Flexible Surgical Robots and Wearable Devices

Expertise in designing teleoperation systems, flexible surgical robots, magnetic capsule endoscopy and soft wearable devices to improve the human quality of life.

Competitive advantage

- World-leading technologies on soft robotics, wearable devices, and flexible surgical systems with multifunctionalities that can be widely applied in various applications
- Expertise in mechanical design, electronics, system modelling, functional materials, and nonlinear control
- Experienced in international patent protections
- Strong collaboration networks in USA, Singapore and Australia

Impact

- Improved the human quality of life with cutting-edge technologies for haptics, entertainment, and healthcare

More Information

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Successful applications

- World’s first flexible endoscopic robot for gastrointestinal cancer treatment
- Soft magnetic capsule robot for weight management
- World’s first multifunctional soft electromagnetic actuators, soft planar textile muscles, and microtubule sensors for haptics and robotic applications

Capabilities and facilities

- Full-scale experimental equipment for real-time control and characterisation of robotics and mechanical systems

Our partners

- Prince of Wales Hospital