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臺灣大學應用力學研究所  
演 講 公 告

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主 講 人：李宇修助理教授  
國立臺灣大學機械工程學系

講 題：智慧型機電系統在醫療的應用

主 持 人：林哲宇助理教授

時 間：110年10月25日（星期一）下午2時20分開始

地 點：實體（R100）與線上會議並用（採用 webex 軟體進行會議）

會議鏈結：

<https://ntumeet.webex.com/ntumeet/j.php?MTID=ma9db80a67b5756760d45ca18c11d43cf>

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# 智慧型機電系統在醫療的應用

李宇修助理教授  
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## 演講摘要：

Mechatronics is a discipline that investigates the synergistic integration of mechanics, electronics, control theory, and computer science. Although the development of each component can improve the surgical outcome to some extent, through integration unprecedented performance and innovative solutions become possible. Herein eye surgery is used as an example to demonstrate how mechatronics can help revolutionize the way surgeries are conducted. Three modules will be presented: 1) a robotic platform for eye surgery, 2) semi-automated nucleus extraction, and 3) semi-automated posterior capsule polishing. It will be shown how mechanism design, sensing/estimation, modeling/control, and machine intelligence can achieve superior and more consistent performance.

## 簡歷：

Yu-Hsiu Lee received the B.S. and M.S. degrees in mechanical engineering from National Taiwan University, Taipei, Taiwan, in 2007 and 2009, respectively. He received his Ph.D. degree in systems and control division with the Mechanical and Aerospace Engineering Department, University of California, Los Angeles, Los Angeles, CA, USA in 2019. Prior to his Ph.D. career, he worked as a mechanical designer in Jabil design services (2011-2012, Hsinchu, Taiwan) and Qisda corporation (2012-2014, Taoyuan, Taiwan), specializing in consumer electronics and health care products. His everlasting enthusiasm is in development of mechatronic systems and application of control system technologies. His current research focus includes medical robotics, image-guided intervention, and inversion-based control methods.