EUSAS Online Sessions 2025

Artificial Intelligence in Fire Safety and Security Systems

Addressing Regulatory Challenges · Advancing Research · Reviewing Case Studies

---

Conference Overview

Join us for a three-part digital conference series dedicated to the evolving role of Artificial Intelligence in fire safety and security systems. This year, we move beyond theory, diving into regulatory challenges, groundbreaking research, and real-world case studies that are shaping the next generation of fire safety technology.

Building on the momentum of our highly successful 2021 event, “Artificial Intelligence in Fire Detection and Security – without the hype,” the 2025 Online Sessions promise to deliver cutting-edge insights, expert knowledge, and critical discussions that matter to professionals in the field.

Key Topics

- AI in early fire detection, simulation, and performance analysis
- Risk assessments, certification, and regulatory frameworks
- Productisation challenges and real-world deployments
- European AI legislation in fire and safety
- Bias, data integrity, and system validation

Who Should Attend?

- Fire safety and Security professionals, engineers, and consultants
- Researchers, PhD candidates, academic staff
- Manufacturers, system integrators, AI developers
- Standardisation bodies, regulators, policymakers
- Public safety and emergency planners

Registration

✅ Participation is free of charge
🔗 Register via our website www.eusas.org/events
📥 EUSAS Members will be able to download the presentations

EUSAS Online Sessions 2025

Programme

Session 1: Regulations and Certification of AI Systems

🗓️ 22 May 2025, 14:00–15:30 CET
🎯 Understanding how policy and certification are catching up with AI in safety-critical environments

- **Opening & Welcome:** Prof. Andreas Czylwik, EUSAS Chairman
- **Prof. Dr. Monika Reif**, ZHAW Winterthur
  "Challenges and Certification Approaches for AI in Safety-Critical Systems"
- **Vasilios Danos**, TÜV IT
  "The Achilles Heel of AI: Risk Analysis and Assessments in Security and Safety Contexts"
- **Dr. Thomas Clausen**, ZVEI
  "The EU Artificial Intelligence Act in the Context of Existing NLF Legislation"

Session 2: AI in Fire Engineering and Simulations

🗓️ 12 June 2025, 09:30–11:00 CET
🎯 Exploring how AI is used in predictive modelling, simulation, and performance-based fire design

- **Prof. Lukas Arnold**, Fire Dynamics Division, Forschungszentrum Jülich
  "Two Application Examples of AI in Fire Dynamics: Predictions of Fluid Dynamics and Material Parameters"
- **Prof. Xinyan Huang**, Dept of Building Environment and Energy Engineering, The Hong Kong Polytechnic University
  "Artificial Intelligence in Fire Engineering and Simulations"

Session 3: Applications of AI in Security, Fire Detection, and Firefighting

🗓️ 28 August 2025 14:00–15:30 CET
🎯 Reviewing the practical implementation of AI in fire detection, video analytics for fire detection and security, and flashover forecasting for firefighting

- **Philipp Dietrich**, Bosch, Germany
  "Bridging the Gap – The Challenge of Transferring AI Research to a Reliable Video Fire Detector"
- **Dr. Wai Cheong Tam (Andy)**, Fire Research Division, NIST, USA
  "Machine Learning Driven Building Fire Forecast"
- **Thomas Hermes**, Securiton, Germany
  "Reduction of False Alarms in Video Analytics due to Intensive Trained Neural Networks – a Breakthrough in EPSS ?"
