

## 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.

## Organizing Committee

Dr. Birgit Milius (TU Braunschweig)  
Dr. Anja Naumann (German Aerospace Center)

## Program Committee

Prof. Dr. Martin Baumann (Universität Ulm)  
Prof. Dr. Karsten Lemmer (German Aerospace Center)  
Prof. Dr. Dietrich Manzey (TU Berlin)  
Prof. Dr. Ullrich Martin (Universität Stuttgart)  
Dr. Birgit Milius (TU Braunschweig)  
Dr. Anja Naumann (German Aerospace Center)  
Prof. Dr. Jörn Pachl (TU Braunschweig)

## Venue

Stadthalle Braunschweig  
Leonhardplat  
38102 Braunschweig  
Germany



## Registration

Mr. Andreas Redeker, Fax: +49 531 231721-19

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### Further Information

The conference language will be English.

### Conference Fee (including VAT):

I hereby register as

- |  |                 |
|--|-----------------|
| <input type="checkbox"/> Participant       | 350 € incl. VAT |
| <input type="checkbox"/> Presenting author | 175 € incl. VAT |

Last Name \_\_\_\_\_

First Name \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

E-Mail \_\_\_\_\_

Place, Date \_\_\_\_\_

Signature \_\_\_\_\_

**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-an.de or fax + 49 531 231721-19.

**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.



# 2<sup>nd</sup> German Workshop on Rail Human Factors

## Agenda

March, 8<sup>th</sup> and 9<sup>th</sup>, 2016

Stadthalle  
Braunschweig, Germany

[www.rhf-germany.de](http://www.rhf-germany.de)



## Tuesday, March 8<sup>th</sup>, 2016

- 09:00 **Registration**
- 09:45 **Opening**  
Prof. Dr. Karsten Lemmer (*German Aerospace Center*)
- 10:00 **Keynote**  
**Human Factors in Aviation, Cars and Rail - different domains, similar problems?**  
Prof. Dr. Mark Vollrath  
(*Technical University of Braunschweig*)

### **Human Factors Influencing Design**

Chair: Anja Naumann (*German Aerospace Center*)

- 11:00 **CCTV Level Crossing HMI Design – NRTMS 1st Deployment**  
Joanna Evans (*Thales UK*)
- 11:30 **Ways of Interaction with Innovative Technologies in Railway Environment**  
Marc Burkhardt, Damaris Dose (*Siemens AG*)
- 12:00 **Lunch break**
- 13:00 **Poster Session**

### **Human Factors in Control Centers**

Chair: Meike Jipp (*German Aerospace Center*)

- 13:45 **New Generation of Traffic Controllers - Evolution in Job Tasks requires new Training Methodologies**  
Jörg Demitz  
(*Scheidt & Bachmann System Technik GmbH*)
- 14:15 **Comparison of real-time relative workload measurements in rail signallers**  
Rob van Broekhoven, Aron Wolf Siegel, Matthijs L. Noordzij (*University of Twente*),  
Jan Maarten Schraagen (*University of Twente/TNO Earth, Life, and Social Sciences*)
- 14:45 **Jubilee and Northern line Upgrade Project Alarm progression**  
Mark Lowten (*Thales Ground Transportation Systems*),  
James Murphy (*London Underground*)
- 15:15 **Measurements and Data Collecting for Assessing Usability and User Experience of Interlocking Interfaces**  
David Matz, Birgit Milius  
(*Technical University of Braunschweig*)

15:45 **Coffee break**

### **Human Factors and Safety**

Chair: Anja Naumann (*German Aerospace Center*)

- 16:30 **Mitigating safety risk through confidential reporting**  
Chris Langer (*CIRAS*)
- 17:00 **Modelling the Human Impact in Railway Accidents**  
Jorge Almeida, Alexandra Fonseca, Luis Gargaté  
(*Critical Software*)
- 18:00 **Evening Reception in the historic center of Braunschweig**  
-  
Restaurant Friedrich
- 21:30 **Am Magnitor 5**  
38100 Braunschweig

## Wednesday, March 9<sup>th</sup>, 2016

- 08:15 **Registration**
- 08:45 **Opening**  
Prof. Dr. Jörn Pachtl  
(*Technical University of Braunschweig*)
- 09:00 **Keynote**  
**Limits of vocational training, demonstrated by a modeling of perception**  
Hanspeter Zehnder (*Zehnder Bildungsprojekte*)
- 10:00 **Coffee break**

### **Human Factors Effects on Train Drivers (I)**

Chair: Prof. Dr. Jörn Pachtl (*Technical University of Braunschweig*)

- 10:30 **A review of compliance with permanent, temporary and emergency speed restrictions**  
Alice Monk, Ann Mills, Philippa Murphy, Marcus Dacre, Rachael Johnson, Susan Cassidy  
(*Rail Safety and Standards Board (RSSB)*)
- 11:00 **Assessment of computer based route knowledge training**  
Anne Lorenz, Birgit Milius  
(*Technical University of Braunschweig*)
- 11:30 **ERTMS in Holland: overview of human factors issues in a pilot with Dual Signalling**  
Melcher Zeilstra, Richard van der Weide (*Intergo*)
- 12:00 **Lunch break**

### **Human Factors Effects on Train Drivers (II)**

Chair: Birgit Milius (*Technical University of Braunschweig*)

- 13:00 **Monotony, Fatigue and Microsleeps - train drivers' daily routine: a simulator study**  
Jenny Stein, Anja Naumann  
(*German Aerospace Center*)
- 13:30 **Integrating non-technical skills into the competence management of train drivers**  
Paul Leach, Philippa Murphy  
(*Rail Safety and Standards Board (RSSB)*)
- 14:00 **Determining the allocation of tasks in automated high speed train driving**  
Niels Brandenburger, Anja Naumann  
(*German Aerospace Center*)
- 14:30 **Final Remarks & Closing**  
Birgit Milius (*Technical University of Braunschweig*),  
Anja Naumann (*German Aerospace Center*)

Program is subject to alterations

