



## **Department of Materials Science and Engineering Seminar Series 2024**

### **Fluidic based multi-axis mechanical and chemical sensors and systems**

**Yu Kelu**

**Date and time: 10 July, 4-6pm**

**Venue: EA-02-11**

### **Abstract**

Flexible sensors offered substantial potential in energy harvesting, soft robotics, and health monitoring devices. Although many efforts have been undertaken to advance flexible sensor applications, concurrent sensor technologies grapple with inherent limitations: mechanical robustness in system integration, suboptimal adaptability to dynamic environments. This thesis research tries to address these challenges by delving into the realm of high-performance materials and exploring dynamic working mechanisms into both mechanical and chemical sensing devices. By incorporating fluid-based approach, facile design and manufacturing processes, developed chemical and mechanical sensing devices can achieve reliable system integration and expand their capabilities to undertake various challenging tasks, from dimensional awareness in force detection, real-time water quality surveillance, integration into a system for accurate intraocular pressure monitoring.

### **Biography**

Yu Kelu received her BEng degree from Imperial College London. She is currently a Ph.D candidate under the supervision of Assoc. Prof. Benjamin Tee. Her research focuses on flexible pressure sensor design and targeted applications in soft robotics and health monitoring.

**Please join us!**

HOST: Dr Wu Changsheng