

# Hodam Kim, Ph.D.

## ASSISTANT PROFESSOR

Division of Biomedical Engineering, Yonsei University Mirae Campus  
Department of Biomedical Engineering, Yonsei University  
hodamkim@yonsei.ac.kr

27 peer-reviewed papers · 10 patents · 2 active grants

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## EDUCATION

**2016.03 – 2022.02** **Ph.D. in Electronic Engineering**, Department of Electronic Engineering, Hanyang University, Seoul, Republic of Korea

**2010.03 – 2015.08** **B.S. in Biomedical Engineering**, Department of Biomedical Engineering, Hanyang University, Seoul, Republic of Korea

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## ACADEMIC APPOINTMENTS

**2025.03 – present** **Assistant Professor**, Division of Biomedical Engineering (Undergraduate) and Department of Biomedical Engineering (Graduate), Yonsei University, Wonju, Republic of Korea

**2024.04 – 2025.01** **Postdoctoral Fellow**, Biomedical Engineering and Imaging Institute / Department of Radiology, Icahn School of Medicine at Mount Sinai, New York, NY, USA

**2022.01 – 2024.03** **Postdoctoral Fellow**, George W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA, USA

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## RESEARCH INTERESTS

Soft On-body Bioelectronics & Sensors · Neural & Human–Machine Interfaces · Biosignal Intelligence for Mental & Physical Health

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## SELECTED PUBLICATIONS

1. **Hodam Kim<sup>1</sup>**, Hojoong Kim, Yoon Jae Lee, Hoon Yi, Youngjin Kwon, Yunuo Huang, Lynn Marie Trotti, Yun Soung Kim, and Woon-Hong Yeo\*, **"Continuous Real-Time Detection and Management of Comprehensive Mental States Using Wireless Soft Multifunctional Bioelectronics,"** *Biosensors and Bioelectronics*, 117387, 2025. doi.org/10.1016/j.bios.2025.117387
2. **Hodam Kim<sup>1</sup>**, Ju Hyeon Kim<sup>1</sup>, Yoon Jae Lee<sup>1</sup>, Jimin Lee, Hyojeong Han, Hoon Yi, Hyeonseok Kim, Hojoong Kim, Tae Woog Kang, Suyeong Jeong, Seunghyeob Ban, Byeongjun Lee, Haran Lee, Chang-Hwan Im, Seong Jin Cho, Jung Woo Sohn, Ki Jun Yu, Tae June Kang\*, and Woon-Hong Yeo\*, **"Motion artifact-controlled micro-brain sensors between hair follicles for persistent augmented reality brain–computer interfaces,"** *Proceedings of the National Academy of Sciences*, 122 (15), e2419304122, 2025. doi.org/10.1073/pnas.2419304122
3. **Hodam Kim<sup>1</sup>**, Ho-Seung Cha<sup>1</sup>, Minseon Kim, Yoon Jae Lee, Hoon Yi, Sung Hoon Lee, Ira Soltis, Hojoong Kim, Chang-Hwan Im\*, and Woon-Hong Yeo\*, **"AR-Enabled Persistent Human-Machine Interfaces via a Scalable Soft Electrode Array,"** *Advanced Science*, 11 (7), 2305871, 2024. doi.org/10.1002/adv.202305871
4. **Hodam Kim<sup>1</sup>**, Suhye Kim, Hongin Kim, YoungSoo Ji, and Chang-Hwan Im\*, **"Modulation of driver's emotional states by manipulating in-vehicle environment: Validation with biosignals recorded in an actual car environment,"** *IEEE Transactions on Affective Computing*, 13 (4), 1783–1792, 2022. doi.org/10.1109/TAFFC.2022.3206222
5. **Hodam Kim<sup>1</sup>**, Dan Zhang, Laehyun Kim, and Chang-Hwan Im\*, **"Classification of Individual's Discrete Emotions Reflected in Facial Microexpressions Using Electroencephalogram and Facial Electromyogram,"** *Expert Systems with Applications*, 188, Art. No. 116101, 2022. doi.org/10.1016/j.eswa.2021.116101

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## CURRENT GRANTS

**2026.03 – 2029.02** **Development of an Emotion- and Intent-Interpreting Sign Language Recognition System Using a Wireless Flexible Electronics-Based Platform for Combined Facial Expression and Hand Gesture Recognition**, National Research Foundation of Korea (NRF)

**2025.03 – 2028.02** **Development of a Wearable System and Analysis Technology for Personalized Multi-Site Biosignal Measurement**, Yonsei University

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## ACADEMIC SERVICE

**2026.08 – 2027.12** **Director of Domestic Academic Affairs, Academic Committee**, Korea BCI Society

**2026.01 – present** **Committee Member, Academic Affairs (Brain Engineering)**, Korean Society of Medical & Biological Engineering

**2025.03 – present** **Editorial Director**, Korean Brain Engineering Society