



## Wolfson Department of Chemical Engineering Seminar

**Seminar Zoom: <https://technion.zoom.us/j/91255141536>**

**Monday - January 13, 2025 - at 13:30 (Israel time) / 19:30 (China time)**

### **Title: “Hydrogel-enabled electronic skins for health monitoring”**

**Dr. Yan Wang**

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 advancing wearable electronics for biomedical health monitoring, encompassing stretchable conductors, sensors, and soft energy devices. In today’s presentation, Dr. Wang will discuss high-performance electronic skins created using hydrogel materials and ultrathin, permeable nanomesh-reinforced hydrogel epidermal electrodes. These innovations enable precise measurement of various electrophysiological signals without compromising comfort or accuracy, supporting long-term health monitoring applications.