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		
10:05 - 10:50	Keynote address - Allison McDonald (SystemiQ)		
10:50 – 11:10	Ann Mill to introduce poster session 1-2-minute pitches by each presenter Posters can be reviewed throughout the conference in the Exhibition Hub		
11:10 - 11:20	Break		
	Safety Management	**Safety culture**	**Competence**
11:20 - 11:45	*Prototype of an educational tool for train drivers to learn to use repeating commentary* Speaker: Ayanori Sato, Railway Technical Research Institute	**SPEAKER & PANEL SESSION:** ***Safety culture I - The influence of the regulatory framework and institutions*** ***Facilitated by:*** Bart Accou & Fabrizio Carpinelli, European Union Agency for Railways **Speakers** *Can you change a safety culture by introducing new requirements?* Speaker: Lena Kecklund, MTO Safety & *Developing a framework for the oversight of safety culture* Speaker: Monika Haug & Bart Accou, European Union Agency for Railways	*Engineering non-technical skills: a case study for implementation of NTS in a maintenance environment* Speaker: Andrew Russell, Rail Training International Ltd
11:45 - 12:10	**DISCUSSION:** *Safety Management and Safety Leadership – The Doing and Being of Safety within the Rail Industry* Speaker: Paul Davison, PPWD Consulting Ltd, Colin Litherland, PPWD Consulting Ltd		*Leveraging non-technical skills (NTS): linking NTS to system level influences* Speakers: Nora Balfe, Irish Rail & Mark Young, RAIB
12:10 - 12:35			*Understanding and addressing the role of non-technical skills in stop short incidents* Speaker: Anisha Tailor, RSSB
12:35 - 13:00	*Developing human factors risk models for design and operations: the SAFEMODE project* Speaker: Luca Save, Deep Blue		*A pre and post analysis to test the effectiveness of a series of interventions on safety climate and other safety variables* Speaker: Rajkiran Kandola, Amey
13:00 - 13:50	Break		
	Passengers and members of the public	**Safety culture**	**Competence**
13:50 - 14:15	*Rail travel experiences of people on the autism spectrum: A thematic analysis* Speaker: Hannah White, Thales	**SPEAKER & PANEL SESSION continued:** ***Safety culture II: Assessment methods and practice*** ***Facilitated by:*** Bart Accou & Fabrizio Carpinelli, European Union Agency for Railways **Speakers:** *Safety culture assessment at Nordjyske Jernbaner*	*It was acceptable in the 80s' Part 2 - validation of the GB rail train driver psychometric assessment process and a look to the future* Speaker: Priya Shah, RSSB
14:15 - 14:40	*Behaviour of Vulnerable Road Users at a Passive Level Crossing and Measures to Foster their Safety* Speaker: Jan Grippenkoven, German Aerospace Center (DLR)		*Improving industry route knowledge competence processes for guards* Speaker: Charlotte Kaul, RSSB

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

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 - Mark Young, RAIB and Simon French, RAIB	
09:50 - 10:00	Break	
	Human Factors methods	**Virtual and augmented reality**	**Accident investigation**
10:00 - 10:25	*The benefits of human factors validation* Speaker: Vincent Pargade, ALSTOM	*Virtual reality - the utilisation and application in human factors-related disciplines: past, present, future* Speaker: Craig Fletcher, Ergonomie Australia Pty Ltd	**SPEAKER AND PANEL DISCUSSION SESSION:** **Human factors methods for accident investigation** ***Facilitated by*** Mark Young, RAIB **Speakers** *Delving deeper: Applying human factors analysis to identify factors contributing to rail incidents* Speaker: Nora Balfe, Irish Rail & *Training for operational incident responders: first responder and investigator?* Speaker: Emma Lowe, Network Rail
10:25 - 10:50	*Using a mathematical modelling approach to understand and optimise the complex perceptions in response to the environment in rail vehicles* Speaker: Lukas Malek, Siemens s.r.o.	*Remote learning and immersive technology in training – When is it appropriate and what are the benefits?* Speaker: Jordan Smith, RSSB	
10:50 - 11:15	*Human error analysis at Valencia Railway Operation Control: training proposal towards reducing human error* Speaker: Raquel Alba Millán, Adif	*From Virtual Reality to the Naturalistic Environment: Usability Trials to Design and Develop New User Worked Crossing Signage* Speaker: Gareth Tucker, Network Rail	
11:15 - 11:30	Break	
	Human performance: workload	**Virtual/augmented reality and new technology**	**Accident investigation**
11:30 - 11:55	*Developing an approach to characterising cognitive demand for the Network Rail signaller task demand modelling tool* Speaker: Chris Hack, Network Rail	*Using haptic signals in an operator workplace: First results* Speaker: Birgit Milius, TU Berlin	**SPEAKER AND PANEL DISCUSSION SESSION continued** ***Human factors methods for accident investigation*** ***Facilitated by:*** Mark Young, RAIB **Speakers** *Investigating human and organisational factors in complex socio-technical systems by using the 'safety fractal analysis method'*
11:55 - 12:20	*A study of human performance and mental workload of a railway control room operator* Speaker: Anthony Byrne, Commission for Railway Regulation	*Using human factors principles, 3D CAD modelling and virtual reality to resolve specification conflicts* Speaker: Karen Priestley, Ricardo Rail	

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

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

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Time	Stream 1	Stream 2	Stream 3
Day 3 - Friday 25 June 2021			
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**	**Culture workshop 1**
10:00 - 10:25	*Modelling the human factor in a digital railway* Speaker: Daniel Simmons, Acmena	*Local knowledge and balancing efficiency and thoroughness in signaller performance* Speaker: David Golightly, Newcastle University	
10:25 - 10:50	*Preparing railways against CBRNe threats through common approaches between security practitioners and the vulnerable civil society* Speaker: Grigore Havarneanu, International Union of Railways (UIC)	*Shouldering the blame: Applying systems thinking to musculoskeletal disorders in tram drivers* Speaker: Anjum Naweed, CQ University Adelaide	**WORKSHOP:** *Safety Culture improvement measures for railway networks* Speaker: Federico Ucci, Oliver Wyman
10:50 - 11:15	*The comfort conundrum - designing comfortable seats with complex constraints* Speaker: Dan Jenkins, DCA Design	*Identifying locations with high volumes of user-worked crossing calls to reduce risk of signaller error* Speaker: Chris Hack, Network Rail	
11:15 - 11:30	Break		
	Degraded working and work site protection	**Human and organisational performance**	**Culture workshop 2**
11:30 - 11:55	*Effort to prevent serious accidents essentially* Speaker: Koichiro Taki, West Japan Railway Company	*Learning and retaining a new alphabet* Speaker: Richard van der Weide, INTERGO	**WORKSHOP Continued:** *Safety Culture improvement measures for railway networks* Speaker: Federico Ucci, Oliver Wyman
11:55 - 12:20	*Revision of a man-vehicle collision accident prevention rule in the human factor viewpoint* Speaker: Takashi Futatsugi, West Japan Railway Company	*Managing driver behaviours through adhesion related information* Speaker: Richard Roles, RJ Roels Limited	

	Human Factors methods	Organisational performance	New technology
12:20 - 12:45	*Worksite protection in an urban rail environment: are the humans in the system beyond capacity to manage the safety risk?* Speaker: Craig Fletcher, Ergonomie Australia Pty Ltd	*G-force: a tool for improving operational decision making* Speaker: James Lonergan, RSSB	
12:45 - 13:10	*A framework for incorporating JESIP into railway operations* Speaker: Joanne Smyth, SYSTRA Scott Lister	*Incident reduction programme: Nottingham Rail Station* Speaker: Paul Davison, PPWD Consulting Ltd	
13:10 - 14:00	**Break**		
	Human Factors methods	**Organisational performance**	**New technology**
14:00 - 14:25	**WORKSHOP:** *A tool for communicating HF interventions in rail - create your own visual story* Speaker: Amanda Elliott, Innovace Designs	*Human factors contribution to rail decarbonisation* Speaker: David Golightly, Newcastle University	**WORKSHOP:** *Implementing new technology: lessons to learn for innovators and integrators* Speaker: Richard Bye, Network Rail
14:25 - 14:50		*Safety Management Systems and frontline performance in the railway industry: A study using Bayesian networks* Speaker: Alistair Cooper, TRL	
14:50 - 15:15		*Haven't we already done this? Is safety always a work in progress* Speaker: Liam Toase, Loughborough University/Arup	
15:15 – 15:30	**Conference Close – Ann Mills**		