

IET Travel Award Report

The 76th International Astronautical Congress (IAC 2025) in Sydney, Australia

I am Tasneem Yousif, a postdoctoral researcher at the University of Nottingham and the Nottingham Geospatial Institute. I am sincerely grateful to the Institution of Engineering and Technology (IET) for sponsoring my attendance at the 76th International Astronautical Congress (IAC 2025) in Sydney, Australia. Thanks to the IET Travel Award, I had the invaluable opportunity to present my research at one of the world's flagship conferences in the space and satellite fields. Attending the conference in person allowed me not only to share my work and participate in Q&A discussions but also to connect with leading experts from both academia and industry.

On 2nd October, during Session 6A – Generic Technologies for Small Satellites (1), I presented my paper titled “JamSail: A 3U CubeSat for GNSS Interference Mapping, Ionospheric Scintillation Analysis, and ADCS Research.” The paper introduces JamSail, a student-led CubeSat mission designed to detect and geolocate GNSS interference worldwide. This mission directly aligns with the IAC 2025 theme, “Sustainable Space: Resilient Earth,” by addressing the growing threat that interference poses to navigation and timing infrastructure essential for safety, public services, and environmental monitoring. Presenting this work to a diverse and knowledgeable audience provided an excellent opportunity to receive expert feedback, engage in technical discussions, and further develop my communication skills — particularly as I prepare for my final PhD viva. I received several insightful questions and constructive recommendations that will help me enhance this research project and better understand how the community perceives its impact and potential.

In addition to this research paper, I also presented a second paper as part of the International Project Management Committee (IPMC) Young Professionals Workshop. I am proud to have been the only student representative from both the University of Nottingham and the United Kingdom. Since December 2024, I have been collaborating with international peers on a project investigating the role of Artificial Intelligence (AI) in Project Management Offices (PMOs) within space missions. Presenting at the IPMC Workshop strengthened my leadership, teamwork, and policy-related skills — all of which are essential for a successful career in the space sector — and enabled me to contribute to discussions on how AI can streamline mission planning and execution.

I also attended the 32nd IAF Workshop on “Resilient Coasts, Resilient Earth: Innovative Space Solutions for Coastal Resilience and Emergency Management,” held from 26–28 September and supported by the United Nations Office for Outer Space Affairs (UNOOSA). The JamSail CubeSat research project directly aligns with the workshop's theme, as it proposes a CubeSat-based GNSS interference detection system designed to enhance maritime navigation resilience, a capability that is particularly crucial for disaster response, emergency logistics, and environmental monitoring in coastal and oceanic regions. Participating in this workshop allowed me to position JamSail within the broader context of Earth observation and global resilience initiatives, while exploring interdisciplinary collaborations to maximise the societal impact of my work.

The conference brought together leading experts from both industry and academia across the world, providing an exceptional networking platform. Connecting with these professionals was highly beneficial, as it allowed me to exchange knowledge and expertise in the field of space and satellite technologies. I also established valuable connections with several companies at the career exhibition, including those specialising in antenna design and FPGA development, which will provide technical support for the JamSail CubeSat project. Moreover, the IAC is often described as the “Olympics of Space,” offering a unique opportunity to learn about the latest techniques and innovations shaping the future of the space sector. I attended numerous technical sessions related to navigation and small satellites, which were highly relevant and directly beneficial to my ongoing research.

I would like to extend my sincere gratitude to the IET for supporting and encouraging this unique opportunity. The travel award enabled me to present my research at the 76th International Astronautical Congress (IAC 2025), connect with global experts, and gain valuable feedback that will directly strengthen my PhD work and future publications. It also opened new collaboration opportunities with industry partners, enhancing the technical development of the JamSail CubeSat project and broadening the real-world impact of my research.

Below are some photos from my two presentations:



