MNS2025
Jiaxing · China

DAOHUA HU

Ph.D in "Design, Simulation and Development of a Miniature Detector System for Radiation Monitoring on Satellites" at University College London

Principle electronics engineer and instrument system engineer at University College London

Director of Umbrella Space Science Ltd;

Lecture:
Umbrella Radiation Monitor and its application

Dr. Daohua Hu is a Principal Electronics Engineer and Instrument System Engineer at the Mullard Space Science Laboratory, University College London. He is also the founder of Umbrella Space Science Ltd., a NewSpace startup focused on advancing our understanding of the space environment. He holds a PhD in space instrumentation, and his research interests center on technologies for measuring the space radiation environment.

Dr. Hu has played key roles in several major space missions led by ESA, UKSA, and the European Union. His contributions include:

- Vigil (PLA instrument) – System Engineer and Lead Electronics Engineer. Responsible for the design of the front-end analogue subsystem and high-voltage unit; also oversaw development of the DC-DC converters and FPGA subsystems.
- EUCLID (VIS instrument) – Senior Electronics Engineer. Designed the RPSU, a custom power supply unit for CCD readout electronics.
- ExoMars TGO (NOMAD-UVIS) – System Engineer and Lead Electronics Engineer. Designed digital and power electronics, and optimized the proximity and preamp circuits for the UVIS spectrometer.
- TDS-1 (ChaPs instrument) – Electronics Engineer. Developed the high-voltage power supply and led the instrument's Assembly, Integration, and Testing (AIT).
- QB50 (INMS instrument) – Electronics Engineer. Designed a combined high-voltage and digital electronics board for the instrument.

Through Umbrella Space Science Ltd., Dr. Hu leads a highly experienced team dedicated to supporting spacecraft missions with innovative tools. Their flagship product, the Umbrella Radiation Monitor, offers real-time, in-situ monitoring of radiation environments to enhance spacecraft health diagnostics and mission resilience.