
RESEARCH INTERESTS

Human-Computer Interaction; Smart Sensing with AI/ML; Tactile Sensing; Health Sensing

EDUCATION BACKGROUND

University of Washington (UW)	Seattle, Washington
Ph.D. in Electrical and Computer Engineering	Jun. 2025 – Present

Korea Advanced Institute of Science and Technology (KAIST)	Daejeon, Korea
M.S. in Mechanical Engineering	Mar. 2021 – Feb. 2023
B.S. in Mechanical Engineering	Sep. 2016 – Feb. 2021
Graduation with <i>Cum Laude</i>	

RWTH Aachen University (Exchange program)	Aachen, Germany
Department of Mechanical Engineering	Sep. 2019 – Jan. 2020

AWARDS & HONORS

▪ Best Oral Presentation Award, <i>IEEE NEMS</i>	May 2023
▪ ICAE Best Poster Award, <i>ICAE</i>	Nov. 2021
▪ Dean's List, School of Freshman, <i>KAIST</i>	Feb. 2017

PUBLICATIONS

INTERNATIONAL JOURNALS (SCI)

†: contributed equally

First-Authored

1. [Thermoforming 2D Films into 3D Electronics for Customizable Tactile Sensing](#)
J. Choi[†], **C. Han[†]**, D. Lee[†], H. Kim, G. Lee, J.-H. Ha, Y. Jeong, J. Ahn, H. Park, H. Han, S. Cho, J. Gu, I. Park
Science Advances 11.20 (2025): eadv0057. <https://doi.org/10.1126/sciadv.adv0057>
2. [Spike-based Self-calibration for Enhanced Accuracy in Self-powered Pressure Sensing](#)
C. Han[†], J. Choi[†], J. Ahn, H. Kim, J.H. Ha, H. Han, S. Cho, Y. Jeong, J. Gu, I. Park
Advanced Materials Technologies (2023): 2301199. <https://doi.org/10.1002/admt.202301199>
3. [Recent Advances in Sensor–Actuator Hybrid Soft Systems: Core Advantages, Intelligent Applications, and Future Perspectives](#)
C. Han[†], Y. Jeong[†], J. Ahn[†], T. Kim, J. Choi, J.-H. Ha, H. Kim, S.H. Hwang, S. Jeon, J. Ahn, J.T. Hong, J.J. Kim, J.H. Jeong, I. Park
Advanced Science (2023): 2302775. <https://doi.org/10.1002/advs.202302775>

Co-Authored

4. [Nanotransfer Printing of Functional Nanomaterials on Electrospun Fibers for Wearable Healthcare Applications](#)

- J.-H. Ha, J. Ko, J. Ahn, Y. Jeong, J. Ahn, S. Hwang, S. Jeon, D. Kim, S. A. Park, J. Gu, J. Choi, H. Han, **C. Han**, B. Kang, B.-H. Kang, S. Cho, Y.J. Kwon, C. Kim, S. Choi, G.-D. Sim, J.-H. Jeong, I. Park *Advanced Functional Materials* (2024): 2401404. <https://doi.org/10.1002/adfm.202401404>
5. [Wireless, Multimodal Sensors for Continuous Measurement of Pressure, Temperature, and Hydration of Patients in Wheelchair](#)
S. Cho, H. Han, H. Park, S.-U. Lee, J.-H. Kim, S.W. Jeon, M. Wang, R. Avila, Z. Xie, K. Ko, M. Park, J. Lee, M. Choi, J.-S. Lee, W.G. Min, B.-J. Lee, S. Lee, J. Choi, J. Gu, J. Park, M.S. Kim, J. Ahn, O. Gul, **C. Han**, K. Lee, S. Kim, K. Kim, J. Kim, C.-M. Kang, J. Koo, S.S. Kwak, S. Kim, D.Y. Choi, S. Jeon, H.J. Sung, Y.B. Park, Y.T. Choi, M. Je, Y.S. Oh, I. Park *npj Flexible Electronics* 7.1 (2023): 8. <https://doi.org/10.1038/s41528-023-00238-3>
 6. [Battery-Free, Wireless, Ionic Liquid Sensor Arrays to Monitor Pressure and Temperature of Patients in Bed and Wheelchair](#)
H. Han, Y.S. Oh, S. Cho, H. Park, S.-U. Lee, K. Ko, J.-M. Park, J. Choi, J.-H. Ha, **C. Han**, Z. Zhao, Z. Liu, Z. Xie, J.-S. Lee, W.G. Min, B.-J. Lee, J. Koo, D.Y. Choi, M. Je, J.-Y. Sun, I. Park *Small* 19.9 (2023): 2205048. <https://doi.org/10.1002/smll.202205048>
 7. [All-Recyclable Triboelectric Nanogenerator for Sustainable Ocean Monitoring Systems](#)
J. Ahn[†], J.-S. Kim[†], Y. Jeong, S. Hwang, H. Yoo, Y. Jeong, J. Gu, M. Mahato, J. Ko, S. Jeong, J.-H. Ha, H.-S. Seo, J. Choi, M. Kang, **C. Han**, Y. Cho, C. H. Lee, J.-H. Jeong, I.-K. Oh, I. Park *Advanced Energy Materials* (2022): 2201341. <https://doi.org/10.1002/aenm.202201341>
 8. [A Review of Recent Advances in Electrically-Driven Polymer-based Flexible Actuators: Smart Materials, Structures, and Their Application](#)
J. Ahn[†], J. Gu[†], J. Choi[†], **C. Han**, Y. Jeong, J. Park, S. Cho, Y. S. Oh, J.-H. Jeong, M. Amjadi, I. Park *Advanced Materials Technologies* (2022): 2200041. <https://doi.org/10.1002/admt.202200041>
 9. [Stretchable Printed Circuit Board Based on Leak-Free Liquid Metal Interconnection and Local Strain Control](#)
M. S. Kim, S. Kim, J. Choi, S. Kim, **C. Han**, Y. Lee, Y. Jung, J. Park, S. Oh, B.-S. Bae, H. Lim, I. Park *ACS Applied Materials & Interfaces* 14.1 (2021): 1826-1837. <https://doi.org/10.1021/acsami.1c16177>
 10. [Customizable, Conformal, and Stretchable 3D Electronics via Pre-distorted Pattern Generation and Thermoforming](#)
J. Choi, **C. Han**, S. Cho, K. Kim, J. Ahn, D. D. Orbe, I. Cho, Z. Zhao, Y.S. Oh, H. Hong, S. S. Kim, I. Park *Science Advances* 7.42 (2021): eabj0694. <https://doi.org/10.1126/sciadv.abj0694>

CONFERENCE PROCEEDINGS & PRESENTATIONS

1. **C. Han**, J. Choi, I. Park, “Soft Triboelectric Pressure Sensor with Spiking Calibration Signal”, *IEEE NEMS 2023*, May 2023, Jeju, Korea. (Oral Presentation)
2. **C. Han**, J. Choi, I. Park, “Triboelectric Pressure Sensor with Surface Charge Density Calibration”, *Transducers 2023*, June 2023, Kyoto, Japan. (Oral Presentation)
3. **C. Han**, J. Choi, I. Park, “Soft Triboelectric Pressure Sensor with Spiking Calibration Signal”, *2023 MRS Spring Meeting*, April 2023, San Francisco, California, USA. (Oral Presentation)
4. J. Choi, **C. Han**, I. Park, “Thermoforming based customizable, conformal, and stretchable 3D electronics”, *2022 MRS Spring Meeting*, August 2022, Hawaii, USA. (Oral Presentation)

5. J. Choi, **C. Han**, I. Park, “Customizable, Conformal, and Stretchable 3D Electronics via Pre-Distorted Pattern Generation and Thermoforming”, *ICAE 2021*, November 2021, Jeju, Korea. (*Poster Presentation*)
6. **C. Han**, Y. Kim, H.S. Park, “Relative Foot Position Algorithm (RFPA) for Reliable Gait Event Detection in Stroke Survivors”, *KSME 2019*, April 2019, Busan, Korea. (*Oral Presentation*)

PATENT

1. I. Park[†], J. Choi[†], **C. Han**[†], G. Lee[†], “Finger wearable touch sensor, control system using same, and method thereof” *Korea Patent* (Application Number: 10-2021-0096964), 2021.

SKILLS

Manufacturing Methods: 3D printing (DLP, FDM), Thermoforming, Laser processing(CO₂, UV, Fiber)

Programming Language: C++, Python, MATLAB, LabVIEW, C#(Unity)

TOEFL IBT: 108/120

OTHER

Military Service in Republic of Korea Army

Jun. 2023 – Dec. 2024