Wednesday, 10 October 2018

> **08:30 - Registration and welcome coffee**

10:00 Opening address: Stéphane Pimbert, Director General, INRS

10:15 Keynote speaker: Pr. Benoit Iung, University of Lorraine
From Industrial Automated Systems to Cyber-Physical Production Systems: impacts on safety?

### Session 1 – Functional safety - Information Technology

Chairpersons: HARDY Sandrine, France; IKEDA Hiroyasu, Japan

11:00 Foresight of new and emerging occupational safety and health risks associated with information and communications technologies
*Stacey N., HSL, United Kingdom*

11:20 How to consider security aspects during the design of machinery
*Mysliwiec B., MySafeAutomation, Germany*

*Schiller F., Beckhoff Automation, Germany*

12:00 An extensive method to analyze impacts of cyber-security on major hazards
*Massé F., INERIS, France*

> **12:20 - Lunch**

### Session 2-1 – Safety of Collaborative Systems

Chairpersons: FUJITA Toshihiro, Japan; CHINNIAH Yuvin, Canada

13:50 Human-robot coactivity: need’s analysis
*Tihay D., INRS, France*

14:10 Of the necessity of a uniform measurement procedure for the determination if the threshold values listed in ISO TS 15066
*Pilz T., PILZ, Germany*

14:30 Object Recognition for Safety Applications using Ultrasonic Holography
*Kirfel A., Safety and Security Research Institute (ISF), Germany*

14:50 Reliable Planning of Human-Robot-Collaboration featuring Speed and Separation Monitoring
*Petersen H., Fraunhofer IFF, Germany*

15:10 Industrial collaborative robot application: experimental implementation of safety-rated monitored stop
*Sghaier A., INRS, France*

> **15:30 - Coffee break**
Session 2-2 – Safety of Collaborative Systems
Chairpersons: MALM Timo, Finland; GIRAUD Laurent, Canada

16:00 Advancing Anticipatory Behaviors in Dyadic Human-Robot Collaboration: The AnDy project
Maurice P., INRIA, France

16:20 COVR - Towards simplified evaluation and validation of collaborative robotics applications
across a wide range of domains using robot safety skills
Saenz J., Fraunhofer IFF, Germany

16:40 Japan’s approach for the realization of Future Safety Concept by implementing collaborative
safety technologies
Mukaidono M., IGSAP, Japan

17:00 New collaborative safety concept in various coexistence areas for human and machinery
Shimizu T., IDEC Corporation, Japan

> 17:20 - End of the day

Thursday, 11 October 2018

08:30 Registration

Session 3 – Autonomous systems
Chairpersons: BOEMER Thomas, Germany; GIRAUD Laurent, Canada

09:00 Top-Down approach for safety engineering in autonomous and semi-autonomous machinery
systems
Tiusanen R., VTT, Finland

09:20 Safety concepts for autonomous and semi-autonomous mobile work machines
Malm T., VTT, Finland

09:40 Autonomous Driving within the Plant Functional Safety between(?) Industrial Automation and
Automotive Engineering
Borowski T., IFA, Germany

10:00 A methodological framework to support the design of safe & secure autonomous systems
Heikkilä E., VTT, Finland

> 10:20 - Coffee break
Session 4 – Protective devices and smart systems

Chairpersons: HALL Nicholas, United Kingdom; HARDY Sandrine, France

10:50  Use of tablets and smartphones for the control of machinery
Nischalke-Fehn G., IFA, Germany

11:10  General principles of smart personal protection systems design
Marchal P., INRS, France

11:30  Safety related sensors used for protection of person
Wüstefeld M., Sick, Germany

11:50  Future prospects of enabling device as an essential safety device for the safety of machinery and Safety2.0
Nobuhiro M., IDEC Corporation, Japan

> 12:10 - Lunch

13:30  Poster session

Session 5 – Safety of machinery

Chairpersons: BLAISE Jean-Christophe, France; FUJITA Toshihiro, Japan

15:20  Challenges during the risk assessment of large intelligent logistic storage system
Hongbin L., TÜV SÜD, China

15:40  Impact of changes in machinery during use: toward a forecast of dangerous situations?
Lamy P., INRS, France

16:00  A study on safety requirements for brake systems of the mechanical servo presses
Hata Y., JFMA, Japan

16:20  Revision of ISO 13855
Görnemann O., Sick, Germany

> 16:40 - End of the working day

> 18:45 - Evening event
Friday, 12 October 2018

08:30  Registration

Session 6 – Experiences / Practical applications
Chairpersons: IKEDA Hiroyasu, Japan; BLAISE Jean-Christophe, France

09:10  Serious and fatal accidents caused by mobile machinery in Quebec: More prevention is needed
Burlet-Vienney D., IRSST, Canada

09:30  Safety Assessor Qualification Impact and Influence in Thailand
Patiphon K., TPA, Thailand

09:50  Framework for Occupational Safety and Health: the eSocial
Kieckbusch R.-E., CNI, Brazil

10:10  Analysis of 141 serious and fatal machine accidents occurring in Quebec between 2011 and 2015
Giraud L., IRSST, Canada

> 10:30 - Coffee break

Session 7 – Experiences / Prospects
Chairpersons: CHINNIAH Yuvin, Canada; BOEMER Thomas, Germany

11:00  Supportive Protective System IV. Experimental procedure of behavior analysis to the Supportive Protective System (SPS) as a safety management approach. For appropriate prediction and control of human behavior
Hojo R., JNIOSH, Japan

11:20  Importance of safety personnel in the era of robot revolution: Current status and future prospects of Safety Assessor and Safety Basic Assessor (SA/SBA) qualification system
Fujita T., NECA, Japan

11:40  Objective and Subjective Effects of Passive Exoskeleton on Overhead Work
Maurice P., INRIA, France

12:00  Closing address: Louis Laurent, Director of Studies and Research, INRS

12:30  End of the conference