



Topic of the Speech:

Biohybrid Humanoid Robots Enable Fiber-Based Bioengineering Sensing: fiber sensors, bio-hybrid humanoid robot platform, digital health

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Dr. Zeku Liu received his Ph.D. from the Department of Materials at The University of Manchester in 2022, where his doctoral research focused on advanced fiber materials and their applications in emerging technologies. Following his Ph.D., he worked as a Research Associate at the Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, as well as the Institute of Biomedical Engineering at the University of Oxford, where he contributed to interdisciplinary research at the interface of materials science, bioengineering, and healthcare technologies. In 2026, he joined Donghua University as a Professor, continuing his research on next-generation materials and systems for biomedical and robotic applications. His research primarily focuses on the design and development of fiber-based materials for wearable and implantable sensors, soft robotic systems, and biohybrid humanoid robots aimed at advancing digital healthcare solutions. He is particularly interested in integrating functional fibers with electronic and biological systems to enable real-time sensing, adaptive actuation, and intelligent human-machine interfaces. His broader research interests include advanced fiber materials for sensing, robotics, and biointegrated systems, with an emphasis on their applications in future healthcare technologies, personalized medicine, and intelligent assistive devices.