

## Annual Meeting 2017

### Varieties of interaction: from User Experience to Neuroergonomics

September 28-30, 2017

ROME - ITALY



**PROGRAMME**



**Europe Chapter**  
**Human Factors and Ergonomics Society**

## **Organisation Committee 2017**

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*Sapienza University of Rome*

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*University of Groningen*

**ANTONELLA TOFFETTI**

*CRF*

**DICK DE WAARD**

*University of Groningen*

## Thursday September 28th

08.30 - 09.15	<b>REGISTRATION</b> Welcome coffee	
09.15 - 09.30	<b>OPENING</b>	<b>Francesco di Nocera</b> Sapienza University of Rome <b>Antonella Toffetti</b> CRF
09.30 - 10.50	<b>Session 1: HMI - 1</b>	<i>Chair: Simon Mastrangelo</i> Ergoproject
09.30 - 09.50	Persuasive Assistance for Safe Behaviour in Human-Robot Collaboration	<b>Matthias Hartwig</b> BAuA
09.50 - 10.10	An Approach to Objectively Measure the Learnability of Interactive Systems	<b>Andrea Marrella</b> Sapienza University of Rome
10.10 - 10.30	Designing an interface to support eco-driving by the combination of Ecological Interface Design with User-Centred Design	<b>Antonella Toffetti</b> CRF
10.30 - 10.50	Traffic signs just locating events: the interplay of semantic, embodied and situated parameters	<b>Antonio Lucas-Alba</b> University of Zaragoza
10.50 - 11.20	<b>POSTER SETUP</b> Coffee break	
11.20 - 12.40	<b>Session 2: VULNERABLE ROAD USERS</b>	<i>Chair: Luca Pietranton</i> University of Bologna
11.20 - 11.40	Cyclists' Anger Experience in Road Traffic: From Anger Provoking Incidents to Developing a Cycling Anger Experience Measure	<b>Anja Katharina Huemer</b> TU Braunschweig
11.40 - 12.00	Cyclist's riding behaviour at low and high speed	<b>Nicola Bongiorno</b> University of Messina
12.00 - 12.20	Predicting Cycling Near Misses: How is Behavioural Adaptation Involved?	<b>Víctor Marin Puchades</b> University of Bologna
12.20 - 12.40	Affecting the position of a cyclist on a cycle path	<b>Frank Westerhuis</b> University of Groningen
12.40 - 13.40	<b>Lunch</b>	
13.40 - 15.00	<b>Session 3: AUTOMATION</b>	<i>Chair: Francesco di Nocera</i> Sapienza University of Rome
13.40 - 14.00	Increasing operator flexibility in luggage screening: the impact of spontaneous breaks and adaptable automation on performance	<b>Alain Chavaillaz</b> University of Fribourg
14.00 - 14.20	Automated driving: subjective assessment of different strategies to manage drowsiness	<b>Veronika Weinbeer</b> AUDI AG
14.20 - 14.40	Eye movements and verbal communication as indicators for the detection of system failures in a control room task	<b>Carmen Bruder</b> DLR
14.40 - 15.00	A method to improve driver's situation awareness in automated driving	<b>Yucheng Yang</b> TU München
15.00 - 15.30	<b>Coffee break</b>	
15.30 - 16.30	<b>Session 4: AVIATION</b>	<i>Chair: Dick de Waard</i> University of Groningen
15.30 - 15.50	User performance for vehicle recognition in 3D point clouds	<b>Patrik Lif</b> Swedish Defence Research Agency
15.50 - 16.10	Impulsivity modulates pilot decision-making under uncertainty	<b>Julia Behrend</b> PSL Research University
16.10 - 16.30	Innovative cockpit touch screen HMI design using Direct Manipulation	<b>Marieke Suijkerbuijk</b> NLR
16.30 - 17.00	<b>TALKING POSTER Session</b> All Poster Presenters have 20 seconds to promote their poster	<b>Dick de Waard</b> University of Groningen
17.00 - 18.00	<b>POSTER Session</b> Authors present at their poster	
18.00 - 19.00	<b>Europe Chapter HFES Business Meeting</b> Executive council, chapter members are welcome	

## Friday September 29th

<b>09.00 - 10.40</b>	<b>Session 5: HEALTH &amp; VISION</b>	<i>Chair: Denis Coelho</i> Universidade de Beira Interior
09.00 - 09.20	Assessment of stress sources and moderators among analysts in a cyber-attacks simulation context	<b>Stéphane Deline</b> Lab-STICC
09.20 - 09.40	The effect of musical training on the identification of absolute SpO2 values using varying pitch-only and enhanced sonifications: A laboratory experiment	<b>Penelope Sanderson</b> University of Queensland
09.40 - 10.00	Potential of wearable devices for mental workload detection in different physiological activity conditions	<b>Franziska Schmalfuß</b> TU Chemnitz
10.00 - 10.20	Ocular-based automatic summarization of documents: is re-reading informative about the importance of a sentence?	<b>Orlando Ricciardi</b> Sapienza University of Rome
10.20 - 10.40	Aesthetic appeal influences visual search slopes	<b>Irene Reppa</b> Swansea University
<b>10.40 - 11.10</b>	<b>Coffee break</b>	
<b>11.10 - 12.30</b>	<b>Session 6: AUDIBLE ALARMS - SPECIAL SESSION</b>	<i>Chair: Judy Edworthy</i> Plymouth University
11.10 - 11.20	Audible Alarms-session introduction	<b>Michael Sonne Kristensen</b> Plymouth University
11.20 - 11.35	In-vehicle Auditory Forward Collision Warning Design	<b>Carryl Baldwin</b> GMU
11.35 - 11.50	Searching for meaning in sound: How alarm sounds are learned and interpreted in visual environments	<b>Sine McDougall</b> Bournemouth University
11.50 - 12.05	Integrated Operating Room Music – Alerting Through Volume Reduction	<b>Joseph Schlesinger</b> Vanderbilt University
12.05 - 12.20	Experience-driven design for audible alarms: An introduction	<b>Elif Özcan</b> Delft University of Technology
12.20 - 12.30	Questions & Answers	<b>Panel</b>
<b>12.30 - 13.30</b>	<b>Lunch</b>	
<b>13.30 - 14.50</b>	<b>Session 7: SURFACE TRANSPORTATION - 1</b>	<i>Chair: Karel Brookhuis</i> University of Groningen
13.30 - 13.50	To warn or not to warn? Towards an assistance strategy that reduces unnecessary collision alerts	<b>Christina Kaß</b> Opel Automobile GmbH
13.50 - 14.10	Implementing manoeuvre control in automated driving - effects on trust and comfort	<b>Felix Wilhelm Siebert</b> Leuphana University Lüneburg
14.10 - 14.30	Relevant eye-tracking parameters within cooperative traffic situations	<b>Jonas Imbsweiler</b> KIT-IFAB
14.30 - 14.50	The Concept of Trust of Automation in Unmanned Autonomous Vessels	<b>Scott MacKinnon</b> Chalmers University
<b>14.50 - 15.20</b>	<b>Coffee break</b>	
<b>15.20 - 16.40</b>	<b>Session 8: HMI - 2</b>	<i>Chair: Fabio Ferlazzo</i> Sapienza University of Rome
15.20 - 15.40	Comparing the effects of space flight and water immersion on sensorimotor performance	<b>Bernhard Weber</b> DLR
15.40 - 16.00	Affinity for technology interaction – a personal-resource perspective	<b>Thomas Franke</b> Universität zu Lübeck
16.00 - 16.20	The usefulness of Virtual Reality for learning - why students learn better on a computer screen	<b>Carli Ochs</b> EPFL+ECAL Lab
16.20 - 16.40	How different input modalities affect users performance and experience of information seeking tasks	<b>Patrik Pluchino</b> University of Padova
<b>16.40 - 16.45</b>	<b>KEYNOTE Introduction</b>	<b>Karel Brookhuis</b> University of Groningen
<b>16.45 - 17.30</b>	<b>KEYNOTE</b> Physiological Computing as User-Centred Design for the 21st Century	<b>Prof. Stephen Fairclough</b> Liverpool John Moores University
<b>20.00</b>	<b>Conference Dinner</b>	

## Saturday September 30th

09.30 - 10.50	<b>Session 9: HMI - 3</b>	<i>Chair: Thomas Franke</i> Univerität zu Lübeck
09.30 - 09.50	Examining how driver steering behaviour is affected by optic flow after resuming control from a highly automated vehicle	<b>Yuki Okafuji</b> Kobe University
09.50 - 10.10	Rethinking the Interface for Driverless Last Mile Mobility Solutions	<b>Joscha Wasser</b> Coventry University
10.10 - 10.30	Analysis of potentials of an HMI-concept concerning highly automated driving for system-inexperienced vs. system-experienced users	<b>Kassandra Bauerfeind</b> Volkswagen
10.30 - 10.50	Beyond simplicity: Predicting mental load with cumulated information from cardiac activity	<b>Elena Wolf</b> KIT-IFAB
<b>10.50 - 11.15</b>	<b>Coffee break</b>	
<b>11.15 - 12.45</b>	<b>Session 10: SURFACE TRANSPORTATION - 2</b>	<i>Chair: Antonella Toffetti</i> Centro Ricerche Fiat (CRF)
11.15 - 11.35	Key Performance Indicators to measure the quality of multimodal travel	<b>Andree Woodcock</b> Coventry University
11.35 - 11.55	If Nostradamus was an Ergonomist: a review of ergonomics methods for their ability to predict accidents	<b>Eryn Grant</b> University of the Sunshine Coast
11.55 - 12.15	Modelling Driver States Based on Specific Driving Style Data	<b>Peter Moertl</b> Virtual Vehicle
12.15 - 12.35	Real-time auditory feedback systems based on headway	<b>Pavlo Bazilinskyy</b> Delft University of Technology
<b>12.30 - 12.45</b>	<b>BEST POSTER AWARD 2017</b>	<b>Chair Best Poster Committee</b>
	<b>EARLY CAREER BEST PAPER AWARD 2017</b>	<b>Dick de Waard</b>
	<b>CONFERENCE CLOSING</b>	<b>Francesco di Nocera &amp; Antonella Toffetti</b>
<b>12.45 - 14.00</b>	<b>Lunch</b>	

<b>POSTERS</b>	<b>AUTHOR</b>	<b>AFFILIATION</b>
Assessment of Registration Errors in Augmented Reality Head-Up Displays	<b>Vitalij Sadovitch</b>	Volkswagen
Augmented indication of lane change intention - Creating an assistive HMI using design thinking	<b>Adrian Haar</b>	Volkswagen
Rear Seat belts Comfort	<b>Gabriella Bisci</b>	FCA
The Driving Anger Expression Inventory – Validation of a German (Short) Version	<b>Stefan Brandenburg</b>	TU Berlin
Designing a Framework for Human Factors Integration in Railway Systems	<b>Andrea Castellano</b>	Suor Orsola Benincasa University
Motion sickness in cars: Influencing human factors as an outlook to highly automated driving	<b>Adrian Brietzke</b>	Volkswagen
Behaviour change in electric vehicles use: Study of a mobile app interface	<b>Roberto Montanari</b>	Loughborough University
Cycling with low vision	<b>Bart Jelijs</b>	University of Groningen
Office Tasks in Highly Automated Vehicles	<b>Tobias Vogelpohl</b>	TU Braunschweig
Case-based decision support for fault diagnosis: Salient outcome ratings do not discourage thorough situation analysis	<b>Romy Müller</b>	TU Dresden
Trust and Beliefs about Autonomous Vehicles: Can They Be Leveraged to Enhance Intention to Use?	<b>Gabriele Prati</b>	University of Bologna
From distraction to controlled engagement: How secondary tasks affect drivers' supervisory and fall-back performance of the driving task while using SAE level 2 driving automation.	<b>Anna Pätzold</b>	TU Chemnitz
New technology enabling wellbeing, independence, successful ageing, and relationship centred care, for seniors domicile in residential homes.	<b>Joan Cahill</b>	Trinity College Dublin
Cold legs do not matter – investigating the effect of leg cooling to overcome passive fatigue	<b>Elisabeth Schmidt</b>	BMW
Using Paper, E-ink device or Desktop-PC for office work and subjective strain - a comparative study	<b>Patricia Tegtmeier</b>	BAuA
Effects of Latency on Perception of Augmented Reality in Head-Up Displays	<b>Matthias Walter</b>	TU München
User Expectations vs. Web Design Patterns: User Expectations for the Location of Web Objects Revisited	<b>Ulrich Nikolaus</b>	HTWK Leipzig
Driver behaviour at sleepy state while performing a car following task	<b>Alina Mashko</b>	Czech Technical University in Prague
Designing for visual appeal, simplicity and concreteness: the development and evaluation of design standards to manipulate icon characteristics.	<b>Romain Collaud</b>	EPFL+ECAL Lab
Stop reading, start looking – Pictorial scales for the evaluation of interactive products	<b>Juergen Baumgartner</b>	University of Fribourg
Improving medication safety through labels background characteristics	<b>Yuval Bitan</b>	Ben-Gurion University of the Negev
Video in control rooms – effects of autocycling frequency and video complexity on operators' mental workload	<b>Fabian Ries</b>	KIT-IFAB
Gamified eco-driving - personal or social game? Investigation of motivation and distraction potential in an experimental field trial	<b>Maria Kreusslein</b>	TU Chemnitz
Efficiency evaluation of an assistance system for text annotations	<b>Robert Greinacher</b>	TU Berlin
Acceptability beyond usability: a manufacturing case study	<b>Silvia Gilotta</b>	Fiat Chrysler

<b>POSTER</b>	<b>AUTHOR</b>	<b>AFFILIATION</b>
The Impact of Keyboard Layouts on Dwell-Free Eye-Driven Typing Performance	<b>Bernine Caruana</b>	University of Malta
AniSAM and AniSmiley – Development of an animated tool to measure affective states	<b>Andreas Sonderegger</b>	EPFL+ECAL Lab
Peripheral Colour Contrast Sensitivity under Perceptual Load	<b>Joshua Shive</b>	Tennessee State University
Investigating the Impact of Gamification on Training in Process Plant Operators through Eye Tracking	<b>Laya Das</b>	Indian Institute of Technology Gandhinagar
My data is mine – rights and personal information on mobile device	<b>Sven Bock</b>	TU Berlin
Head-worn displays for patient monitoring	<b>Penelope Sanderson</b>	University of Queensland
Frequency and Variance of Communication Characteristics in Aviation Safety Events	<b>Mr Kaspers</b>	Amsterdam University of Applied Sciences
Neck muscle fatigue in military high performance aircraft pilots	<b>Francesco Draicchio</b>	Lab of Physiology and Ergonomics
Behavioural and physiological non-technical skills assessment in simulated electricity distribution tasks	<b>Fabrizio Bracco</b>	University of Genova
A new nuclear safety guide: A comparison of designers' and users' priorities	<b>Julie Albentosa</b>	French Armed Forces
Effects of Cognitive fatigue on the human resilience	<b>Mick Salomone</b>	French Air Force Research Center
German Non-professional vs. Professional Drivers' Driving Anger Experience and Expression – Validation of Measures and Cross-cultural Comparison	<b>Michael Oehl</b>	Leuphana University Lüneburg
Change of perspective approach to Hazard Prediction assessment and training: The first study.	<b>Candida Castro</b>	University of Granada
Activating illumination at the flight deck – a new way to reduce pilot fatigue during night time?	<b>Maximilian Peukert</b>	TU Dresden
The Future of Real-Time Control Room Simulation	<b>Hugh David</b>	R+D Hastings
User-Centred Evaluation of Medical Software: Developing a Multidimensional Questionnaire for Medical Professionals	<b>Bettina Seifert</b>	TU Berlin
A study on the factors that contribute to the practice of organizational behaviour as coping with unexpected events - Exploration of the factors through the case survey of the Great East Japan Earthquake	<b>Kenichi Hayase</b>	CRIEPI
Rapid Serial Visual Presentation: Degradation of inferential comprehension as a function of speed	<b>Francesco Di Nocera</b>	Sapienza University of Rome
Ambient Light Display- Light based HMI for automated driving	<b>Marc Wilbrink</b>	DLR
Predicting driving cessation in patients with cognitive impairments	<b>Dafne Piersma</b>	University of Groningen
Effects of taking drivers' hands off the steering wheel on manual control recovery from highly automated vehicles	<b>Genya Abe</b>	JARI
Development of a driving simulator with eye-tracking functionality to assess driving fitness for visual field defect patients	<b>Junpei Kuwana</b>	SoftEther
To cope with unknown problems, performance and metacognition of collective decisions	<b>Damien L'Haridon</b>	Centre de Recherche de l'Armée de l'air
Effects of different level of automation on responsibility feelings and cross-checking behaviour	<b>Helene Cymek</b>	TU Berlin
Maintain of Basic flight skills during real flight interruption: the effects of glider training simulation	<b>Fabre Ludovic</b>	French Air Force Research Center
Speed choice as a trade-off between time pressure and driving task complexity	<b>Anne Goralzik</b>	TU Braunschweig
Autostereoscopic 3D displays for in-vehicle applications	<b>Andre Dettmann</b>	TU Chemnitz
Finding your way: investigating tourists' attitudes toward paper-based and smartphone-based urban maps	<b>Valeria Orso</b>	University of Padua
Naturalistic Study of PC Mouse Usability	<b>Denis Coelho</b>	Universidade da Beira Interior
Practice makes perfect – driving experience with a multi stage warning system	<b>Susann Winkler</b>	TU Braunschweig
Comprehension of Conventional and Ergonomically-Improved Road Signs in Israel and Poland	<b>Lidia Zakowska</b>	Cracow University of Technology