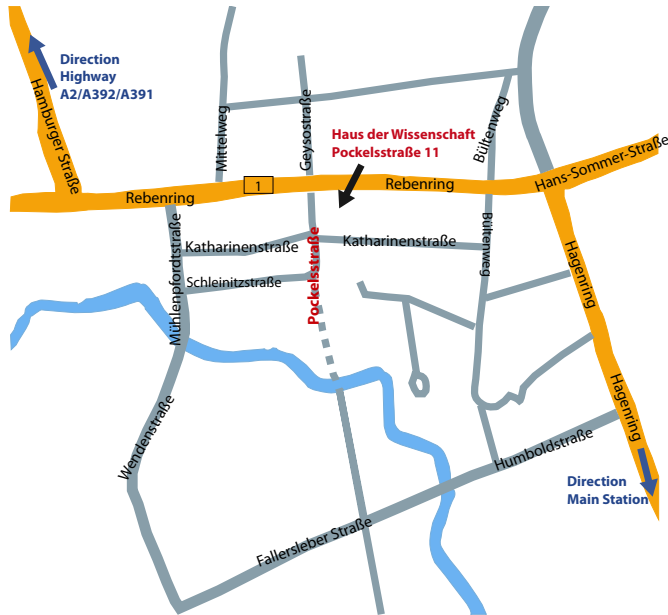


## Venue

Haus der Wissenschaften  
Pockelsstraße 11  
38106 Braunschweig  
Germany



## Organizing Committee

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

## Program Committee

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 Pacht (TU Braunschweig)  
Dipl.-Des. (FH) Kim-Markus Rosenthal (Siemens AG)  
Prof. Dr. Hartmut Wandke (HU Berlin)

## Registration

Mr. Andreas Redeker, Fax: +49 531 35406-73

E-Mail: andreas.redeker@its-nds.de

### Further Information

The conference language will be English.

### Conference Fee (including VAT):

I hereby register as

- Participant 275 €  
 Presenting author free of charge

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

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

Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Phone \_\_\_\_\_

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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-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.



# First German Workshop on Rail Human Factors

## Program

May, 20<sup>th</sup> and 21<sup>st</sup>, 2014

Haus der Wissenschaft,  
Braunschweig, Germany

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



## 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 20<sup>th</sup>, 2014

- 12:00 Registration & snacks
- 12:45 **Opening**  
Prof. Dr. Karsten Lemmer (*German Aerospace Center*)  
Prof. Dr. Jörn Pacht (*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*)

### 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*)

- 17:30 Transfer to the German Aerospace Center
- 18:00 Dinner buffet and visits to the rail research laboratories at the German Aerospace Center

## Wednesday, March 21<sup>st</sup>, 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 (With Consideration of User Behavior)**  
Zifu Chu (*University of Stuttgart*)
- 13:15 Final remarks & closing