

Seventh International Human Factors Rail Conference

23, 24 & 25 June 2021 | Live Virtual Conference



Day 1 - Wednesday, 23 June 2021			
	Stream 1	Stream 2	Stream 3
9:30 - 09:50	Networking opportunity via the Meeting Hub		
09:50 - 10:05	Conference opening - Ann Mills , RSSB		
10:05 - 10:50	Keynote address - Allison McDonald , SystemIQ		
10:50 - 11:10	Poster Session: Presenters: Birgit Milius , TU Berlin; Richard Bye , Network Rail; & Kazumasa Oyama , East Japan Railway Company <i>Posters can be reviewed throughout the conference in the Poster Exhibition</i>		
11:10 - 11:20	Break		
	Safety Management	Safety culture	Competence
11:20 - 11:45	<i>Prototype of an educational tool for train drivers to learn to use repeating commentary</i> Speaker: Ayanori Sato, Railway Technical Research Institute	<u>SPEAKER & PANEL SESSION:</u> <i>Safety culture I - The influence of the regulatory framework and institutions</i> Facilitated by: Bart Accou & Fabrizio Carpinelli, European Union Agency for Railways <u>Speakers</u> <i>Can you change a safety culture by introducing new requirements?</i> Speaker: Lena Kecklund, MTO Safety	<i>Engineering non-technical skills: a case study for implementation of NTS in a maintenance environment</i> Speaker: Andrew Russell, Rail Training International Ltd
11:45 - 12:10	<u>DISCUSSION:</u> <i>Safety Management and Safety Leadership – The Doing and Being of Safety within the Rail Industry</i> Speaker: Paul Davison, PPWD	& <i>Developing a framework for the oversight of safety culture</i> Speaker: Monika Haug & Bart Accou, European Union Agency for Railways	<i>Leveraging non-technical skills (NTS): linking NTS to system level influences</i> Speakers: Nora Balfe, Irish Rail
12:10 - 12:35		& <i>Safety culture assessment at Nordjyske Jernbaner</i> Speakers: Kim Drews, European Union Agency for railways	<i>Understanding and addressing the role of non-technical skills in stop short incidents</i> Speaker: Anisha Tailor, RSSB
12:35 - 13:00	<i>Developing human factors risk models for design and operations: the SAFEMODE project</i> Speaker: Marta Llobet Lopez, EUROCONTROL		<i>A pre and post analysis to test the effectiveness of a series of interventions on safety climate and other safety variables</i> Speaker: Rajkiran Kandola, Amey
13:00 - 13:50	Break		
	Passengers and members of the public	Safety culture	Competence
13:50 - 14:15	<i>Rail travel experiences of people on the autism spectrum: A thematic analysis</i> Speaker: Hannah White, Thales	<u>SPEAKER & PANEL SESSION</u> <i>What does integration of Human and Organisational Factors (HOF) in railways look like?</i>	<i>It was acceptable in the 80s' Part 2 - validation of the GB rail train driver psychometric assessment process and a look to the future</i> Speaker: Priya Shah, RSSB
14:15 - 14:40	<i>Behaviour of Vulnerable Road Users at a Passive Level Crossing and Measures to Foster their Safety</i> Speaker: Jan Grippenkov, German Aerospace Center (DLR)	Facilitated by: Bart Accou & Fabrizio Carpinelli, European Union Agency for Railways Speakers: Jayne Yeo, European Union Agency	<i>Improving industry route knowledge competence processes for guards</i> Speaker: Charlotte Kaul, RSSB

Seventh International Human Factors Rail Conference

23, 24 & 25 June 2021 | Live Virtual Conference



14:40 - 15:05	<p><i>Information processing, decision making and pedestrian behaviour at Australian Level Crossings</i> Speaker: Kate Moncrieff, SYSTRA Scott Lister</p>	for Railways	<p><i>Developing experience to improve train driver performance - what can we learn from international rail and other transport industries?</i></p> <p>Speaker: Paul Leach, RSSB</p>
Break			
Passengers and members of the public		Safety leadership	Competence
15:25 - 15:50	<p><i>Designing out disability: Providing insights into the transport needs of disabled rail passengers</i> Speaker: Laura Lewis, Mott MacDonald</p>	<p><u>SPEAKER & PANEL SESSION:</u></p> <p><i>Safety leaderships skills: Key ingredients for an effective development programme</i></p> <p><i>Facilitated by:</i> Kim Drews, European Union Agency for railways and Bjorn Feys, Thalys THI Factory</p>	
15:50 - 16:15	<p><i>Designing out train surfing with Human Factors</i> Speaker: Suganth Rajendra Kumar, Alstom</p>	<p><u>Speakers:</u></p> <p><i>How to develop safety leadership skills: A new training targeting rail managers at all levels</i> Speaker: Kim Drews, European Union Agency for Railways</p>	<p><u>WORKSHOP:</u></p> <p><i>Facilitating Non-Technical Skills within Safety Critical Sectors: An Adult Learning & Narrative Psychological Approach</i></p>
16:15 - 16:40	<p><i>Identification of most potential ways to reduce suicides on Finnish railways</i> Speaker: Anne Silla, VTT Technical Research Centre of Finland Ltd</p>	<p style="text-align: center;">&</p> <p><i>Improving safety and performance through people - developing the leadership of operational front-line leaders</i> Speaker: Paul Leach, RSSB</p>	<p>Speaker: Paul Davison, PPWD Consulting Ltd and Colin Litherland PPWD Consulting</p>
16:40 - 17:05	<p><i>Good practice guide to trespass risk</i> Speaker: Michael Wright, Greenstreet Berman</p>	<p style="text-align: center;">&</p> <p><i>Sharing experiences in safety leadership development</i> Speakers: Valerie Nicaise and Björn Feys, ERMEWA</p>	

Seventh International Human Factors Rail Conference

23, 24 & 25 June 2021 | Live Virtual Conference



Day 2 - Thursday, 24 June 2021			
	Stream 1	Stream 2	Stream 3
08:30 - 09:05	Networking opportunity via the Meeting Hub		
09:05 - 09:50	Keynote address - Simon French and Mark Young , Rail Accident Investigation Branch		
09:50 - 10:00	Break		
	Human Factors methods	Virtual and augmented reality	Accident investigation
10:00 - 10:25	<p><i>The benefits of human factors validation</i></p> <p>Speaker: Vincent Pargade, ALSTOM</p>	<p><i>Virtual reality - the utilisation and application in human factors-related disciplines: past, present, future</i></p> <p>Speaker: David Goble, Ergonomie Australia Pty Ltd</p>	<p><u>SPEAKER AND PANEL DISCUSSION SESSION:</u></p> <p>Human factors methods for accident investigation</p> <p>Facilitated by Mark Young, Rail Accident Investigation Branch</p> <p><u>Speakers</u></p> <p><i>Delving deeper: Applying human factors analysis to identify factors contributing to rail incidents</i> Speaker: Nora Balfe, Irish Rail</p> <p>&</p> <p><i>Changing the learning experience to develop non-technical skills and behaviours in incident managers</i> Speaker: Emma Lowe, Network Rail</p> <p>&</p> <p><i>Methods for Accident Investigation and Human Factors: What Determines their Uptake, Use (and sometimes Abandonment) by Practitioners</i> Speaker: Patrick Waterson, Loughborough University</p>
10:25 - 10:50	<p><i>Using a mathematical modelling approach to understand and optimise the complex perceptions in response to the environment in rail vehicles</i></p> <p>Speaker: Lukas Malek, Siemens Mobility s.r.o.</p>	<p><i>Remote learning and immersive technology in training – When is it appropriate and what are the benefits?</i></p> <p>Speaker: Jordan Smith, RSSB</p>	
10:50 - 11:15	<p><i>Human error analysis at Valencia Railway Operation Control: training proposal towards reducing human error</i></p> <p>Speaker: Raquel Alba Millán, Adif</p>	<p><i>From Virtual Reality to the Naturalistic Environment: Usability Trials to Design and Develop New User Worked Crossing Signage</i></p> <p>Speaker: Gareth Tucker & Tom Hyatt Network Rail</p>	
11:15 - 11:30	Break		
	Human performance: workload	Virtual/augmented reality and new technology	Accident investigation
11:30 - 11:55	<p>Protecting track workers from trains: Understanding signallers' challenges in blocking the line between trains</p> <p>Speaker: Chris Hack, Network Rail</p>	<p><i>Using haptic signals in an operator workplace: First results</i></p> <p>Speaker: Birgit Milius, TU Berlin</p>	<p><u>SPEAKER AND PANEL DISCUSSION SESSION continued</u></p> <p>Human factors methods for accident investigation</p> <p>Facilitated by: Mark Young, Rail Accident Investigation Branch</p> <p><u>Speakers</u></p> <p><i>Investigating human and organisational factors in complex socio-technical</i></p>
11:55 - 12:20	<p><i>A study of human performance and mental workload of a railway control room operator</i></p> <p>Speaker: Anthony Byrne, Commission for Railway Regulation</p>	<p><i>Using human factors principles, 3D CAD modelling and virtual reality to resolve specification conflicts</i></p> <p>Speaker: Karen Priestley, Ricardo Rail</p>	

Seventh International Human Factors Rail Conference

23, 24 & 25 June 2021 | Live Virtual Conference



12:20 - 12:45	<p><i>The Network Rail signaller task demand tool: theoretical background and preliminary version of the tool</i></p> <p>Speaker: Melcher Zeilstra, INTERGO BV</p>	<p><i>From GoA2 to Remote Operation: Workplaces in highly automated Rail</i></p> <p>Speaker: Anja Naumann, DLR</p>	<p><i>systems by using the 'safety fractal analysis method'</i></p> <p>Speaker: Bart Accou, European Union Agency for Railways</p> <p>&</p> <p>Training for investigating Human and Organisational Factors (HOF) in railways</p> <p>Speaker: Fabrizio Carpinelli, European Union Agency for Railways</p> <p>&</p> <p><i>Human factors methods for accident investigation</i></p> <p>Speaker: Huw Gibson, RSSB</p>
12:45 - 13:10	<p><i>Workload assessment of task conflict: development of a methodology to identify potential for task conflict of CCTV level crossing operations</i></p> <p>Speaker: Emily Thorne & Lizzie Rawlinson, Atkins (Member of the SNC-Lavalin Group)</p>	<p><i>The Application of Human Factors to an Integrated Traffic Management System</i></p> <p>Speaker: Balraj Sreenivasan, Network Rail</p>	<p><i>Human factors methods for accident investigation</i></p> <p>Speaker: Huw Gibson, RSSB</p>
13:10 - 14:10	Break		
	Human Factors methods	New technology	Human performance: fatigue and underload
14:10 - 14:35	<p style="text-align: center;"><u>DISCUSSION:</u></p> <p><i>The future of rail human factors professionals? Time for a new approach?</i></p>	<p><i>Implementation of agile processes in human factors and safety management - a case study from the Swedish national train management project (NTL)</i></p> <p>Speaker: Lars Pettersson, MTO Safety AB & Tove Ragnevi, Swedish Transport Administration</p>	<p><i>Do railway staff get enough sleep?</i></p> <p>Speaker: Dan Basacik, RSSB</p>
14:35 - 15:00	<p>Speakers: Amanda Elliott, Innovace Designs; Clara Schmitz, Siemens Mobility; Laura Sutton, ORR, Lisa Kelly, Risktec & Dominic Russell, Ricardo Rail</p>	<p><i>Assessing the impact of driver advisory systems (DAS) on train driver workload, attention, allocation and safety performance</i></p> <p>Speaker: Vera Verstappen, Netherlands Railways</p>	<p><i>Managing and measuring fatigue: a survey of industry practice</i></p> <p>Speaker: Ishbel Macgregor-Curtin, Irish Rail</p>
15:00 - 15:25	<p><i>Simulator-assisted assessment system for controller competency and training program</i></p> <p>Speaker: Masato Kuratani, East Japan Railway Company</p>	<p><i>Revolution, evolution, and devolution: Human factors challenges and the digital railway</i></p> <p>Speaker: Richard Bye, Network Rail</p>	<p><i>Creating and evaluating the underload toolbox</i></p> <p>Speaker: Sam Waters, RSSB</p>
15:25 - 15:45	Break		
	Workshop - Human Factors Methods	Accident prevention	Workshop – User Interfaces

Seventh International Human Factors Rail Conference



23, 24 & 25 June 2021 | Live Virtual Conference

15:45 - 16:10	<p style="text-align: center;"><u>WORKSHOP:</u></p> <p><i>Human Factors Network at SBB -How to establish and increase the human factors maturity in railway companies</i></p> <p>Speaker: Daniel Boos, Swiss Federal Railways SBB</p>	<p><i>Underlying causes of signals passed at danger - looking at a recent spike</i></p> <p>Speaker: Huw Gibson, RSSB</p>	<p style="text-align: center;"><u>WORKSHOP:</u></p> <p><i>User interfaces within the Railway Industry are outdated and need to be significantly improved to meet the expectations of current and future users</i></p> <p>Speaker: Mark Lowten, Thales</p>
16:10 - 16:35		<p><i>Using the Red Aspect Approaches to Signals (RAATS) tool to better understand the human factors associated with SPADs</i></p> <p>Speaker: Chris Harrison, RSSB</p>	
16:35 – 17:00		<p><i>Understanding accident causes to enable better safety decisions</i></p> <p>Speaker: Anita Weltz, RSSB</p>	

Seventh International Human Factors Rail Conference

23, 24 & 25 June 2021 | Live Virtual Conference



Day 3 - Friday 25 June 2021			
Time	Stream 1	Stream 2	Stream 3
08:30 - 09:05	Networking opportunity via the Meeting Hub		
09:05 - 09:50	Keynote address - Richard Bye , Network Rail		
09:50 - 10:00	Break		
	Design and New technology	Human and organisational performance	
10:00 - 10:25	<p><i>Modelling the human factor in a digital railway</i></p> <p>Speaker: Daniel Simmons, Acmena</p>	<p><i>Local knowledge and balancing efficiency and thoroughness in signaller performance</i></p> <p>Speaker: David Golightly, Newcastle University</p>	
10:25 - 10:50	<p><i>Preparing railways against CBRNe threats through common approaches between security practitioners and the vulnerable civil society</i></p> <p>Speaker: Grigore Havarneanu, International Union of Railways (UIC)</p>	<p><i>Shouldering the blame: Applying systems thinking to musculoskeletal disorders in tram drivers</i></p> <p>Speaker: Anjum Naweed, Central Queensland University</p>	
10:50 - 11:15	<p><i>The comfort conundrum - designing comfortable seats with complex constraints</i></p> <p>Speaker: Dan Jenkins, DCA Design</p>	<p><i>Protecting track workers from trains: results and lessons learnt from assessing signallers' capacity to block the line between trains</i></p> <p>Speaker: Chris Hack, Network Rail</p>	
11:15 - 11:30	Break		
	Degraded working and work site protection	Human and organisational performance	
11:30 - 11:55	<p><i>Effort to prevent serious accidents essentially</i></p> <p>Speaker: Koichiro Taki, West Japan Railway Company</p>	<p><i>Promoting teamwork in Network Controller and Driver interactions</i></p> <p>Speaker: Philippa Murphy, RSSB</p>	
11:55 - 12:20	<p><i>Revision of a man-vehicle collision accident prevention rule in the human factor viewpoint</i></p> <p>Speaker: Takashi Futatsugi, West Japan Railway Company</p>	<p><i>Managing driver behaviours through adhesion related information</i></p> <p>Speaker: Richard Roels, RJ Roels Limited</p>	

Seventh International Human Factors Rail Conference



23, 24 & 25 June 2021 | Live Virtual Conference

12:20 - 12:45	<p><i>Worksite protection in an urban rail environment: are the humans in the system beyond capacity to manage the safety risk?</i></p> <p>Speaker: Craig Fletcher, Ergonomie Australia Pty Ltd</p>	<p><i>G-force: a tool for improving operational decision making</i></p> <p>Speaker: James Lonergan, RSSB</p>	
12:45 - 13:10	<p><i>A framework for incorporating JESIP into railway operations</i></p> <p>Speaker: Joanne Smyth, SYSTRA Scott Lister</p>	<p><i>Incident reduction programme: Nottingham Rail Station</i></p> <p>Speaker: Paul Davison, PPWD Consulting Ltd</p>	
13:10 - 14:00	Break		
	Human Factors methods	Organisational performance	New technology
14:00 - 14:25	<p><u>WORKSHOP:</u></p> <p><i>A tool for communicating HF interventions in rail - create your own visual story</i></p> <p>Speaker: Amanda Elliott, Innovace Designs</p>	<p><i>Human factors contribution to rail decarbonisation</i></p> <p>Speaker: David Golightly, Newcastle University</p>	<p><u>WORKSHOP:</u></p> <p><i>Implementing new technology: lessons to learn for innovators and integrators</i></p> <p>Speaker: Richard Bye, Network Rail</p>
14:25 - 14:50		<p><i>Safety Management Systems and frontline performance in the railway industry: A study using Bayesian networks</i></p> <p>Speaker: Alistair Cooper, TRL & Mark Young, Rail Accident Investigation Branch</p>	
14:50 - 15:15		<p><i>Haven't we already done this? Is safety always a work in progress</i></p> <p>Speaker: Liam Toase, SYSTRA Scott Lister</p>	
15:15 - 15:45	Closing Keynote Address – Sarah Sharples , University of Nottingham		
15:45 - 16:00	Conference Close – Huw Gibson , RSSB		