



MNS2025
Jiaxing · China

MINGCHUAN WEI



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**Lecture :
Lessons learnt from lunar Micro-Satellite Missions**

Wei Mingchuan is a researcher and doctoral supervisor at the Harbin Institute of Technology, specializing in micro- and nano-satellite systems, satellite telemetry, tracking and command (TT&C), and information processing. Throughout his career, he has played a leading role in several significant satellite projects. He was the chief designer for 'Zijinling No. 2,' the first satellite in China developed independently by university students, as well as for 'Zijinling No. 1,' a scientific satellite created through China-Europe collaboration.

Wei has contributed to the development of more than ten satellites, including the pioneering 'Longjiang No. 2,' which was the world's first micro-satellite independently developed for Earth-Moon transfer. He also played key roles in projects such as 'Tiandu No. 2,' a test satellite for lunar communication and navigation technologies, and the 'New Technology Test Satellite E,' a major initiative in high-resolution observation. In these projects, he has served as both chief designer and deputy chief designer.

Among his technical accomplishments, Wei has led the development of advanced equipment such as the VHF/UHF deep-space transponder, broadband uplink modules, and miniature cameras. These innovations have been used in over thirty satellites currently operating in orbit.

His outstanding contributions have earned him the First Prize for Scientific and Technological Progress in Heilongjiang Province, the Outstanding Contributor Award for the Chang'e-4 Lunar Exploration Mission, and the Second Prize for National Graduate Teaching Achievements, among other distinctions. He has published more than ten research articles in high-impact journals, including Nature Communications.

Wei is also actively involved in the professional community. He is a member of the Civil and Commercial Space Standardisation Technical Committee, a young member of the Space Intelligence Specialized Committee of the Chinese Society of Space Science, and serves on the Space Communications Working Group of the Amateur Radio Branch of the China Radio Association.