



SAFETY OF INDUSTRIAL AUTOMATED SYSTEMS - SIAS 2024 12. - 13. JUNE 2024, @ HOTEL ILVES, TAMPERE, FINLAND

Dear Colleagues

It is my pleasure to invite you to Tampere, Finland to participate in the Safety of Industrial Automated Systems - SIAS 2024 - Conference. The conference was previously held in Montreal, Bonn, Tampere, Chicago, Nancy and Tokyo. Tampere is a technology-oriented city and is home to, among others, Tampere University, research units of VTT Technical Research Centre of Finland, Forum for Intelligent Machines and various industrial facilities that apply automation and mobile machines. Technology has also been very important in the city's history. Electrical light lit up first time in Tampere already in 1882 – first in Nordic countries and fifth in Europe. Electric lights also provided a new technology to improve fire safety by replacing the gas light. Since then, several innovations have been developed and applied at Tampere. The conference venue, Hotel Ilves, is located in the Tampere city centre.

- **Timo Malm**, Chair of the NOC

IMPORTANT DATES

- **Submission of abstracts (December 2023)**
-> **January 31st, 2024**
- **Notification of acceptance March 2024**
- **Submission of full papers April 2024**
- **Early registration April 2024**
- **Conference 12.-13. June 2024**

SCOPE

Automation has reduced the frequency of man-machine physical interaction; however, it has increased the complexity of human interventions. Therefore, it is not always evident that when the degree of automation increases, the number of accidents decreases. Accidents often occur during maintenance, troubleshooting and repairing and usually because the machine starts up unexpectedly. Better understanding about these conditions of man-machine interface as well as development of methods, means and tools to control them needs to be considered. This conference takes a close look at research and development in industrial from safety viewpoint. The conference will be of interest to work systems end-users, designers and occupational health & safety experts interested in the general theme of Safety of Industrial Automated Systems. The planned topics describe a non-exhaustive list of suggested themes. Other topics related to the scope will be considered. Texts, posters and oral presentations will be in English.

PAPER SUBMISSION

The abstracts written in English should contain title, authors, affiliations, address and email address of the corresponding author. Appropriate length is 500-1000 words without any figures. Submission of all papers and abstracts is handled via EasyChair. The Scientific Committee will select the presentations on the basis of the abstracts. The presenter will be asked to provide an article of max 6 pages to be published in the proceedings of the conference. The proceedings will carry an ISBN number and the copyrights are held by the Finnish Society of Automation. The proceedings will be available at Finnish Society of Automation website.

REGISTRATION

Registration information: www.automaatioseura.fi/sias2024/registration

SCIENTIFIC COMMITTEE

- **Tsuyoshi Saito**, JNIOOSH, Japan
- **Jean-Christophe Blaise**, INRS, France
- **Damien Burlet-Vienney**, IRSST, Canada
- **Jarosław Jankowski**, CIOP-PIB, Poland
- **Nicholas Hall**, HSE, UK
- **Lien Wioland**, INRS, France
- **Thomas Bömer**, IFA - DGUV Germany
- **Toshihiro Fujita**, NECA, Japan
- **Yoji Yamada**, National Institute of Technology, Toyota College, Japan
- **Yuvin Chinniah**, Polytechnique Montréal, Canada
- **Timo Malm**, VTT Technical Research Centre of Finland
- **Risto Tiusanen**, VTT Technical Research Centre of Finland
- **Jouni Kivistö-Rahnasto**, Tampere University, Finland
- **Minna Lanz**, Tampere University, Finland

NATIONAL PROGRAMME COMMITTEE

- **Timo Malm**, VTT Technical Research Centre of Finland
- **Risto Tiusanen**, VTT Technical Research Centre of Finland
- **Marko Vuorio**, Finnish Society of Automation, Finland
- **Anu Randén-Siippainen**, Finnish Society of Automation, Finland
- **Jouni Kivistö-Rahnasto**, Tampere University, Finland
- **Jyrki Latokartano**, Tampere University, The Robotics Society in Finland
- **Outi Rask**, Tampere University of Applied Sciences, Finland
- **Jukka-Pekka Rapinjoja**, MetSta, Finland
- **Antti Siren**, FIMA, Finland

PROPOSED TOPICS

Safety of machinery

- Safety concepts and principles
- Design rules and strategy
- Engineering-ergonomics multidisciplinary in safety research
- Collaboration with autonomous machines

Risk assessment

- Hazard identification, historic experience, mitigation
- Methodologies

Practical applications/experiences

- Accident analysis and investigation
- Economics of safety

Human and organisational factors

- Organizational design, management and leadership
- Socio-technical system approach to automation safety
- Safety culture
- Vision Zero
- Training, education and personnel qualification

Protective devices and systems

- Safety of autonomous machines, robots and cobots
- Intelligent personal protective equipment

Control system designs and evaluations

- AI and safety
- Digital twins
- Cybersecurity
- XR technologies improving safety

Standardization and regulations

- Standardization in the safety of machinery
- Effects of new EU regulations

Functional safety

- SILs and PLs of intelligent devices
- Experiences of new functional safety standards

