Taejun Kim, Ph.D.

CONTACT

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

RESEARCH INTERESTS

Human-Computer Interaction, Eye Tracking, Gaze Analysis, XR, Mobile Devices, Computer Vision

PROFESSIONAL EXPERIENCE

Future Interface Group, Carnegie Mellon University, Pittsburgh, USA MAY. 2025 – Present
Research Associate
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. **HiFiGaze: Improving Eye Tracking Accuracy Using Screen Content Knowledge**
   Taejun Kim, Vimal Mollyn, Riku Arakawa, Chris Harrison
   CHI 2026: ACM Conference on Human Factors in Computing Systems (acceptance ratio: 25.3%)
   http://doi.org/10.1145/3772318.3791339

2. 🏆 **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

3. **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

4. **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

5. **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

6. **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

7. **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

8. **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

9. **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
   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. 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
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

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 — 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