Taejun Kim, Ph.D.

CONTACT

Email: taejun22222@gmail.com
URL: https://taejunkim.com

RESEARCH INTERESTS

Eye tracking, Gaze analysis, Gaze-interactive application, AR/VR, User behavior modeling.

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: TBU%)
   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: TBU%)
   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**
Taejun 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 (acceptance ratio: TBU%)
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. Ph.D. Fellowship - 1 Million KRW	MAY. 2023

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"

Minister of Science and ICT of the Republic of Korea

EDUCATION **Korea Advanced Institute of Science and Technology (KAIST)** Daejeon, Korea
Ph.D. in Computer Science 2025
Thesis: "Addressing Viewing-Inputting Conflict in Gaze Interaction through Spatial and Temporal Separation: Lattice Menu and Tension&Gaze"
Advisor: Geehyuk Lee

Korea Advanced Institute of Science and Technology (KAIST) Daejeon, Korea
M.S. in Computer Science 2020
Thesis: "Improving Recognition Accuracy of Wrist-Worn Spatiotemporal Tactile Display using Heterogeneous Vibrotactile Stimuli"
Advisor: 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, *Host*: Jaeyeon Lee

Haptics, Text Entry, and Gaze Interaction May. 2024
Interactive Wearable Computing Class, KAIST, *Host*: Ian Oakley

Interface Control with Eye Movement Mar. 2023
High-Beams seminar series, University College London, *Host*: Kaan Akşit

Interface Control with Eye Movement Nov. 2022
Stanford HCI Lunch, Stanford University, *Host*: Sean Liu

Interface Control with Eye Movement Nov. 2022
DGP Lab, University of Toronto, *Host*: Karthik Mahadevan

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** 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