Tabletop Display"
2014	Korea Advanced Institute of Science and Technology (KAIST) Bachelor of Engineering, Department of Industrial Design

PROFESSIONAL EXPERIENCE

2025–present	Assistant Professor	Department of Design, Sungkyunkwan University
2023–2024	Postdoctoral Research Associate	Industry Management Research Center, KAIST
2022–2025	Executive	IoTIZ (IoT Startup Company)

AWARDS & HONORS

2025	Honorable Mention	ACM Conference on Human Factors in Computing Systems
2024	ADR Research Paper Excellence Award	Korean Society of Design Science
2021	Interface & User Experience Design Award	Red Dot Award
2021	Discipline Professional Concept Award	iF Design Award
2018	Global Ph.D. Fellowship (Extended)	National Research Foundation of Korea
2017	Best Paper Award	HCI Society of KOREA
2016	Best Paper Award	HCI Society of KOREA

2016–2017	Global Ph.D. Fellowship	National Research Foundation of Korea
2014	R&D Best Project Award	KAIST & K-Valley

PUBLICATIONS

International Journals & Proceedings

2026	Reminiscences of Futures (RoF): Designing and Studying Encounters with Embodied, AI-Generated Future Selves Jiwon Lee, Yewon Kim, Chang-Min Kim , Suhyun Lim, Chang Hyun Park, Subin Cho, Tek-Jin Nam CHI '26, ACM Conference on Human Factors in Computing Systems
2025	LO: A Speculative Domestic Technology That Lives and Dies Along with Its User Jiyeon Lee, Chang-Min Kim , Hyungjun Cho, Jisu Park, Tek-Jin Nam DIS '25, ACM Conference on Designing Interactive Systems
2025	The effect of In-Car Agent Embodiment on Different Types of Information Bonhee Ku, Chang-Min Kim , Hyungjun Cho, Jisu Park, Tek-Jin Nam CHI '25, ACM Conference on Human Factors in Computing Systems — ACM Honorable Mention
2025	ShamAln: Designing Superior Conversational AI Inspired by Shamanism Hyungjun Cho, Jiyeon Seo, Jiwon Lee, Chang-Min Kim , Tek-Jin Nam CHI '25, ACM Conference on Human Factors in Computing Systems
2024	Transforming Everyday Objects into IoT Control Interfaces: Design and Evaluation of the 'e-Rings' System Chang-Min Kim Archives of Design Research, 37(5), 29–49
2024	Educational Framework for IoT Product and Service Prototyping Chang-Min Kim Archives of Design Research, 37(2), 103–119
2022	Exploration on Everyday Objects as an IoT Control Interface Chang-Min Kim , Tek-Jin Nam DIS '22, ACM Conference on Designing Interactive Systems
2021	IoTIZER: A Versatile Mechanical Hijacking Device for Creating Internet of Old Things Hyungjun Cho, Han-Jong Kim, JiYeon Lee, Chang-Min Kim , Tek-Jin Nam DIS '21, ACM Conference on Designing Interactive Systems
2019	The Effect of Handwriting and Physical Representation in Computer-Mediated Text Communication Chang-Min Kim , Oosung Son, Tek-Jin Nam Archives of Design Research, 32(2), 45–55
2018	SketchStudio: Experience Prototyping with 2.5-Dimensional Animated Design Scenarios Han-Jong Kim, Chang-Min Kim , Tek-Jin Nam DIS '18, ACM Conference on Designing Interactive Systems
2017	Applying Real-Time Text on Instant Messaging for a Rapid and Enriched Conversation Experience Chang-Min Kim , Hyeon-Beom Yi, Ji-Won Nam, Geehyuk Lee DIS '17, ACM Conference on Designing Interactive Systems
2016	Self-camera Positions to Make Myself More in Style Chorong Kim, Chang-Min Kim , Hyeon-jeong Suk IASDR '16, International Association of Societies of Design Research

2015	G-raff: An Elevating Tangible Block for Spatial Tabletop Interaction Chang-Min Kim , Tek-Jin Nam CHI '15, ACM Conference on Human Factors in Computing Systems
Domestic Journals & Proceedings	
2024	BeatGlow: Ambient Light and Control Device for a Rich and Active In-Car Music Listening Experience Incheol Jung, Chang-Min Kim HCIK '24, HCI Society of Korea
2024	EmoFrame: A Frame-like Interactive Mood Lamp for Assisting the Emotional Reflection of Everyday Moments Jungin Choi, Chang-Min Kim HCIK '24, HCI Society of Korea
2024	Chair-Mounted Avatar Robot for Enhancing Interaction Between Remote and On-Site Students in a Hybrid Learning Environment Jeongmin Ryu, Teawan Kim, Chang-Min Kim HCIK '24, HCI Society of Korea
2024	Robot Avatar and Controller System for Supporting Remote Chatting between Elderly and Their Child Jeongmin Ryu, Chang-Min Kim , Tek-Jin Nam KSDS '24, Korean Society of Design Science
2019	A System Transforming Legacy Products to Smart IoT Products Hyungjun Cho, Chang-Min Kim , Tek-Jin Nam KSDS '19, Korean Society of Design Science
2018	Raspberry Pi Based Web Development Environment for IoT Prototyping Chang-Min Kim , Han-Jong Kim, Tek-Jin Nam KSDS '18, Korean Society of Design Science
2017	LAMPY: An Assistive Pet-like Smart Lamp Living in a Desk Workspace Chang-Min Kim HCIK '17, HCI Society of Korea
2017	TransLayer: Remote Assistance System Using Transparent Display in Tabletop Environment Chang-Min Kim , Tek-Jin Nam HCIK '17, HCI Society of Korea
2016	Formula One: Mobile Device Supported Rapid In-the-Wild Design and Evaluation of Interactive Prototypes Chang-Min Kim , Seongkook Heo, Kyeong-Ah Jeong, Youn-Kyung Lim HCIK '16, HCI Society of Korea
Exhibitions, Posters & Demonstrations	
2025	Exploration on Everyday Objects as an IoT Control Interface Chang-Min Kim , Tek-Jin Nam CHI '25, ACM Conference on Human Factors in Computing Systems, Yokohama, Japan
2024	ShamAI: Superior Conversational AI Inspired by Shamanism Hyungjun Cho, Jiyeon Seo, Jiwon Lee, Chang-Min Kim , Tek-Jin Nam Crossing Over, Ground Seoul, Korea
2024	The Future of Objects Chang-Min Kim Culture & Art Center, Daejeon, Korea

2019	IoTIZ: Open-source DIY Tool for Transforming Analog Products to IoT Devices Chang-Min Kim, Tek-Jin Nam Salone del Mobile, Milano, Italy
2018	SketchStudio: Rapid Prototyping Tool for 2.5D Animated Design Scenarios Han-Jong Kim, Chang-Min Kim, Tek-Jin Nam DIS '18, ACM Conference on Designing Interactive Systems, Hong Kong
2017	Tele-Handwriter: Affective Digital Text Communication Using Physical Handwriting Oosung Son, Chang-Min Kim, Tek-Jin Nam DIS '17, ACM Conference on Designing Interactive Systems, Edinburgh, Scotland
2016	Exploring the Layered Use of Transparent Display on a Large Tabletop Display Chang-Min Kim, Tek-Jin Nam CHI '16, ACM Conference on Human Factors in Computing Systems, San Jose, USA
2016	DooBoo: Pet-Like Interactive Dashboard towards Emotional Electric Vehicle Yea-Kyung Row, Chang-Min Kim, Tek-Jin Nam CHI '16, ACM Conference on Human Factors in Computing Systems, San Jose, USA
2015	G-raff: An Elevating Tangible Block for Spatial Tabletop Interaction Chang-Min Kim, Tek-Jin Nam CHI '15, ACM Conference on Human Factors in Computing Systems, Seoul, Korea
2014	An Elevating Tangible Block Supporting 2.5D Interaction Jungu Sim, Chang-Min Kim, Seung-Woo Nam, Tek-Jin Nam UIST '14, ACM Symposium on User Interface Software and Technology, Hawaii, USA

FUNDED RESEARCH PROJECTS

2026	Exploration of Alternative Forms of AI and Their Encounters
2024–2025	Educational Frameworks for Convergence Design
2023–2024	AI-Driven Home Appliance Design
2023	Wearable Robot and Service Platform Design
2022	UI/UX Design for Mobile Negative Pressure Isolation Rooms
2020–2021	Human-Car Interaction Design with Artificial Intelligence Agents
2018–2022	Natural IoT Control Interface Design
2017–2021	Gradual and Sustainable Smart Home Transformation
2017–2018	IoT Platform Design for Makers and Hobbyists
2017	Emotional and Affective Communication System Design
2014–2017	Interface Devices for Tabletop Computing Environments
2016	Computerized Design Interfaces for Interactive Products and Services
2014	UX-Oriented Mobile Software Platform Development

INVITED TALKS

2026	Alternative Encounters with AI Across Products, Spaces, and Everyday Life Sungkyunkwan University, School of Arts
2025	Beyond the Prompt: Understanding Generative AI as Designers Sungkyunkwan University, School of Arts

2024	Prototyping for the Future: Design Education in the Era of Advanced Technology KSDS Conference, Special Session
2024	Speculations on the Future Home Interaction Seoul Women's University, Industrial Design
2024	Applying ChatGPT in Interactive Art and Design Korea National University of Arts, School of Visual Art
2024	Speculating Future through a Technology-Infused Design Approach Seoul National University of Science and Technology, Industrial Design

TEACHING

Fall 2025–26	3D Form Making	Sungkyunkwan University, Department of Design	Lecture
Fall 2026	Design Research Methodology	Sungkyunkwan University, Department of Design	Lecture
Spring 2026	Creative Project	Sungkyunkwan University, Department of Design	Lecture
Spring 2026	Smart Experience Design	Sungkyunkwan University, Department of Design	Lecture
Spring 2025	Convergence Design	Korea National University of Arts, School of Visual Art	Lecture
Spring 2025	Interaction Design Studio	Korea National University of Arts, School of Visual Art	Lecture
Fall 2023	IoT Product and Service Prototyping	Korea University, School of Art & Design	Lecture
Fall 2023	IoT Product and Service Prototyping	Seoul Women's University, Industrial Design	Lecture
2019	Venture Research Program for Graduate Students	KAIST, Industrial Design	Mentoring
2017–2018	Interactive Prototyping	KAIST, Industrial Design	Teaching Assistant
2014–2016	Interaction Design	KAIST, Industrial Design	Teaching Assistant