

## Post-Trip Report

IET National Travel Award, 6G and Future Networks Conference

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### 1. Background to the Event

The IET 6G and Future Networks Conference took place on 17–18 June 2025 at Savoy Place, London, as part of IET’s Space & Communications Week. The meeting convened leading academics, industry engineers and policymakers to explore the convergence of terrestrial 6G radio access, free-space optical (FSO) systems and satellite communications.

### 2. Technical Highlights & Talks Attended

I attended several sessions across the FSO & Satcom tracks, with two standout presentations:

- “Free Space Optical Communications Technologies and Its Impact on Future Satcom Systems” by Andrew Paul Reeves (Associate Professor, Department of Physics, Durham University). He presented advanced modulation formats, detailed urban link-budget analyses and strategies for integrating FSO terminals into next-generation satellite backbones.
- NATO Communications and Information Agency’s Satcom Overview, which outlined resilient low-latency satellite constellations and their role in secure 6G backhaul for both civilian infrastructure and defence networks.

### 3. My Oral Presentation

For my talk—“Performance Evaluation of 2R BMOR & CMOR Cascade in Hybrid FSO–Fiber Systems” I discussed how

- BMOR is suitable for low power, weak turbulence
- CMOR is more efficient at high power, weak turbulence
- Hybrid FSO-Fiber with cascaded 2R ORs significantly improves BER degradation under the influence of ASE noise and atmospheric turbulence

### 4. Networking & Collaborations

I also had the opportunity to meet industry professionals and fellow researchers, building a valuable network for future collaborations.

### 5. Sustainable Travel

I travelled by train from Newcastle to London, reducing my CO<sub>2</sub> emissions by approximately 70% compared to air travel—aligning with the IET’s sustainability goals.

Thank you to the IET for the National Travel Award and the opportunity to advance my research through this conference. Here are some visual highlights of conference.

