



# International Conference on Hydrogen Safety

October 19-21, 2015 - Yokohama (Japan)

**CALL FOR PAPERS - Abstracts Deadline is Dec. 31, 2014**



Hydrogen  
Energy System  
Society of Japan



Ministry of the Interiors  
The National Fire Corps  
ITALY

Organizing Institutions:



Technova|Inc.



In Collaboration with:



ISO/TC 197 HYDROGEN TECHNOLOGIES



HySUT  
The Research Association of  
Hydrogen Supply / Utilization Technology

## ICHS 2015 CONFERENCE SPONSOR



## ICHS 2015 CONFERENCE SCOPE

The 6th International Conference on Hydrogen Safety (ICHS 2015) will be held in Yokohama, Japan on October 19-21, 2015 under the auspices of the International Association for Hydrogen Safety (HySafe). The first five biennial conferences since 2005 succeeded in attracting the world's leading experts, by providing an open platform for the presentation and discussion of new findings, information and data on hydrogen safety – covering the wide range of areas from basic research to applied research and development to standardization and regulations. As commercialization of hydrogen fuel cell electric vehicles is imminent and other hydrogen applications are increasingly being deployed, ICHS 2015 will focus on the progress in safety of hydrogen technologies and infrastructure, as crucial/essential means to enable smart hydrogen solutions for global energy challenges. Therefore, the conference organizers seek papers in a wide range of hydrogen safety topics like (but not limited to) Regulations Codes and Standards, safety in H<sub>2</sub> infrastructure, safety solutions for the implementation of H<sub>2</sub> technologies, hydrogen and hydrogen blends behavior, physical effects, consequence analysis, incidents, accidents and near misses, hydrogen effects on materials and components, safety of energy storage, risk management and fuel cells related safety issues. A detailed list of ICHS 2015 Themes and Topics is shown below. All contributions to ICHS 2015 will be evaluated exclusively in the light of their scientific content and relevance to hydrogen safety.

## ICHS 2015 CONFERENCE STRUCTURE

ICHS 2015 will include thematic plenary sessions, topical lectures, and parallel oral and poster sessions. The conference seeks to facilitate the near term introduction of hydrogen technologies in the market place.

## CONFERENCE ORGANIZING COMMITTEE

Akiteru Maruta, Marco Carcassi, Andrei Tchouvelev, Marc Steen, Iñaki Azkarate, Thomas Jordan, Jay Keller, Suguru Oyama, Antonio Ruiz.

## CONFERENCE SCIENTIFIC COMMITTEE

Iñaki Azkarate, Daniele Baraldi, Herve Barthelemy, Luc Bauwens, Pierre Benard, Gilles Bernard-Michel, Dag Bjerketvedt, Marco Carcassi, Fabio Dattilo, Sergey Dorofeev, Vasco Ferreira, Marco Frezza, Javier Garcia, Oliver Gentilhomme, Stuart Haworth, Olaf Jedicke, Thomas Jordan, Shoji Kamiya, Jay Keller, Armin Keßler, Alexei Kotchourko, Frank Markert, Akiteru Maruta, Akiko Matsuo, Vladimir Molokov, Pietro Moretto, Ernst-Arndt Reinecke, Antonio Ruiz, Ulrich Schmidtchen, Trygve Skjold, Marc Steen, Andrei Tchouvelev, Andrzej Teodoreszyk, Piet Timmers, Alexandros Venetsanos, Franck Verbecke, Changjian Wang, Benno Weinberger, Steven Weiner, Jennifer Wen, Jinyang Zheng.

## ICHS 2015 THEMES AND TOPICS

### Safety in H<sub>2</sub> infrastructure

- Production
- Distribution and transport (pipelines, gaseous and liquid)
- Storage
- Handling and Use

### H<sub>2</sub> fueling stations deployment experience

- Safe design
- Indoor / outdoor fueling
- Permitting
- Public acceptance
- Mitigation practices
- Co-location with other fueling options

### Mixed / blended H<sub>2</sub> fueling stations and vehicles

- HCNG

### Safety in H<sub>2</sub> vehicle /station interface

#### Safety in H<sub>2</sub> vehicles

- On-board storage
- Vehicle operation in tunnels and garages
- Public acceptance
- Material handling and operations in warehouses

### H<sub>2</sub> Safety aspects in other applications/industries/technologies

- Chemical plants
- Oil refinery
- Space-aircrafts- Unmanned Aerial Vehicles (drones)
- Nuclear
- Maritime applications e.g boats, submarines
- Mining industry
- Semiconductor/electronic industries, electrical generators, neutron beams and other fundamental experiments
- Other applications

### Safety of energy storage

- H<sub>2</sub> solid-storage materials
- Grid scale storage
- Power-to-gas / power-to-hydrogen

### Fuel cells and electrolyzers related safety issues

- Risk Assessment
- Safety of material
- Normative or Pre-normative

### Behavior of gaseous and liquid hydrogen and hydrogen mixtures

- Release, dispersion
- Ignition and auto-ignition
- Combustion: fire, deflagration, detonation, transitional effects

### Physical effects, consequence analysis

- Thermal, overpressure, missile effects
- Effects on humans and environments
- Incidents, accidents and near misses

### Hydrogen effects on materials and components

- Embrittlement
- Permeation/blistering

### Risk/safety management

- Hazard identification and analysis
- Risk assessment (cost-benefit analysis, safety perception, acceptance and harm criteria, uncertainties, decision making, human factor)
- Risk-informed safety engineering
- Prevention and Mitigation (active, passive, sensors, safety distances)
- Insurance
- Safety solutions and implementation of H<sub>2</sub> technologies
- Public Acceptance
- "Outside-the-box" safety

### Regulations Codes and Standard (RCS)

- Pre-normative research (needs, approaches, incorporation of QRA)
- Post normative experience (case studies)
- Comparison/compatibility with other fuels

### Education, training, lessons learned and best practices

- First responders training
- Databases, Web tools and training/educational material

## CONTRIBUTED PAPERS

Conference attendees who wish to present a paper are required to submit a short abstract (up to 100 words). When submitting the abstract/paper, authors can express a preference for presenting their work in an oral session or in the poster session or no preference. Authors whose abstract has been accepted will be asked to submit a full paper which will be peer-reviewed. The evaluation will be forwarded to the Authors by email. All accepted papers (oral and poster) will be published with exactly the same format in the proceedings of the conference. Abstract submission instructions will be available on the Conference website from June 1, 2014: [www.ICHS2015.com](http://www.ICHS2015.com)

## KEY DEADLINES

- Conference website open for abstracts submission: **June 1, 2014**
- Abstracts deadline: **December 31, 2014**
- Abstracts acceptance notification: **January 31, 2015**
- Full papers submission: **March 31, 2015**
- Paper acceptance notification: **June 1, 2015**
- Submission of papers final versions and payment of conference fees: **July 15, 2015**
- ICHS Conference: **October 19-21, 2015**

## CONFERENCE LOCATION

Yokohama Bay Sheraton Hotel & Towers

## CONFERENCE LANGUAGE

The conference language is English. Translation to Japanese option to be announced later.

## REGISTRATION/INFORMATION FORM

Registration will be accepted only in electronic form on the conference website: [www.ICHS2015.com](http://www.ICHS2015.com)

## CONFERENCE INFO

For more information, contact: Dania Del Corso: email: [ichs@hysafe.org](mailto:ichs@hysafe.org)  
Conference Website: [www.ICHS2015.com](http://www.ICHS2015.com)