

**DEPARTMENT OF MECHANICAL ENGINEERING****SEMINAR****Online**

**Title:** Introduction to MRI-guided Neurosurgical Robots

**Speaker:** Miss Xie Rongying (PhD candidate)  
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**Date:** 27 April, 2021 (Tuesday)

**Time:** 4:00 p.m.

**Zoom Link:** 1) Link to join the meeting:

<https://hku.zoom.us/j/95071412596?pwd=ZEpyZDk4MitpQnZlUHpsaHdtT3lvZz09>

2) Meeting ID: 950 7141 2596

3) Password: 276359

**Abstract:**

Neurosurgery is one of the most demanding surgical specialties in terms of precision requirements and surgical field limitations. Stereotaxy is a technique that can locate targets of surgical interest using an external coordinate system as a reference. Its application in functional neurosurgery mostly aims to treat a variety of movement disorders. Magnetic resonance imaging (MRI)-guided robot technology shows enormous potentials in neurosurgery operation. However, MRI-guided neurosurgical robot remains challenging due to powerful magnet working environment, high demand for surgical accuracy, complicated stereotactic navigation, and execution of delicate maneuvers through narrow and limited surgical windows. In this talk, a brief background of MRI-guided robotic systems and current development and challenges will be introduced. And some typical robotic system designs and their performance in previous research will be reviewed.

**ALL INTERESTED ARE WELCOME**

For further information, please contact Dr. K.W. Kwok at 3917 2636.

**Research area: Robotics and Control**