

Taejun Kim, Ph.D.

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RESEARCH INTERESTS

Sensing, Eye tracking, Gaze analysis, Gaze-interactive application, XR, User Experience (UX) design and analysis.

Future Interface Group, Carnegie Mellon University, Pittsburgh, USA

MAY. 2025 – Present

Ph.D. Researcher

Advisor: Chris Harrison

Meta Reality Labs, Toronto, Canada

JUN. 2022 – DEC. 2022

Ph.D. Research Intern

Managers: Hemant Surale, Amy Karlson, and Aakar Gupta

PUBLICATIONS

Note about conference papers: in Human-Computer Interaction, top-tier conferences maintain highly selective standards, subjecting full manuscripts to a rigorous, multi-stage review process. This results in high-quality archival proceedings, making conference proceedings the preferred publication venue for greatest impact.

Note about venues: CHI (the ACM Conference on Human Factors in Computing Systems) and UIST (the ACM symposium on User Interface Software and Technology) are both recognized as very top tier HCI conferences (Google Scholar and Microsoft Academic both rank them as #1 and #3). The average acceptance rate for CHI is 23% and UIST 21%.

International Conference Papers

1. **🏆 TwinSpin: A Virtual Ball in a VR Controller Enabling In-Hand 3DoF Rotation**
Changsung Lim, Taejun Kim, Geehyuk Lee
UIST 2025: ACM Symposium on User Interface Software and Technology (acceptance ratio: 22.2%)
<https://doi.org/10.1145/3746059.3747735>
2. **Typing Haptically: Towards Enabling Non-auditory Smartphone Text Entry with Haptic Feedback for Blind and Low Vision Users**
Jisu Yim, Donghyeon Ko, Taeho Kim, Taejun Kim, Jonggi Hong, Geehyuk Lee
UIST 2025: ACM Symposium on User Interface Software and Technology (acceptance ratio: 22.2%)
<https://doi.org/10.1145/3746059.3747801>
3. **Over the Mouse: Navigating across the Z-dimension of GUI with Finger-Lifting Operations**
YoungIn Kim, Yohan Yun, Taejun Kim, Geehyuk Lee
CHI 2025: ACM Conference on Human Factors in Computing Systems (acceptance ratio: 25.1%)
<http://doi.org/10.1145/3706598.3713340>
4. **Palmrest+: Expanding Laptop Input Space with Shear Force on Palm-Resting Area**
Jisu Yim, Seoyeon Bae, Taejun Kim, Sunbum Kim, Geehyuk Lee
UIST 2024: ACM Symposium on User Interface Software and Technology (acceptance ratio: 24.0%)
<https://doi.org/10.1145/3654777.3676371>
5. **QuadStretcher: A Forearm-Worn Skin Stretch Display for Bare-Hand Interaction in AR/VR**
Taejun Kim, Youngbo Aram Shim, YoungIn Kim, Sunbum Kim, Jaeyeon Lee, Geehyuk Lee
CHI 2024: ACM Conference on Human Factors in Computing Systems (acceptance ratio: 26.3%)
<https://doi.org/10.1145/3613904.3642067>
6. **STAR: Smartphone-Analogous Typing in Augmented Reality**
Taejun Kim, Amy Karlson, Aakar Gupta, Tovi Grossman, Jason Wu, Parastoo Abtahi, Christopher Collins, Michael Glueck, Hemant Bhaskar Surale
UIST 2023: ACM Symposium on User Interface Software and Technology (acceptance ratio: 25.1%)
<https://doi.org/10.1145/3586183.3606803>
7. **Lattice Menu: A Low-Error Gaze-Based Marking Menu Utilizing Target-Assisted Gaze Gestures**

on a Lattice of Visual Anchors

Taejun Kim, Auejin Ham, Sunggeun Ahn, Geehyuk Lee

CHI 2022: ACM Conference on Human Factors in Computing Systems (acceptance ratio: 12.5%)

<https://doi.org/10.1145/3491102.3501977>

8. Heterogeneous Stroke: Using Unique Vibration Cues to Improve the Wrist-Worn Spatiotemporal Tactile Display

aejun Kim, Youngbo Aram Shim, Geehyuk Lee

CHI 2021: ACM Conference on Human Factors in Computing Systems (acceptance ratio: 26.3%)

<https://doi.org/10.1145/3411764.3445448>

International Journal Papers

1. WristMenu with Tactons: An Eyes- and Ears-free Menu with Tactons Describing Menu Items in the Wrist Rotation Space

Eunhye Youn, Taejun Kim, Geehyuk Lee

IJHCI 2022: International Journal of Human-Computer Interaction (Impact Factor: 3.353)

<https://doi.org/10.1080/10447318.2022.2159780>

Extended Abstracts: Posters and Demos

1. Tension&Gaze: Gaze-Responsive UI Gated by Finger Tension

Taejun Kim, Ludwig Sidenmark, Parastoo Abtahi, Jisu Yim, YoungIn Kim, Geehyuk Lee

UIST 2025 Demo: ACM Symposium on User Interface Software and Technology

<https://doi.org/10.1145/3746058.3759018>

2. QuadStretch: A Forearm-wearable Multi-dimensional Skin Stretch Display for Immersive VR Haptic Feedback

Youngbo Aram Shim, Taejun Kim, Geehyuk Lee

CHI 2022 Demo: ACM Conference on Human Factors in Computing Systems

<https://doi.org/10.1145/3491101.3519908>

3. QuadStretch: A Forearm-wearable Skin Stretch Display for Immersive VR Experience

Youngbo Aram Shim, Taejun Kim, Sangyoon Lee, Geehyuk Lee

Siggraph Asia Emerging Technology Systems

<http://doi.org/10.1145/3550471.3564761>

AWARDS & HONOR

Best Paper Honorable Mention Award, ACM UIST 2025 SEP. 2025

Presenting “TwinSpin: A Virtual Ball in a VR Controller Enabling In-Hand 3DoF Rotation”

Best Demo Award, Jury’s Choice, ACM CHI 2022 MAY. 2022

Demonstrating “QuadStretch: A Forearm-wearable Multi-dimensional Skin Stretch Display for Immersive VR Haptic Feedback”

ICT Challenge Award, Minister of Science, Republic of Korea. AUG. 2025

Exo-skeleton extension for VR controllers enabling force feedback - CES 2026 Travel Grant

Jang Young Sil Postdoctoral Fellowship, KAIST. APR. 2025

Postdoctoral Fellowship - 50 Million KRW

KIA Research Fellowship, KIA Motors Corp. MAR. 2024

Ph.D. Fellowship - 3 Million KRW

2024 Global Leadership Awards, President of KAIST. FEB. 2024

Ph.D. Award - 1 Million KRW

Kim Young Han Global Leader Fellowship, KAIST. JUL. 2023

Ph.D. Fellowship - 4 Million KRW

Inseo Precision Engineering Fellowship, KAIST. MAY. 2023

Ph.D. Fellowship - 1 Million KRW

	Naver PhD Fellowship , Naver Corp. Ph.D. Fellowship - 5 Million KRW	DEC. 2022
	Outstanding Master's Thesis Award , KAIST School of Computing Thesis Title: "Improving Recognition Accuracy of Wrist-Worn Spatiotemporal Tactile Display using Heterogeneous Vibrotactile Stimuli"	FEB. 2021
EDUCATION	Korea Advanced Institute of Science and Technology (KAIST) Ph.D. in Computer Science <i>Thesis:</i> "Addressing Viewing-Inputting Conflict in Gaze Interaction through Spatial and Temporal Separation: Lattice Menu and Tension&Gaze" <i>Advisor:</i> Geehyuk Lee	Daejeon, Korea 2025
	Korea Advanced Institute of Science and Technology (KAIST) M.S. in Computer Science <i>Thesis:</i> "Improving Recognition Accuracy of Wrist-Worn Spatiotemporal Tactile Display using Heterogeneous Vibrotactile Stimuli" <i>Advisor:</i> Geehyuk Lee	Daejeon, Korea 2020
	Korea Advanced Institute of Science and Technology (KAIST) B.S. in Computer Science	Daejeon, Korea 2018
INVITED TALKS	Haptics, Text Entry, and Gaze Interaction Introduction To Human-Computer Interaction, UNIST, <i>Host:</i> Jaeyeon Lee	MAY. 2024
	Haptics, Text Entry, and Gaze Interaction Interactive Wearable Computing Class, KAIST, <i>Host:</i> Ian Oakley	MAY. 2024
	Interface Control with Eye Movement High-Beams seminar series, University College London, <i>Host:</i> Kaan Akşit	MAR. 2023
	Interface Control with Eye Movement Stanford HCI Lunch, Stanford University, <i>Host:</i> Sean Liu	Nov. 2022
	Interface Control with Eye Movement DGP Lab, University of Toronto, <i>Host:</i> Karthik Mahadevan	Nov. 2022
PATENT	[1] Geehyuk Lee, Taejun Kim, Auejin Ham, Sunggeun Ahn, "Electronic Device for Providing Gaze-Based Menu Interface Utilizing Lattice of Visual ANchors, and Method of the Same", KR10-2829285, KAIST, Jun 2025. [2] Geehyuk Lee, Youngbo Shim, Jaeyeon Lee, Taejun Kim, "Wearable Tactile Display Device for Presentation of Continuous Parameters Using Multiple Skin Stretch Tactors and Operating Method Thereof", KR10-2339031, KAIST, Dec 2021. [3] Hwisung Park, Geehyuk Lee, Sunggeun Ahn, Taejun Kim, Yeonsu Kim, "Region of Interest Visualization Method of Electronic Apparatus", KR10-2694286, KAIST and ADD, May 2025. [4] Geehyuk Lee, Youngbo Shim, Taejun Kim, "Force Sensory Substitution Device Using Multiple Skin Stretch Tactor Pairs and Method of the Same", KR10-2820820, KAIST, Jun 2025.	

ACADEMIC SERVICE	Program Committee CHI LBW 2025: Associate Chair ETRA Short Papers 2023-2025
	Paper Review (47) CHI 2024*, 2025*, 2026, UIST 2024*, 2025, CHI LBW 2024*, 2025, ETRA Short Papers 2023-2025, MobileHCI 2024, AH 2025, ISS 2024, SIGGRAPH Asia ET 2024, WHC 2023*, INTERACT 2023

(*Special recognition for outstanding reviews)

Session Chair

CHI 2025: Haptic Technology Session

TEACHING

Guest Lecturer

Lecture on SPSS & R practice, CS584, KAIST

OCT. 2021

Teaching Assistant

CS492 Wearable User Interface, KAIST

Spring 2023

Fall 2021

CS584 Human-Computer Interaction, KAIST

Spring 2021

CS550 Software Engineering, KAIST

Fall 2020

CS300 Introduction to Algorithms, KAIST

Spring 2019

CS204 Discrete Mathematics, KAIST

Spring 2018

CS230 System Programming, KAIST

Fall 2017

CS101 Introduction to Programming, KAIST