

1st European Summer School on Hydrogen Safety 15th – 24th August 2006 Program

Tuesday 15th of August 2006

09:00-10:45	<i>Registration in Loughview Suite (Block 8 Floor G)</i>
10:45-11:00	Opening ceremony by Pro Vice-Chancellor Prof Denise McAlister
11:00-11:45	T. Jordan. Hydrogen as an energy carrier
11:45-12:00	<i>Coffee</i>
12:00-12:45	R. Wurster. HyApproval - Handbook for Approval of Hydrogen Refuelling Stations - Safe and Harmonised Implementation of Hydrogen Refuelling Stations on a Global Scale
12:45-14:15	<i>Lunch</i>
14:15-15:00	T. Hirano. Reacting fluid dynamics (1): fundamentals of hydrogen-air combustion
15:00-15:15	<i>Break</i>
15:15-16:00	T. Hirano. Reacting fluid dynamics (2): phenomena in the hydrogen-air boundary or mixing layer
16:00-16:15	<i>Tea</i>
16:15-17:00	Round table discussion
18:00-20:00	<i>Welcome Reception</i>

Wednesday 16th of August 2006

10:00-10:45	J.H.S. Lee. Explosion problems for hydrogen safety (1)
10:45-11:15	<i>Coffee</i>
11:15-12:00	J.H.S. Lee. Explosion problems for hydrogen safety (2)
12:00-12:45	Round table discussion
12:45-14:15	<i>Lunch</i>
14:15-15:00	H.J. Pasman. The challenge of risk control in a hydrogen based economy (1)
15:00-15:15	<i>Break</i>
15:15-16:00	H.J. Pasman. The challenge of risk control in a hydrogen based economy (2)
16:00-16:15	<i>Tea</i>
16:15-17:00	Round table discussion

Thursday 17th of August 2006

10:00-10:45	D. Bradley. Burning rates in gaseous explosions of hydrogen-air
10:45-11:15	<i>Coffee</i>
11:15-12:00	D. Bradley. Hydrogen powered vehicles for transport
12:00-12:45	Round table discussion
12:45-14:15	<i>Lunch</i>
14:15-15:00	J.E. Shepherd. Structural response to explosions (1)
15:00-15:15	<i>Break</i>
15:15-16:00	J.E. Shepherd. Structural response to explosions (2)
16:00-16:15	<i>Tea</i>
16:15-17:00	Round table discussion

Friday 18th of August 2006

10:00-10:45	M. Carcassi. Actual methods on technological risk assessment
10:45-11:15	<i>Coffee</i>
11:15-12:00	G. Newsholme. Risk management for hydrogen economy projects
12:00-12:45	Round table discussion
12:45-14:15	<i>Lunch</i>
14:15-14:45	Presentation by S. Weiner. From laboratory to demonstration: safety practices - lessons learned. Safety Plan Checklist.
14:45-15:45	Work in progress presentations
15:45-16:00	<i>Tea</i>
16:00-17:10	Work in progress presentations
17:15-18:00	FireSERT tour

Saturday 19th of August 2006

10:30-11:15	M. Carcassi. The role of uncertainties on risk assessment
11:15-11:30	<i>Coffee</i>
11:30-12:30	G. Newsholme. Mock-up workshop on risk assessment of hydrogen fuel cell installation
12:30-14:00	<i>Lunch</i>
14:00-18:00	O. Hansen. Hands on workshop on CFD-modelling of hydrogen experiments with FLACS – session in room 6C58 (Block 6, Floor C, Room 58)

Sunday 20th of August 2006

- 09:00-16:00 Boat trip "Titanic tour" (there will be two 75 minute tours, each for 45 people, start times 09.45h and 14.00h)
- 18:30-23:00 HyCourse Dinner in Belfast Castle

Monday 21th of August 2006

- 10:00-10:45 F.A. Williams. Reduced Chemistry for Hydrogen Combustion and Detonation
- 10:45-11:15 *Coffee*
- 11:15-12:00 F.A. Williams. Simplified Formulations for Turbulent Combustion of Hydrogen
- 12:00-12:45 Round table discussion
- 12:45-14:15 *Lunch*
- 14:15-15:00 J. Wen. Hydrogen fires (1)
- 15:00-15:15 *Break*
- 15:15-16:00 J. Wen. Hydrogen fires (2)
- 16:00-16:15 *Tea*
- 16:15-17:00 Round table discussion

Tuesday 22th of August 2006

- 10:00-10:45 L. Bauwens. Numerical simulation of hydrogen detonations and application in enclosed environments
- 10:45-11:15 *Coffee*
- 11:15-12:00 L. Bauwens. Detonations, cellular structure, detonative ignition and deflagration to detonation transition: lessons from 25 years of numerical simulation
- 12:00-12:45 Round table discussion
- 12:45-14:15 *Lunch*
- 14:15-15:00 H. Barthelemy. Compatibility of metallic materials with hydrogen - review of present knowledge (1)
- 15:00-15:15 *Break*
- 15:15-16:00 H. Barthelemy. Compatibility of metallic materials with hydrogen - review of present knowledge (2)
- 16:00-16:15 *Tea*
- 16:15-17:00 Round table discussion

Wednesday 23rd of August 2006

- 10:00-10:45 A. Teodorczyk. Fast deflagrations, deflagration to detonation transition (DDT) and direct detonation initiation in hydrogen-air mixtures
- 10:45-11:15 *Coffee*
- 11:15-12:00 A. Teodorczyk. Mitigation of hydrogen-air detonations
- 12:00-12:45 Round table discussion
- 12:45-14:15 *Lunch*
- 14:15-15:00 J. Quintiere. Fundamentals of premixed flames
- 15:00-15:15 *Break*
- 15:15-16:00 J. Quintiere. Fire plumes and jets
- 16:00-16:15 *Tea*
- 16:15-17:00 Round table discussion

Thursday 24th of August 2006

- 10:00-10:45 B. Zalosh. Accidental hydrogen releases and mixing in large enclosures
- 10:45-11:15 *Coffee*
- 11:15-12:00 B. Zalosh. U.S. hydrogen safety standards, guidelines, and practices
- 12:00-12:45 Round table discussion
- 12:45-14:15 *Lunch*
- 14:15-15:00 Closing lecture by EC representative Mrs Beatrice Coda
- 15:00-16:00 *Closing ceremony* by Vice-Chancellor Prof Richard Barnett