



SEMINAR 專題演講



國立中央大學 太空科學與工程學系

Department of Space Science and Engineering, National Central University

Time

Thursday, December 5,
2024
14:00 – 15:00

Piezo-driven Nano-positioning System and Its Application to an Imaging Fabry-Perot Spectrometer

Place

健雄館(科四館)

S4-807 教室
Room S4-807,
Chien-Shiung Building

Prof. Jinjun Shan

Department of Earth and Space Science and Engineering, York University

Abstract:

Piezoelectric actuators have many advantages such as high resolution, fast response, large bandwidth, and good temperature stability. They have been used in a wide range of industrial applications to realize high precise motion. However, the piezoelectric actuators inherently have their own nonlinear behaviour such as hysteresis, creep, thermal drift and vibration which deteriorates overall performances including stability of the developed systems. In this talk, Prof. Shan will present his work on dynamics modeling and compensation for the nonlinearities of the piezoelectric actuators, as well as its application to an imaging Fabry-Perot spectrometer for atmospheric studies.

Bio of Prof. Jinjun Shan:

Prof. Jinjun Shan is a Full Professor at the Department of Earth and Space Science and Engineering, York University. He joined York University in 2006 as Assistant Professor of Space Engineering and was promoted to Full Professor in 2016, he also served as the department chair in 2018-2023. Prof. Shan's research areas include dynamics, control and navigation of autonomous systems, multi-agent systems, smart materials and structures, spacecraft dynamics and control, and space instrumentation. His pioneering work has led to over 200 widely cited publications. Prof. Shan's accomplishments in research and engineering education have seen him recognized with prestigious awards such as a Fellow of Canadian Academy of Engineering (CAE), a Fellow of Engineering Institute of Canada (EIC), a Fellow of American Astronautical Society (AAS), and a member of European Academy of Sciences and Arts.