

## SafeComp 2025 at KTH in Stockholm

Let's explore new frontiers of safety critical computing systems!

The 44th edition of SafeComp provides a unique occasion to explore and debate challenges of safety critical computing systems. Safety is more relevant than ever, with expanding capabilities of (semi-) autonomous cyber-physical system (CPS), interacting with humans in various roles and acting in more open environments. The 2025 theme is that of "Managing safety in an era of a software defined computing continuum."

Safety engineering has to carefully investigate the implications of the increasing complexity of software defined computing systems, as they are increasingly connected, interacting with supporting digital infrastructures, filled with AI and provided with more advanced perception systems.

Welcome to SafeComp 2025 in Stockholm, hosted by KTH Royal Institute of Technology

### SafeComp since 1979!

Since it was established in 1979 by the European Workshop on Industrial Computer Systems, Technical Committee 7 on Reliability, Safety and Security (EWICS TC7), SafeComp has contributed to the progress of the state-of-the-art in dependable application of computers in safety-related and safety-critical systems.

SafeComp is an annual international conference covering the state-of-the-art, industrial experiences and new trends in the areas of safety, security and reliability of critical computer applications.

SafeComp provides ample opportunity to exchange insights and experience on emerging methods, approaches and practical solutions. It is a single-track conference without parallel sessions, allowing easy networking.

### SafeComp partners



# safeComp2025

safecomp2025.se



## WELCOME

### CONTACT

For any questions regarding the registration, the website, etc.

SafeComp2025@meetx.se

Address:

Mechatronics, Dept. of Engineering Design

Att: SafeComp2025

KTH Royal Institute of Technology

SE-10044 Stockholm, Sweden

to the 44<sup>th</sup> International  
Conference on Computer  
Safety, Reliability and Security

## STOCKHOLM

9–12 september 2025

## Theme

### Managing safety in an era of a software defined computing continuum

Future societal and industrial systems will be increasingly relying on a digitalized infrastructure, from embedded systems, fog/edge computing systems, to cloud and communications. Entire systems will also increasingly be software defined and upgradeable. Societal and industrial systems consequently be increasingly relying on such digitalized infrastructures, requiring an even stronger and proactive emphasis on key dependability properties, as emphasized by the SafeComp conferences. The theme for SafeComp 2025 has been chosen to highlight some of the following topics and challenges:

- Predictability and reliability of cloud and edge computing, and AI components: The corresponding systems yet have to offer dependability properties suitable for critical systems
- Architectures ensuring safety while enhancing performance
- Co-design of applications and digital infrastructure to achieve cost-efficient dependability
- Trustworthy DevOps – reconciling software and safety practices

## List of topics

The conference covers all aspects related to the development, assessment, operation, and maintenance of safety-related and safety-critical computer systems. Major topics include, but are not limited to:

- Distributed and real-time monitoring and control
- Fault-tolerant and resilient hardware and software architectures
- Fault detection and recovery mechanisms
- Security and privacy protection mechanisms for safety applications
- Safety guidelines and standards
- Safety/security co-engineering and tradeoffs
- Safety and security qualification, quantification, assurance and certification
- Threats and vulnerability analysis
- Risk assessment in safe and secure systems
- Dependability analysis using simulation and experimental measurement
- Model-based analysis, design, and assessment
- Formal methods for verification, validation, and fault tolerance
- Testing, verification, and validation methodologies and tools
- Multi-concern dependability assurance and standardization
- Distributed and real-time monitoring and control

### Domains of application are (but not limited to):

- Railways, automotive, space, avionics & process industries
- Highly automated and autonomous systems
- Telecommunication and networks
- Safety-related applications of smart systems and IoT
- Critical infrastructures, smart grids, SCADA
- Medical devices and healthcare
- Surveillance, defense, emergency & rescue
- Logistics, industrial automation, off-shore technology
- Education & training



Conference venue at KTH main campus

## Conference venue

The conference will be held at KTH Royal Institute of Technology, one of Europe's leading technical universities. KTH conducts research and education in engineering and architecture, and ranks among the top universities in the world in several technical fields. The conference will take place in KTH's beautiful main Campus located in the northern part of Stockholm city center, easily accessible by public transportation.

## Important dates:

Abstract and Workshop proposal Submission . . . February 7, 2025  
Full paper Submission . . . . . February 14, 2025  
Author notification . . . . . April 12, 2025  
Camera ready submission . . . . . June 1, 2025  
Workshops / Main Conference. . . . . Sept.9/10-12, 2025

## Workshops at SafeComp

Workshops are planned for the day preceding the conference. Workshop proposals should be sent by email to the SafeComp 2025 Workshop Chairs (Erwin Schoitsch at AIT Austrian Institute of Technology, AT, and Elena Troubitsyna at KTH, SE) and include scope, contents, programme committee and length (half or full day). Accepted contributions will, as far as the publisher's requirements are fulfilled, be included in the SafeComp Workshop Proceedings.

## Conference and Workshop Proceedings

All accepted research papers, practical experience reports, and tool descriptions will be published by Springer in the LNCS series (Lecture Notes on Computer Science) in the SafeComp and the SafeComp Workshop volumes.

## Paper Submission Guidelines

The tradition of SafeComp is to act as a platform for bringing academic research and industrial needs together. Therefore,

industrial contributions and real-world experience reports are explicitly invited. We solicit two types of paper submission (in both cases, up to 14 pages incl. bibliography):

- Research papers address a research gap and illustrate how the contribution submitted can help improve the state-of-the-art by advancing current knowledge;
- Practical experience reports / tool descriptions provide new insights and valuable support to practitioners.

Papers exceeding the page limit will be excluded from the review process. All papers will be reviewed by at least three members of the International Programme Committee. Papers must not have been previously published or concurrently submitted elsewhere.

All paper submissions must be formatted according to the LNCS templates provided by Springer. Abstracts and papers should be submitted in pdf through EasyChair.

## SafeComp 2025 chairs

### EWICS TC7 Chair

Mario Trapp (TU Munich, DE)

### EWICS TC7 Vice-Chair

Francesca Saglietti (University of Erlangen-Nuremberg, DE)  
Uwe Becker (Draegerwerk AG & Co KGaA, DE)

### General Chairs:

Fredrik Asplund (KTH, SE)  
Martin Törngren (KTH, SE)

### Programme Co-Chairs

Barbara Gallina (MDU, SE)  
Martin Törngren (KTH, SE)

### Workshop Chairs

Erwin Schoitsch (AIT Austrian Institute of Technology, AT)  
Elena Troubitsyna (KTH, SE)

### Position papers

Jérémie Guiochet (LAAS-CNRS, Univ. Toulouse, FR)

### Industrial Contacts and Publicity Chairs

Kristina Lundqvist (MDU, SE) and Mario Trapp (TU Munich, DE), Håkan Sivencrona (ZenseAct, SE)

**Publications chair:** Friedeman Bitsch (Thales, DE)

**Web chair:** Fredrik Asplund (KTH, SE)

## International Programme Committee

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