ISIF Board of Directors statement – Prof. Paul Thomas

Biography

Paul is a Fellow in the UK MOD's Defence Science and Technology Laboratory (Dstl), Fellow of the Institute of Engineering and Technology and Visiting Professor of Sensor Fusion and Autonomy at the University of Loughborough, UK.

Paul has 28 years' experience in the area of data fusion, sensor management and sensor autonomy and has led diverse research areas in the UK Ministry of Defence such as chemical and biological source term estimation; building and running the University Defence Research Collaboration (UDRC) in Signal Processing (2009 to 2018); creating the concept of SAPIENT (www.gov.uk/sapient), MOD's autonomous sensor network fusion architecture. Most recently Paul initiated the Stone Soup open source tracking and state estimation framework (https://github.com/dstl/Stone-Soup). This initiative, where algorithms, data and models are openly shared, aims to change the culture of the global fusion community since it encourages practitioners to adopt the paradigm of code sharing and algorithmic transparency. Currently Paul is the concept lead for 'Reactive ISR', an enterprise-scale transformation for the Defence ISR system.

Paul served on the ISIF Board of Directors 2021 – 2024, as Conference Co-Chair for the Sensor Signal Processing for Defence (SSPD) conference (2009-2018), member of the Organising Committee for the IET Intelligent Signal Processing (ISP) conference, and member of Technical Programme Committee for multiple conferences including ISIF Fusion, IEEE MFI and SPIE Counterterrorism, Crime Fighting, Forensics and Surveillance Technologies. Paul also serves as Chair of ISIF's Open Source Tracking and Estimation Working Group (OSTEWG).

Position statement

I am passionate about code-sharing and open-data. For too long the fusion community has suffered from a reproducibility problem, since the primary dissemination mechanism has been conference and journal papers, rather than algorithms rendered into code. My aspiration is that fusion researchers enjoy the same culture of code-sharing and open-data as the machine learning and computer vision communities, and benefit from the research acceleration that this brings. I have already started this work with Stone Soup and the Open Source Tracking and Estimation Working Group (OSTEWG).

I believe in transitioning state of the art fusion ideas into practical capability. One key way of bridging the gap between academic innovation and real-world implementation is to challenge the algorithms with real data. I believe ISIF should host open data access for challenging datasets to inspire researchers.