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iHealthtech
Institute for Health Innovation
& Technology

"Innovating Health" Distinguished Speaker Seminar Series

Prof Josep Wang

**Distinguished Professor of Nanoengineering
SAIC Endowed Professor and
Director of the Centre of Wearable Sensors
University of California San Diego (UCSD), USA**



Labs on the Skin and Under the Skin for Personalized Health Wellness

10 DEC 2026, THU, 4 PM - 5 PM

NUS, College of Design and Engineering, Building E7, Level 3, Seminar Room 4

Hosted by: Prof Lim Chwee Teck, iHealthtech Director

While the current smartwatches and cellphones can readily track mobility and vital signs, our team has developed new generation of wearable chemical sensing devices is rapidly developing to enable users to monitor their health parameters at the molecular level. Such wearable electrochemical sensors have received a major recent attention owing to their considerable promise for monitoring the wearer's health and wellness at the molecular level. This presentation will discuss our recent efforts towards developing wearable bioelectronic systems, capturing non-invasively and continuously molecular information for obtaining comprehensive information about the wearer health and wellness. Particular attention will be given to wearable electrochemical sensors integrated directly on the epidermis or under the skin for continuous monitoring of sweat and ISF, and to multimodal devices fusing the monitoring of chemical and physical parameters on a single epidermal patch. Clinical translation to the monitoring of sepsis, diabetes and Parkinson diseases in hospital settings will be discussed. The fabrication, characterization, capabilities and clinical applications of such skin-worn bioelectronic platforms will be described, along with future prospects and challenges toward transforming these latest innovations into practical wearable sensing devices and commercial products.

Speaker Biography | Joseph Wang is a Distinguished Professor of Nanoengineering, a SAIC Endowed Professor and the Director of the Center of Wearable Sensors at University of California San Diego (UCSD), USA. Over the past 3 decades, Professor Wang has made pioneering contributions to the fields of, wearable sensors, microrobots and bioelectronics. Wang is a member of the US National Academy of Inventors (NIA), of the European Academy of Engineering (EAE), and a fellow of the RSC, ECS and AIMBE. He has authored over 1300 research papers, 12 books, and 60 patents. He has been a Thomson Reuters Highly Cited Researcher since 2015 (H Index 226). Wang holds Honorary Professor from 11 different universities and is the recipient of three National American Chemical Society (ACS) Awards for Analytical Chemistry, Electrochemistry and Instrumentation, of the Pittcon Award in Bioanalytical Chemistry, of the Talanta Medal, 2021, of the Breyer Medal (Australia), Heyrovsky Medal (Czech Republic) and Speirs Medal (RSC), IUPAC Analytical Chemistry Medal, and the IEEE Sensor Achievement Award, 2021.



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