香港大學 機械工程系
Department of Mechanical Engineering
THE UNIVERSITY OF HONG KONG

SEMINAR

Pioneering the Future of Space Exploration: Dynamics, Autonomy, and Advanced Instrumentation

Date: 21 April, 2026 (Tuesday)
Time: 10:00 a.m.
Venue: Room 7-34 & 7-35
Haking Wong Building
HKU

Speaker: Professor Jinjun Shan
Department of Earth and Space Science and Engineering
York University
Canada

Abstract:

The next generation of space exploration missions necessitates significant advancements in structural stability, orbital precision, and autonomous sensing capabilities. This talk presents a comprehensive overview of recent research conducted at the Spacecraft Dynamics Control and Navigation Laboratory (SDCNLab) of York University, focusing on the critical synergy between theoretical dynamics and control and practical space applications. Prof. Shan will discuss four primary pillars of his research in the past 30 years: active vibration control of flexible space manipulators using input shaping and smart materials; development and flight validation of an advanced Imaging Fabry-Perot Spectrometer (IFPS) for climate change research, space membrane structures, orbit dynamics and trajectory design for multiple space missions.

Biography:

Jinjun Shan is a Full Professor in the Department of Earth and Space Science and Engineering at York University, Canada. He earned his Ph.D. in Spacecraft Design from the Harbin Institute of Technology, China, in 2002. As the founding director of the Spacecraft Dynamics Control and Navigation Laboratory (SDCNLab), Prof. Shan focuses his research on the dynamics, control, and navigation of space, autonomous, and mechatronic systems. His extensive contributions include over 240 peer-reviewed publications and two issued patents. A distinguished leader in his field, he is a Fellow of the Canadian Academy of Engineering (CAE), the Engineering Institute of Canada (EIC), and the American Astronautical Society (AAS), as well as a member of the European Academy of Sciences and Arts (EASA).

ALL INTERESTED ARE WELCOME

For further information, please contact Prof. Mingxin Huang at 3917 7906.