2027 ACM International Conference on Trustworthy and Responsible AI and Computing Systems (TRUST 2027)
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https://eigtrust.acm.org/trust2027/

Call for Papers

EA Track on AI-based Secure Sensor Networks

Track Chairs:

- Imran Sarwar Bajwa, Islamia University Bahawalpur, Pakistan
- Ahmad Lotfi, Nottingham Trent University, United Kingdom

Description

Sensor networks are foundational to modern cyber-physical systems, including smart cities, healthcare monitoring, environmental sensing, industrial automation, and defense systems. However, their distributed nature makes them highly vulnerable to cyber threats such as data spoofing, node capture, adversarial attacks, and communication interception. With the emergence of Artificial Intelligence (AI) at the edge, there is a transformative opportunity to enhance both security and intelligence in sensor networks. AI-based secure sensor networks enable real-time anomaly detection, adaptive authentication, intrusion prevention, and autonomous response mechanisms. This EA Track aims to establish a focused forum for advancing AI-based secure sensor networks, addressing both theoretical foundations and practical deployments. It will bring together experts from AI, cybersecurity, and IoT communities to shape the future of trustworthy intelligent sensing systems.

Track Topics

Scope of the track is confined to the following key topics:

- AI-based intrusion detection in sensor networks
- Federated learning for secure distributed sensing
- AI-based Lightweight cryptographic protocols for IoT sensors
- Adversarial machine learning attacks and defenses
- AI for Trust management and authentication in sensor nodes
- Secure routing protocols using AI techniques
- AI-based Edge intelligence for real-time threat detection
- AI for Privacy-preserving sensing and data aggregation
- AI and Blockchain-enabled sensor network security
- Energy-efficient AI models for constrained devices

Paper Submission and Publication

Manuscripts should be in PDF format, using the 2-column ACM SIGCONF template, see https://www.acm.org/publications/proceedings-template. Full papers cannot exceed 9 pages, including an appendix, plus unlimited pages for the GenAI Usage Disclosure section and references. Reviewing will be double-blind. Submissions must not reveal the authors' names and their affiliations and avoid obvious self-references. Accepted papers will be in the ACM Digital Library and indexed in EI Compendex and Scopus.
Submission Link: https://cmt3.research.microsoft.com/TRUST2027/Submission/Index

Important Dates

Abstract Registration: October 24, 2026
Paper Submission: October 31, 2026
Notification of Acceptance: December 31, 2026
Final Manuscript (Camera Ready): February 28, 2027