



Electronic skins for continuous health monitoring

Dr. Yan Wang

Associate Professor

Guangdong Technion-Israel Institute of Technology (GTIIT)

Hosted by Prof. SONG Yu



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TIME

16:00 – 17:00



VENUE

G5-314, 5/F Yeung Kin Man Academic Building

ABSTRACT

One limitation of commercial wearables, such as smartwatches and fitness bands, is their inability to establish conformable contact with human skin due to their rigid form factors, which restrict their monitoring capabilities. In contrast, soft bioelectronics offer a promising platform for personalized health care, thanks to their unique attributes, including thinness, lightweight design, excellent biocompatibility, mechanical robustness, and superior skin conformability. Permeable, skin-mountable electronics designed for long-term use have emerged as powerful tools for early disease prevention, screening, diagnosis, and treatment. Dr. Wang's research primarily focuses on the development of unconventional soft materials for advanced electronic skins. In today's presentation, Dr. Wang will discuss high-performance electronic skins created using intrinsically stretchable materials, such as nanomeshes and hydrogels, for continuous health monitoring. These innovations enable precise measurement of various electrophysiological signals without compromising comfort, accuracy, or stability, supporting long-term health monitoring applications.

BIOGRAPHY

Dr. Yan Wang is currently a tenured Associate Professor at Guangdong Technion. She received her Ph.D. in Chemical Engineering from Monash University in 2018 and completed postdoctoral training in the Department of Electrical and Electronic Engineering at the University of Tokyo in 2021. In soft electronics field, she has published over 70 peer-reviewed articles, including more than 40 as first or corresponding author, in leading journals such as Science Advances (3 papers), Nature Communications, Proceedings of the National Academy of Sciences, Chemical Society Reviews, and Advanced Materials, with an h-index of 38 and six ESI Highly Cited Papers. And she is also an inventor on multiple patents filed in Australia, Japan, the United States, and China. Her work has earned several awards, including TOP 2% Scientists (2021–2025), the Guangdong Province Major Talent Program (Youth), ACS Publications Award for Women Scientists in Surface and Interface Science (2025), the JMCC Emerging Investigators Award (2025), the Nanoscale Emerging Investigators Award (2022), and the 2018 Outstanding Self-financed Students Abroad Award. Her research achievements have attracted international media attention, including coverage by CNN, Herald Sun (Australia), and Nikkan Kogyo Shimbun (Japan). Her research interests include electronic skins, hydrogel bioelectronics, human-machine interfaces, and diagnostics and therapeutics.