



Midlands Innovation CubeSat Newsletter



Warwick – Aston – Birmingham – Cranfield – Keele – Leicester – Loughborough – Nottingham



And a look back on WUSAT '24!

2024 has seen the commencement of our 18th WUSAT satellite engineering team!

Considering our 'start from scratch' in 2006, working as a sub-system team on ESA's Moon Orbiting Satellite, it seems amazing now that we have spent 18 years (approx. 140 students) working as a university-based Space Agency, with all teams applying an industry-based Space Systems Engineering methodology to the design of satellite platforms that meet the needs of research client payloads.



WUSAT 2024-25 at ESA (see below)

It is of enormous testament to the capabilities and attitude of our engineering students that we have been able to pursue such high-level 'real-world' activities in collaboration with the European Space Agency, Airbus, and a wide range of supporting companies and organisations. Our students graduate with a unique experience of how to develop a complex engineering design within a multi-disciplinary team environment, and this is much valued by companies who want to recruit them! We are very proud of all of them!

WUSAT-4 Team Activities 2024-25

THE TEAM



Dr. Bill Crofts
Project Director



Nilavan Thipaharan
TT&C



Devansh Barman
EPS



Aman Batra
Structures



Alia Meek
OBDH - Software



Natasha Galpayage
OBDH - Hardware



Maxwell Catmur
Ground Station



Oliwier Rawa
Ground Station



Josh Shilling
Mechanisms



Avani Sawe
Thermal



Iniyavan Guhankavitha
Systems

4
11/21/2024



Our WUSAT-4 team for 2023-24 have been excellent and have moved the project on

WUSAT – European Space Agency (ESA) Activity



WUSAT members on ESA Courses

Over the past year we have continued to support WUSAT students applying for, and attending, specialist ESA Training Programmes. These have included,

Sept 2023 – Spacecraft Concurrent Engineering

Oct 2023 – Spacecraft Operations

Nov 2023 – Earth Observation Satellite Design

Nov 2023 – Satellite Communications Systems

Dec 2023 – Human Space Physiology (Warwick Medical Sch)

Feb 2024 – Satellite Communications Systems

Feb 2024 – Spacecraft Concurrent Engineering

Sept 2024 – Spacecraft Concurrent Engineering (Note: Nilivan Thipaharan, WUSAT 2024-25 Team already accepted for this programme)

Oct 2024 – Spacecraft Operations (Note: Natasha Galpayage Dona, WUSAT 2024-25, being supported in application for this)

All ESA training programmes are held at their ESEC Galaxia Centre (Belgium) with occasional visits to other centres as required. They provide excellent training and experience, plus the opportunity to meet students from other European Universities.



ESA, ESEC Galaxia – Concurrent Design Suite

Space Strategy Activities

WUSAT Showcase

Women in Engineering – MISG ?

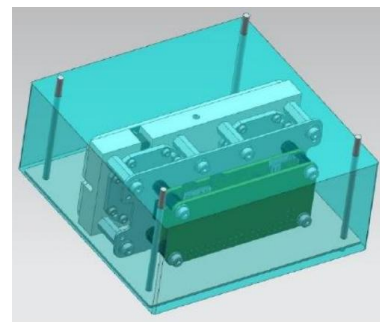
WUSAT Promotion and Outreach

Summary of the WUSAT-4 Mission!

Due to the requirement of submission to ESA's Concurrent Engineering Programme, with expected progression to an ESA launch programme, we had to limit the submission of WUSAT-4 to a single payload based on the Space Biology experiment designed by the University of Exeter and Space Park Leicester.

FDSP Experiment Unit – includes 'pods' that accommodate the microscopic worms, sealing interface and pod window, and PCBs for internal electronics.

Unfortunately, the beacon transmitter (BEAP) payload for UK Launch Services was not yet developed to a level where the team could integrate it into WUSAT-4.



Our partner companies/organisations

AIRBUS

m&c
Marks&Clerk

HARWIN



SPAN
SPACE ACADEMIC NETWORK



Roke
Part of the
Chemring Group



*Best wishes,
Bill & Julia*

