

Taejun Kim, Ph.D.

CONTACT

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RESEARCH INTERESTS

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

PROFESSIONAL EXPERIENCE

Future Interface Group, Carnegie Mellon University, Pittsburgh, USA MAY. 2025 – Present
Visiting Researcher
Advisor: Chris Harrison


Meta Reality Labs, Toronto, Canada JUN. 2022 – DEC. 2022
PhD 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 Presenting “TwinSpin: A Virtual Ball in a VR Controller Enabling In-Hand 3DoF Rotation”	SEP. 2025
Best Demo Award, Jury’s Choice , ACM CHI 2022 Demonstrating “QuadStretch: A Forearm-wearable Multi-dimensional Skin Stretch Display for Immersive VR Haptic Feedback”	MAY. 2022
ICT Challenge Award , Minister of Science, Republic of Korea. Exo-skeleton extension for VR controllers enabling force feedback - CES 2026 Travel Grant	AUG. 2025
Jang Young Sil Postdoctoral Fellowship , KAIST. Postdoctoral Fellowship - 50 Million KRW	APR. 2025
KIA Research Fellowship , KIA Motors Corp. Ph.D. Fellowship - 3 Million KRW	MAR. 2024
2024 Global Leadership Awards , President of KAIST. Ph.D. Award - 1 Million KRW	FEB. 2024
Kim Young Han Global Leader Fellowship , KAIST. Ph.D. Fellowship - 4 Million KRW	JUL. 2023
Inseo Precision Engineering Fellowship , KAIST.	MAY. 2023

	Ph.D. Fellowship - 1 Million KRW	
	Naver PhD Fellowship , Naver Corp.	DEC. 2022
	Ph.D. Fellowship - 5 Million KRW	
	Outstanding Master's Thesis Award , KAIST School of Computing	FEB. 2021
	Thesis Title: "Improving Recognition Accuracy of Wrist-Worn Spatiotemporal Tactile Display using Heterogeneous Vibrotactile Stimuli"	
EDUCATION	Korea Advanced Institute of Science and Technology (KAIST)	Daejeon, Korea
	Ph.D. in Computer Science	2025
	<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	
	Korea Advanced Institute of Science and Technology (KAIST)	Daejeon, Korea
	M.S. in Computer Science	2020
	<i>Thesis</i> : "Improving Recognition Accuracy of Wrist-Worn Spatiotemporal Tactile Display using Heterogeneous Vibrotactile Stimuli"	
	<i>Advisor</i> : Geehyuk Lee	
	Korea Advanced Institute of Science and Technology (KAIST)	Daejeon, Korea
	B.S. in Computer Science	2018
INVITED TALKS	Haptics, Text Entry, and Gaze Interaction	MAY. 2024
	Introduction To Human-Computer Interaction, UNIST, <i>Host</i> : Jaeyeon Lee	
	Haptics, Text Entry, and Gaze Interaction	MAY. 2024
	Interactive Wearable Computing Class, KAIST, <i>Host</i> : Ian Oakley	
	Interface Control with Eye Movement	MAR. 2023
	High-Beams seminar series, University College London, <i>Host</i> : Kaan Akşit	
	Interface Control with Eye Movement	NOV. 2022
	Stanford HCI Lunch, Stanford University, <i>Host</i> : Sean Liu	
	Interface Control with Eye Movement	NOV. 2022
	DGP Lab, University of Toronto, <i>Host</i> : Karthik Mahadevan	
PATENT	[1] Geehyuk Lee, <u>Taejun Kim</u> , 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, <u>Taejun Kim</u> , "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, <u>Taejun Kim</u> , 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, Mo-	

bileHCI 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

OCT. 2021

Lecture on SPSS & R practice, CS584, KAIST

Teaching Assistant

CS492 Wearable User Interface, KAIST

Spring 2023

CS584 Human-Computer Interaction, KAIST

Fall 2021

CS550 Software Engineering, KAIST

Spring 2021

CS300 Introduction to Algorithms, KAIST

Fall 2020

CS204 Discrete Mathematics, KAIST

Spring 2019

CS230 System Programming, KAIST

Spring 2018

CS101 Introduction to Programming, KAIST

Fall 2017