

# CALL FOR PAPERS

14–15 June 2010  
Tampere Hall, Finland

# SIAS 2010

## THE 6<sup>TH</sup> INTERNATIONAL CONFERENCE SAFETY OF INDUSTRIAL AUTOMATED SYSTEMS

### Dear Colleagues

It is my pleasure to invite You to Tampere, Finland to participate in the Safety of Industrial Automated Systems – SIAS 2010 – Conference. The conference has been previously held in Montreal, Bonn, Nancy, Chicago and Tokyo. Tampere is a technology-oriented city and is home to, among others, Tampere University of Technology, Laboratories of the Technical Research Centre of Finland, Technology Centre Hermia and various industrial facilities that apply automation and mobile machines. Technology has also been very important in the city's history. Tampere received electrical lights in 1882 – only four years after Edison's patent. The conference venue, Tampere Hall, is located close to the railway station, Tampere University and Tampere city centre.

*Timo Malm, Chair of the NOC*

### IMPORTANT DATES

Call for papers	31 August 2009
Submission of abstracts	30 November 2009
Notification of acceptance	31 January 2010
Submission of full papers	31 March 2010
Early registration	30 April 2010
Conference	14–15 June 2010
Technical tours	16 June 2010

### 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 clear that when the degree of automation increases the amount of accidents decreases, although the average looks good. Accidents occur often during maintenance, troubleshooting and repairing and usually because the machine starts-up unexpectedly. These conditions of man-machine interface need better understanding and development of methods, means and tools to control them. This conference is designed to take a close look at research and developments in industrial safety from a global perspective essential to understanding the interaction between the worker and automated machinery. The conference will be of interest to work systems end-users, designers and occupational health & safety experts interested in the general theme of *Machinery Safety in a Global Marketplace*. 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.

### TOPICS

#### Safety of machinery

Safety concepts and principles  
Design rules and strategy  
Maintenance of machinery

#### Risk assessment

Hazard identification, historic experience, mitigation  
Risk estimation and evaluation  
Assessment methodology  
Comparison of methodologies

#### Practical applications/experiences

Accident investigation results  
Statistical analysis of accidental trends  
Economics of safety  
Considerations in systems safeguarding

#### Training and supervision

Programs and results  
Organizational design and management  
Dissemination of knowledge

#### Protective devices and systems

Human factors and design  
Protective and complementary protective measures  
Prevention of bypassing and defeating  
Man-machine interface  
Role of software as a safeguard  
Safety of robotics  
Safety-related field buses?

#### Control system designs and evaluations

Safety performance  
Safety-related control systems for cells/IMS  
Proactive safety design

#### Innovation and the future

Human presence sensors (Vision, RFID)  
Robots collaborating with humans  
Integrated Manufacturing Systems  
Autonomous machines in the vicinity of a human

#### International standardization

International standardization in the safety of machinery

#### Functional safety

Safety integrity level; categories, SIL's and PL's  
Safety-related embedded software/firmware  
Reliability features of safety-related control systems

#### Miscellaneous

### 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. Abstracts should be submitted as PDF files to the Secretariat as e-mail attachments to office@atu.fi.

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 both in printed and CD-ROM form.

### EXHIBITION

A small scale exhibition with posters will be held in conjunction to the conference.

### REGISTRATION

The registration fee for the conference is 500 EUR. The fee includes admission to all the sessions during two days, a proceedings, coffees, lunches, get-together party, conference dinner and VAT 22%.

### SCIENTIFIC COMMITTEE

**Philippe Charpentier**, Institute National de Recherché et de Sécurité (inrs), France  
**Yuvim Chinniah**, Institute de recherche Robert-Sauve en sante et en securite du travail (irsst), Canada  
**Marek Dzwirek**, CIOP-PIB, Poland  
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**Steve Shaw**, Health & Safety Executive (HSE), UK  
**Matti Sundquist**, Sundcon Oy

### NATIONAL PROGRAMME COMMITTEE

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