THE UNIVERSITY OF HONG KONG

DEPARTMENT OF MECHANICAL ENGINEERING

SEMINAR

Title: **Endoscopic Vision Research and Development in Academia and Industry**

Speaker: **Dr. Menglong Ye**
Head of Computer Vision
Moon Surgical
USA

Date: **25 November, 2022 (Friday)**

Time: **11:30 a.m. (Hong Kong Time)**

Venue: **Room 7-34, Haking Wong Building, HKU**

Abstract:
Endoscopic vision has been a popular research topic in the past decade. However, conducting computer vision development in medical industry is a very different experience compared to academic research at university. In this talk, I will first present my previous works on endoscopic/surgical vision during PhD and Postdoc from 2012 to 2017. Specifically, I will talk about my work on vision-based tracking approaches and their development trend for endoscopic navigation and robotic surgery. Later, I will share my R&D experience at Auris Health (acquired by Johnson & Johnson), where I developed computer vision algorithms for robotic bronchoscopy. As an example, I will briefly introduce a recent work on vision-based episode recognition for bonrchoscopic videos, using CNNs and Transformers. In the end, I will share my own learnings of applying vision algorithms in medical applications.

Brief Biography:

Dr. Menglong Ye is currently the Head of Computer Vision at Moon Surgical, which is a French-American medical robot startup located in both Paris and San Carlos, CA. Before joining Moon in July 2022, Dr. Ye was a Senior Manager and Principal Research Scientist at Johnson and Johnson (JnJ). During his time at JnJ from 2017 to 2022, Dr. Ye was leading computer vision algorithms development for the Monarch platform, which is the first and only robotic system 510K-cleared for both bronchoscopy and urological operations. Dr. Ye completed his Ph.D. study at Imperial College London, UK, in 2016, with a focus on surgical vision and navigation.

ALL INTERESTED ARE WELCOME

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

Research area: Robotics and Control