

**Topic of the Speech:**

Sensor-Integrated E-textile for Long-term Physiological Monitoring in Sports

**Dr. Lulu Xu**

Loughborough University  
UK



**Dr. Lulu Xu** is a lecturer in Sport Technology, School of Mechanical, Electrical and Manufacturing Engineering at Loughborough University. She received her PhD degree from the School of Materials at the University of Manchester. During her time at Manchester, her research focus was centred on the development of functional textiles and wireless communication systems. Prior to joining Loughborough University, Lulu worked as a Research Fellow at the Wellcome / EPSRC Centre for Interventional and Surgical Sciences (WEISS) at University College London (UCL). Her work there primarily revolved around the printing of flexible electronics for applications in human healthcare.

Lulu's research focuses on functional textile materials and intelligent textile wearables to support remote rehabilitation, personal protection, and athlete training. One of her primary areas of focus is wearable electronics to monitor various physiological and environmental parameters. By coupling these signals with wireless communication systems, such as smartphones or cloud-based readers, there is a potential to monitor healthcare and sports activities in real-time. Lulu is also engaged in additive printing onto textiles and clothing, which explores how additive printing technologies can be harnessed to embed electronics, sensors, and other functional elements directly into fabrics. Her work combines material innovation with practical device development to support both clinical and sports applications.