First German Workshop on Rail Human Factors

Program

May, 20th and 21st, 2014
Haus der Wissenschaft, Braunschweig, Germany

www.rhf-germany.de

Conference Fee (including VAT):

- Participant: 275 €
- Presenting author: free of charge

Last Name _______________________________________
First Name _______________________________________
Title _______________________________________
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Place, Date _______________________________________
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Cancellation: Participation may be canceled free of charge up to 21 days before the event commences. 50% of the attendance fee will be charged for cancellations received after this time. We will charge the full attendance fee for any participation canceled on the actual day of the event. Cancellation must be made in writing by e-mail to info@its-nds.de or fax + 49 531 35406-74.

Event cancellation and changes: The organizer shall be entitled to cancel an event without stating reasons. In this case, the full attendance fee will be reimbursed. No further claims may be made. The organizer reserves the right to change the conference program provided such does not affect the event’s overall character.
**Objectives**

Human factors in railways is a topic that becomes more and more important. So far, changes to the railway system were driven by technical developments with the human acting as back up. However, little thought was given if and how humans can best fulfill their new role.

In other European countries, especially Great Britain and the Scandinavian countries, rail human factors research is well established. Unfortunately, due to the diverse nature of the railways systems with e.g. its different operational rules and safety culture a simple transfer of their research results is not possible. Rail human factors research in Germany is so far very limited. With this workshop we hope to help raise awareness to the importance of rail human factors and want to trigger new research in this area in Germany especially within the community of railway research as we are convinced that only with a strong background in railways best results will be obtained.

**Evening Reception**

Visits will show the rail research laboratories of the German Aerospace Center which are designed for functional testing of Train Control Systems as well as for studies on innovative human machine interfaces and assistance systems.

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**Tuesday, May 20th, 2014**

12:00 Registration & snacks

12:45 Opening
Prof. Dr. Karsten Lemmer (German Aerospace Center)
Prof. Dr. Jörn Pachl (TU Braunschweig)

13:00 Keynote: Human Factors in Train Traffic Control: Automation, System Awareness and Design of Operator Interfaces
Bengt Sandblad
(Dept. of Information Technology, Uppsala University)

**Automation**
Chair: Anja Naumann (German Aerospace Center)

14:00 Human-Machine Interaction in the Swiss Federal Railways: Anticipating Consequences of Automation on Signalling and Train Dispatching
Jonas Brüngger (Fachhochschule Nordwestschweiz)

14:30 Issues in Interaction Designs of Train Protection Systems: the Need to (Re-)Direct Attention towards Signals
Sonja Giesemann (German Aerospace Center)

15:00 Coffee break

**Driver Advisory Systems and Usability**
Chair: Kim-Markus Rosenthal (Siemens AG)

15:30 Development of Train Driver Advisory Systems
Simon Tschirner (Uppsala University)

16:00 LEADER – Driver Advisory Systems and the Human Factor
Manfred Walter
(Knorr-Bremse Systeme für Schienenfahrzeuge GmbH)

16:30 Application of Simulators to Investigate Complex Interactions at the Human Machine Interface of Railway Systems
Jürg Suter

17:00 Usability Engineering in the Rail Sector: Creating a Virtual Learning Environment for Rail Traffic Controllers
Sandra Dietsch (German Aerospace Center)

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**Wednesday, March 21st, 2014**

08:00 Registration & coffee

08:30 Keynote: Importance of Identifying and then Including Representative Users Throughout Design
Suzanne Heape (Siemens AG)

**Traffic Control and Signalling**
Chair: Ullrich Martin (Universität Stuttgart)

09:30 The Impact of the Historical Development of the Traffic Controller’s Workplace on Situation Awareness
Tobias Lindner (TU Braunschweig)

10:00 Are Signalmen a Safety Risk in Railway Systems?
Jörg Demitz (Schienenverkehr System Technik GmbH)

10:30 Coffee break at the Institute of Railway Systems Engineering and Traffic Safety (IfEV) with a visit to the the IfEV’s Virtual Railway Laboratory & poster presentations

**Rail Human Factors Research and Safety**
Chair: Birgit Milius (TU Braunschweig)

11:45 Rail HF Research – An Overview
Ann Mills (Rail Safety and Standards Board)

12:15 Reflections on Human Factors, ERMTS and Automatic Train Operation
Susan Reinartz (European Railway Agency)

12:45 Safety Assessment of Z-Shaped Level Crossings for Urban Systems
(Zith Consideration of User Behavior)
Zifu Chu (University of Stuttgart)

13:15 Final remarks & closing

Program is subject to alterations