

IET travel award report

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I received an IET travel award worth £600 to attend the Safety Critical Systems Symposium conference, which was held in York, UK, from 4th – 6th February 2025. I presented my paper, entitled “Ethical hazard analysis in safety-critical systems: the role of creativity”. I also took part as an invited expert in a “fireside chat”, an interview with experts from across industry and academia to discuss the most pressing concerns emerging in safety engineering and ethics of AI.

My paper was co-authored with Professor Austen Rainer, of Queens University, Belfast. In this, we reported on a series of experiments we conducted to assess the role of creativity in identifying and mitigating ethical harms in AI-enabled safety critical systems across sectors including justice, the arts, law and education. These systems will be used by members of the general public, who may be unaware of the extent of AI embedded within them, and may be vulnerable to a diverse range of ethical harms that were not foreseen by the developers. In these scenarios it is essential to encourage creativity in systems design to address such harms at the design stage; our paper presents a number of structured development techniques for doing so. The paper was well-received, and prompted an interesting discussion on ways in which such AI systems might be used to mitigate against – or alternatively might accidentally enhance – existing discrimination against demographics traditionally marginalised by technology.

The “fireside chat” interview was also very well-received, with both the interviewer and audience posing a number of interesting questions on emerging technology, ethics and the likely future of AI given the current governance regime. This interview provided me with the opportunity to consolidate my position as an authority on ethics and AI, and to establish my good standing as a research practitioner within the field.

I also met a number of other academics, regulatory and industry personnel working in related areas. Several of these have expressed interest in potential collaboration, and I will follow this up over the next few days.

I chose sustainable travel options for this trip, including traveling by public transport to the conference city, and on foot from the railway station to the conference venue. The IET travel grant has been an invaluable support to present new and emerging results, to validate my research with my peers within the field and to identify new collaborative opportunities and potential applications across different domains and sectors.