


13:30–13:45	Opening session	Welcome - Eamon Chandler, Chair, <i>Hazards 33</i> Technical Committee
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13:45–14:30	 <p>Plenary presentation Professor Rhona Flin</p>	<p><i>Developments in Human Factors and Behavioural Safety</i> Professor Rhona Flin, Emeritus Professor, University of Aberdeen and Professor of Industrial Psychology, Robert Gordon University, UK</p>
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	Learning from Incidents	Hydrogen Hazards	Assurance	Modelling & Simulation	Workshops
15:15–15:45	<p><i>Catastrophic Incidents – Prevention and Failure</i> Trevor Hughes, Hughes Consultancy and Research, UK</p>	<p><i>Assessment Techniques for Supporting ALARP Demonstration for Energy Transition Projects</i> Richard Tiffin, ESR Technology, UK</p>	<p><i>Threshold Quantity for Process Safety Metrics for Special/ Coded Chemicals</i> Hema Divya Katna, University of Aberdeen, UK and Rahul Raman, Kaypear Engineering LLP, India</p>	<p><i>Development of a Practical Methodology for Assessing the Major Accident Risks Associated with Carbon Dioxide Pipelines in Areas of Topography</i> Robert Melville, Alison Thackery and Ian Lines, Kent PLC, UK</p>	<p>15:00-17:00</p> <p><i>Human Factors in the Chemical and Process Industries</i> Presented by IChemE and The Keil Centre</p>  
15:45–16:15	<p><i>Learning Effectively from Near-miss Reporting</i> Stuart King, Energy Institute; Tony Gower-Jones; Stichting Tripod Foundation; and Ibrahim Khan, Energy Institute, UK</p>	<p><i>Guidance for UK Hydrogen Safety Case Development</i> Sean Baker and Nikhil Hardy, ERM, UK</p>	<p><i>Performing a Technical Audit With Some of the Findings</i> Robert Canaway, Suregrove, UK</p>	<p><i>Data Driven Gas Dispersion Modelling Leveraging Machine Learning and Artificial Intelligence</i> Kehinde Shaba, Anglo American, UK</p>	
16:15–16:45	<p><i>Lessons Learned from Past Incidents/Near-misses – WestJet Flight 2652</i> Abbie Harvey, UK Civil Aviation Authority, UK</p>	<p><i>Hydrogen as a Fuel for Industry: Technical and Safety Challenges</i> Luke Butcher, ESR Technology and Graeme Cook, Aecom, UK</p>	<p><i>Process Safety Management in Operation Readiness Assurance</i> Zuraida Wong Zulkifli, Petronas, Malaysia</p>	<p><i>CFD-based Evaluation of Inherently Safer FPSO Layouts</i> Etienne Guinot, SBM Offshore, Netherlands; Laurent Paris; Efectis France and Josue Quilliou, Gexcon France</p>	
16:45–17:15	<p><i>Identifying and Managing Weak Signals – The Platypus Philosophy</i> Trish Kerin, IChemE Safety Centre, Australia</p>	<p><i>Review of Gaps and Needs in Data Collection and Definition of Equipment Classes, Failure Modes and Safety Equipment for Hydrogen Systems</i> Marta Bucelli and N Paltrinieri, SINTEF Energy Research AS, Norway</p>	<p><i>Development of a Novel Risk Assessment Methodology to Assess and Communicate the Effectiveness of Risk Control Measures and Strategies Applied to a Covid-19 Scenario</i> Colin Chambers, April Lockhart and Zoe Chaplin, Health and Safety Executive, UK</p>	<p><i>Statistical-based Maintenance for Above Ground Gas Risers in Domestic High-rise Buildings</i> Simon Au and Pasindu Samaranayake, ERM, Hong Kong</p>	


17:15–17:30	Refreshment break with poster and exhibition viewing
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17:30–18:00	 <p>Trevor Kletz Hazards Lecture Amir Gerges</p>	<p><i>New Energy and Sustainable Technology</i> Amir Gerges, Vice President, Group Safety, Shell, USA</p>
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18:00–18:15	IChemE update
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18:15–19:45	Welcome reception
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This is a draft programme and is subject to change.

09:00–09:45	 <p>Plenary presentation Dr Stuart Hawksworth</p>	<p><i>Developments in Hydrogen Infrastructure and Strategy</i> Dr Stuart Hawksworth, Head of Centre for Energy and Major Hazards, Health and Safety Executive, UK</p>
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09:45–10:30	Refreshment break with poster and exhibition viewing
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	Safety Culture - Leadership	Hydrogen Experimental Results	Digitalisation	Non-routine Operations	Workshops
10:30–11:00	<p><i>It Starts at the Top – the Effect of Human Factors and Leadership on Safety</i> Yokogawa</p>  	<p><i>Lessons Learned from Experimental Tests Concerning Liquid Hydrogen Releases</i> Federica Tamburini, Federico Ustolin and Nicola Paltrinieri, Norwegian University of Science and Technology, Norway; Ernesto Salzano, Valerio Cozzani, University of Bologna, Italy</p>	<p><i>Artificial Intelligence in Safety, the Future or a Recipe for Disaster?</i> Craig Paterson and David Jamieson, Salus Technical, UK</p>	<p><i>Operational Risk Assessment: Sharing Good Practice for the Control of Major Accident Risk</i> Tom Downie, INEOS FPS, UK</p>	<p>10:30-12:30</p> <p><i>Unlocking Exceptional Plant and Facility Performance with SMART ASSETS: Harnessing Advanced Analytics for Actionable Insights</i></p> <p>Presented by PETRONAS</p> 
11:00–11:30	<p><i>Engaging Leadership: Getting Better Insights from Incident Investigations</i> Stuart King, Energy Institute; Tony Gower-Jones, Stichting Tripod Foundation; and Ibrahim Khan, Energy Institute, UK</p>	<p><i>Digital image Processing for the Estimation of the Heat Flux Entering a Liquid Hydrogen Tank Exposed to a Fire</i> Alice Schiaroli, Norwegian University of Science and Technology, Norway; Giordano Emrys Scarponi, University of Bologna, Italy; Christian Mata, Universitat Politècnica De Catalunya, Spain; Valerio Cozzani, University of Bologna, Italy; and Federico Ustolin, NTNU, Norway</p>	<p><i>Embedding IOGP Process Safety Fundamentals in the Frontline using AI</i> Edwin Bailey, Ithaca Energy (UK) Limited, UK</p>	<p><i>Guidelines For Managing Abnormal Situations</i> Roger Stokes, Baker Risk, UK</p>	
11:30–12:00	<p><i>Process Safety Leadership Site Visit Toolkit</i> Ashley Hynds, UK</p>	<p><i>Quantification of Liquid Hydrogen Jet Fires from Large Scale Experiments</i> Steven Betteridge, Shell, UK</p>	<p><i>Driving Process Safety Performance Through Intelligent Dashboard</i> Sai Vijaya Krishna Malluri, HMEL, India</p>	<p><i>Pre Start-up Safety Review (PSSR): Significance, Common Pitfalls and Insights for an Effective Review</i> Mohammad Moonis, Saudi Aramco, Saudi Arabia</p>	
12:00–12:30	<p><i>The Difference That Makes the Difference – Identifying and Applying Criteria for Safety Leadership Excellence</i> Rachael Cowin, Legitimate Leadership, UK</p>	<p><i>Effect of Hydrogen Depressurization on Steel Pipe in Case of Puncture: Experimental Results and Analysis</i> Vincent Blachetiere, GRTgaz; Guillaume Leroy, INERIS, Jérôme Poenou; and Magali Polo, GRTgaz, France</p>	<p><i>Enhancing Process Safety Understanding Through Virtual Reality: An Interactive Simulation of an Offshore Installation Well Bay</i> Josh Crawley and Dr E J Bailey, Ithaca Energy (UK), UK</p>	<p><i>Outside in Risks (OiR)</i> Pratik Toshniwal, Shell, India</p>	

12:30–13:30	Lunch break with poster and exhibition viewing
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	Safety Culture – Operator’s Experience	Hydrogen Risk Assessment	Competencies	Critical Task Analysis	Workshops
13:30–14:00	<p><i>Enhancing Process Safety</i> Caroline Myers and Simon Mugford, ExxonMobil, UK</p>	<p><i>Rationalising Ignition Probability Models for QRA of Hydrogen Supply Chain Facilities</i> Sriram Raghunath, Shell, India and Andrew Crerand, Shell Global Solutions, UK</p>	<p><i>Developing the Skills for our World-class Process Safety Workforce</i> Neil Smith and Justine Fosh, Cogent Skills, UK</p>	<p><i>How to Carry Out Human Factors Assessments of Critical Tasks – CIEHF Guidance</i> Pippa Brockington, HF Expertise; Lorraine Braben, Lorraine Braben Consulting; and Jamie Henderson, Human Reliability Associates, UK</p>	<p>13:00-15:00</p> <p><i>Safety Critical Task Identification</i></p> <p>Presented by Axiom</p> 
14:00–14:30	<p><i>Safety Culture in an Operating Environment</i> Ron Ramshaw, Safety Management Solutions, UK</p>	<p><i>To Enclose or Not to Enclose? An Investigation on the Influence of Ventilation Arrangements on Hydrogen Explosion Hazards in Compressors</i> Karina Almeida Leñero and Chris Gold, Gexcon, UK</p>	<p><i>The Next Level in Process Safety with Intra- and Inter Organisational Learning</i> André de Rooij, Coen van Driel and Chris Williams, New Behavior, Netherlands</p>	<p><i>Using Outputs from Safety Critical Task Analyses to Support Rapid Identification of Human Factors Issues in Related Tasks</i> Dominic Furniss, and Jamie Henderson, Human Reliability Associates and Karam Singh Bhinder, Johnson Matthey, UK</p>	
14:30–15:00	<p><i>Transition of Engro Fertilizers from Compliance-based to Risk-Based HSE Management System (Process Safety)</i> Qazi Wasif Ud Din, Sheeraz Hussain Syed and Mohsin Mukhtar, Engro Fertilizers Limited, Pakistan</p>	<p><i>Hazard Assessment of Energy Storage Systems with a Focus on Hydrogen and Hydrogen Derivatives</i> John Evans, Thornton Tomasetti, UK</p>	<p>Facilitated discussion</p>	<p><i>How to Carry Out a Human Factors Review of Safety Critical Tasks: Safety Critical Task Analysis</i> Toby Garner and Simon Layton, MES International, UK</p>	

15:00–15:45	Refreshment break with poster and exhibition viewing
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	Safety Culture	Hydrogen Lessons Learned	Cross-sector Learning (Nuclear)	Safety Critical Task Analysis	Workshops
15:45–16:15	<p><i>How Much Chronic Unease is Enough?</i> Jan Skriver and Mohammad Shafiq, Sandvik Coromant, Sweden</p>	<p><i>Lessons Learned from Hydrogen System Integration</i> Graham Morrison and Karina Almeida, Gexcon, UK</p>	<p><i>Development of a Safety Culture Model and Measure for Great Britain’s Nuclear Industry</i> Nick Shaw, Office for Nuclear Regulation, UK</p>	<p><i>Integration of Qualitative Human Factors Safety Critical Task Analysis with Wider Engineering Risk Assessments</i> Jamie Henderson and Dominic Furniss, Human Reliability Associates, UK</p>	<p>15:30-17:30</p> <p><i>Delta HAZOP</i></p> <p>Presented by IChemE</p> 
16:15–16:45	<p><i>Learning from Process Safety Events – a Culture Improvement Journey</i> Naseem Qamar Shaikh and Syed Aamir Abbas, Mari Petroleum Company, Pakistan</p>	<p><i>Lessons Learned from H₂-related Incidents: Criticality of Maintenance Operations</i> Giulia Collina, Abhishek Subedi, Alessandro Campari, Biraj Singh Thapa, and Nicola Paltrinieri, Norwegian University of Science and Technology, Norway</p>	<p><i>Responding to Climate Change: Improving Resilience to Changing Natural and External Hazards at a Nuclear Fuel Facility</i> David Threlfall, Rebecca Bettison and Mervyn Hayes, Rolls-Royce, UK</p>	<p><i>Leak Testing When Reinstating Plant – It’s More Complicated Than You Think</i> Michelle Cormack, Perenco UK and Andy Brazier, AB Risk, UK</p>	
16:45–17:15	<p><i>Kick Starting Process Safety in the Pulp and Paper Industry in Western Canada</i> John Riddick and Francesca Apruzzese, Caldbeck Process Safety Inc, Canada</p>	<p>Facilitated discussion</p>	<p><i>Engineering Substantiation in the Nuclear Industry</i> Gareth Davies, Sellafield Ltd, Adam Marriott, EDF Energy and Tim Boland, Sellafield Ltd, UK</p>	<p>Facilitated discussion</p>	
17:15–17:45	<p>Facilitated discussion</p>		<p>Facilitated discussion</p>		

19:00–22:00	Social event (ticket only)
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09:00–09:45	 <p>Plenary presentation Paul Stevens</p>	<p><i>The New UK Government Initiative on Best Available Techniques and its Implications</i> Paul Stevens, UK BAT Manager, Environment Agency, UK</p>
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09:45–10:15	Refreshment break with poster and exhibition viewing
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	Human Factors	New Energies	Engineering & Design	Hazardous Area Classification	Workshops
10:15–10:45	<p>Human Factors Health Check: An Approach to Assessing Compliance with the Human Factors Operational Delivery Guide Julie Bell and Pippa Brockington, Human Factors Expertise, UK</p>	<p>Enabling a Safe Energy Transition – How Industry Can Work with its Regulators to Seize the Opportunities of Net Zero Max Walker, Health & Safety Executive, UK</p>	<p>Verifying Compliance with Blowdown Performance Standards Using Advanced Analytics Anthony Teodorczuk, SBM Offshore, Monaco and Morgan Bowling, Seeq, USA</p>	<p>Energy Institute Guide 15 Edition 5 launch (ATEX/ DSEAR) Tim Jones and Steve Sherwen, RPS Consulting UK and Ireland, UK</p>	<p>10:15–12:15 <i>Workshop</i> Presented by Wolters Kluwer Enablon</p> 
10:45–11:15	<p>Human Factors Issues and Solutions When Undertaking Major Projects on Operational Sites Andy Brazier, AB Risk and Nick Wise, SSE Thermal, UK</p>	<p>Mitigation Strategies for Lithium Ion Battery Energy Storage Systems Denise Beach, FM Global, USA</p>	<p>Hydrogen Failures Without Hydrogen Conor Fraser, Axiom, UK</p>	<p>A Semi-quantified Method for Improving Quality and Consistency in DSEAR Assessments David Harding and Graham Morrison, Gexcon, UK</p>	
11:15–11:45	<p>Making Safe Decisions – Our Brains Are Our Worst Enemy Daryl Wake, DEKRA, UK</p>	<p>Performing a Quantitative Risk Assessment for Utility-scale LiFePO4 Battery Energy Storage Systems: A Case Study for First-of-a-kind Installation in South Africa Liza Smit and Adriaan van Wyk, Proconics, South Africa; Oliver Heynes and Allen Miller, Insight Numerics, USA; Richard Walls and Natalia Flores Quiroz, Stellenbosch University, South Africa; and Peter McDonald, Chris Stirling and Andrew Nicholson, Viper Applied Science, UK</p>	<p>The Practical Application of Radio Frequency Interference Assessment Steve Sherwen, RPS Consulting UK and Ireland, UK</p>	<p>A Critical Evaluation of the Basis of Safety for Zone of Negligible Extent in Area Classification Keith Johnson and D De'Ath, Sellafield Ltd, UK</p>	
11:45–12:15	<p>Data Analysis of Behavior Barrier in Permit to Work System Anshulkumar Tiwari and Shrikant Kamle, HMEL, India</p>	<p>Practical Process Safety Decision Making in Decarbonisation and New Technologies Plant Design Helen Fennell and Stuart Hunter, Petrofac, UK</p>	<p>Gas Blowby Relief Study – Are You Approaching it the Right Way? Feras Gamal Beshar, Sharjah National Oil Corporation, United Arab Emirates</p>	<p>HAC to Hazard Hack Wahid Azizi, DEKRA, UK</p>	

12:15–13:15	Lunch break with poster and exhibition viewing
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	Human Factors	New Energies	Environment & Climate Change	Cross-sector Learning (Water)	Workshops
13:15–13:45	<p>Jump to It! - A New Model for Safety Alarm Operator Response Time Requirements that Avoids Misplaced Conservatism Harvey Dearden, SIS Suite and Andy Brazier, AB Risk, UK</p>	<p>Good Practices on Effectively Managing Process Safety Issues When Replicating a Modular Midscale LNG Design Veronica Luna, Fluor Corporation, Philippines</p>	<p>Valuation of Environmental Receptors for Cost-Benefit-Analysis in a Control of Major Accident Hazards Context – Phase 2 Progress Amaia O'Reilly, Energy Institute and Rob Ritchie, RAS, UK</p>	<p>The Challenge of Implementing Process Safety in the Water Industry Julie Jeavons, Andre Le Roux and Talia Alberto Picos, Stantec, UK</p>	
13:45–14:15	<p>Situation Awareness as a Factor in Accidents and Incidents Graeme Dick and Mike Pollard, Reflekt AS, Norway</p>	<p>Explosion Safety in Anaerobic Digestion Sites: Where It Can Go Wrong and Guidance to Avoid That Happening Sarah Bergin, Graham Atkinson, Alan Beswick, Brian Crook, Tim Small and Lee Schilling, Health & Safety Executive, UK</p>	<p>NaTech Hazards – What Are They? Why Should We Care? And What Can We Do? Aimee Russell, Carolyn Nicholls and Robert Ritchie, RAS, UK</p>	<p>The Potential Hits COMAH Misses: Process Safety for Significantly Hazardous Installations Outside the Scope of Major Hazards Legislation Ken Patterson, Ken Patterson Process Safety and Ian Welburn, Yorkshire Water, UK</p>	
14:15–14:45	<p>Using Data Science to Identify Human Factors Affecting Process Safety Andrea Rossi and Nyala Nöe, Empirisys, UK</p>	<p>Historical Analysis on Wind Turbine FIRE Incidents Vahid Foroughi, ERM, UK and Adriana Palacios, Universidad de las Américas, Puebla, México</p>	<p>Adapting Hazard Studies to Reflect Climate Change Mike McKay, TUV Rheinland Industrial Services and George Watson, Manchester University, UK</p>	<p>Visualizing Flammable Risks in Drainage Systems Jonathon Lowe, RPS Consulting UK & Ireland and Ian Spriggs, Anglian Water, UK</p>	
14:30–15:00	Facilitated discussion	Facilitated discussion	Facilitated discussion	Facilitated discussion	

15:15–15:30	Refreshment break with poster and exhibition viewing
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15:30–16:15	 <p>Plenary presentation Dr Faisal Khan</p>	<p><i>Process Safety Challenges from a North American Perspective</i> Dr Faisal Khan, Director, Mary Kay O'Connor Process Safety Center, USA</p>
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16:15	Closing remarks
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