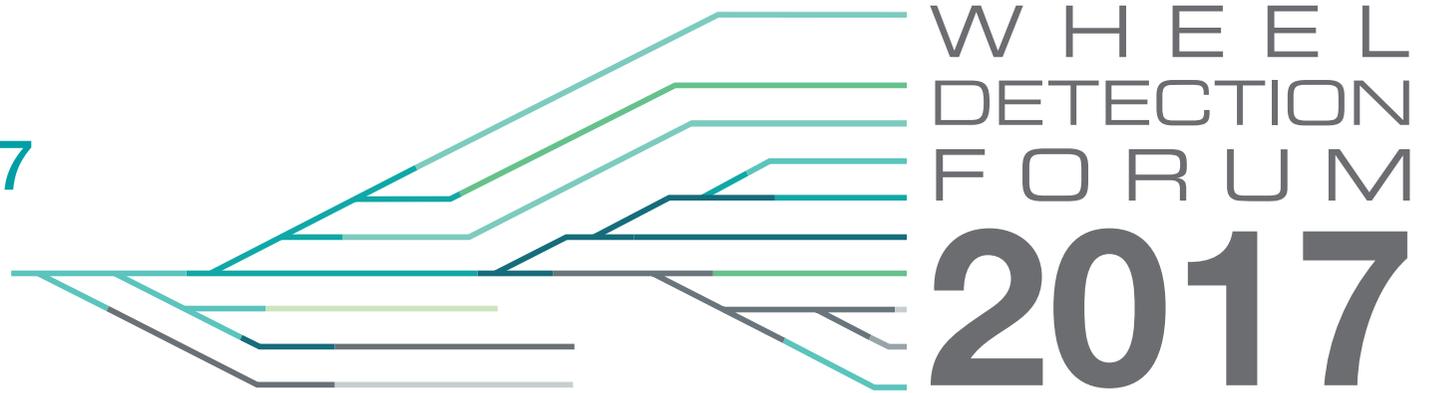


4TH WHEEL DETECTION FORUM

THE FUTURE OF TRAIN TRACKING

4–6 October 2017
Vienna, Austria

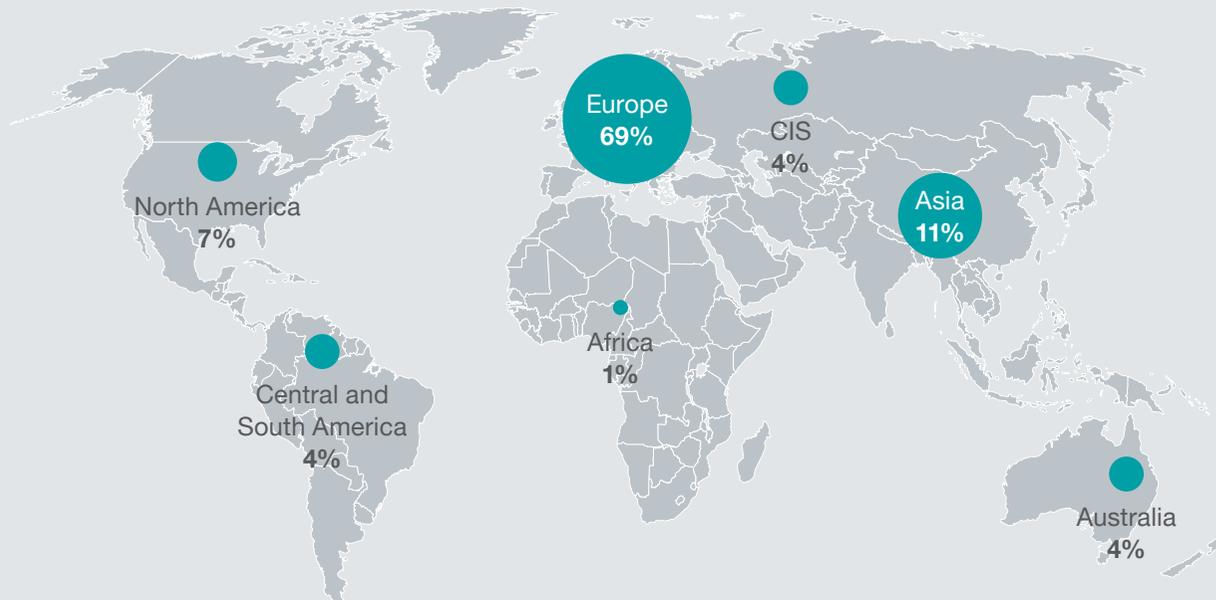


Register now: www.wheeldetectionforum.com



Review WDF 2015

Facts and figures



Statements

What participants say about the 3rd Wheel Detection Forum



VENNIE DYAVANAPALLI

Loram Maintenance of Way Inc. | US

"This forum for me is one of the most interesting because it takes a very small topic and really puts a lot of light into it, because I don't think that wheel detectors get enough attention in a wider perspective in other venues."



SANJAY SINGH

Mumbai Railway Vikas Corporation Ltd. (MRVC) | IN

"The WDF is a very good forum for exchanging our experiences; various practices being followed by various railways and companies. And it helps us in grasping about new technology which helps us in improving our system back at home."



PHIL BLACKER

Atkins Global | UK

"The WDF is an important event: It brings together both system operators and system integrators for a general discussion around wheel detection and the problems affecting modern railways. It has a wide variety of topics – which come together and challenge people to generate ideas allowing them to discuss and transfer approaches and technologies from one area to another."



4th Wheel Detection Forum

Discover the future of train tracking from 4 to 6 October 2017 in Vienna.

Look forward to an international industry event packed with presentations, discussions and reports on proven as well as future technology. As we await about 250 leading experts to join us in Vienna, the 4th Wheel Detection Forum will be the perfect possibility for networking with senior decision makers from all over the globe.

The future of train tracking is all about providing valuable information to operators by detecting and tracking trains and events.

The conference will focus on state-of-the-art solutions based on wheel detection, axle counting and Distributed Acoustic Sensing (DAS), as well as alternative tracking technologies.



Schedule at a glance



-
-  **15:00**
Registration and welcome drink
 - 16:30**
Keynote speakers:
Trends and visions
 - 19:00**
Dinner and networking evening

-
-  **09:00**
New concepts for train tracking
 - 12:30**
Networking lunch
 - 14:00**
Innovations with Distributed Acoustic Sensing DAS
 - 19:00**
Wheel Detection TALK
Networking dinner

-
-  **09:00**
Best practices in wheel detection and axle counting
 - 12:30**
Networking lunch



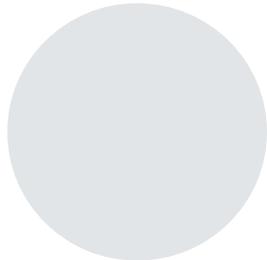
**KEYNOTE SPEAKERS:
TRENDS AND VISIONS**

 **16:30**



ETCS DEPLOYMENT IN GERMANY

Jörn Schlichting | DB Netz AG | DE
Philipp Bührsch | DB Netz AG | DE



**COGNITIVE PATTERN COMPUTING IN BIG
DATA**

Hannes Stefko | IBM | AT



BECOMING A MASTER OF CHANGE

Dietmar Dahmen | Visionary and innovation
expert | AT



NEW CONCEPTS FOR TRAIN TRACKING

 09:00

DIGITALISATION AND AUTOMATION IN RAILWAY INFRASTRUCTURE – ARE INNOVATION AREAS REALLY CHANGING?

tba

INTELLIGENT AUTO BLOCK SIGNALLING IN INDIAN RAILWAYS

Giri Pentakota | Alstom Transportation India Pvt Ltd | IN

- Development of this system will improve operational capability and reliability of block section signalling when compared to most of the conventional Intermediate Block Signalling (IBS) systems

- IABS system is the integration of wheel detection, Distributed Acoustic Sensing (DAS) and train identification system (which scan the train number)

TBA

tba

 10:30 – 11:00 

COMPASS (COMBINED POSITIONING ALTERNATIVE SIGNALLING SYSTEM) DEGRADED MODE WORKING SYSTEM

Howell Jordan | Altran | UK

- COMPASS Degraded Mode Working System
- Combining outputs from multiple sensors to reliably determine train location
- Using existing channels for safe and secure communication of authorities to move

ALTERNATIVE AND INNOVATIVE APPROACH FOR TRAIN TRACKING TECHNOLOGY

Monish Sengupta | Ricardo Rail | UK

- New and innovative approach with significant findings, highlighting the potential for introducing alternative methods to train positioning
- Reduction of trackside location correction balises, leading to huge reduction in maintenance activity and provide more flexibility in future track design
- Sensor fusion algorithm and intelligent sensor selection methodology
- Similar techniques for software based train

control as for aviation, satellite, submarine and other navigation systems

A NOVEL FIBRE OPTIC SENSING SYSTEM FOR WEIGHING IN MOTION AND WHEEL FLAT DETECTION

Antonio Iele | University of Sannio | IT

- Recent efforts to implement a novel fibre optic sensing system for weighing in motion, wheel flat detection, and train tracking in railways assets
- The capability of FBG sensor with regard to train tracking and counting axles
- Main features of the developed system, with the results obtained in real scenarios

 12:30 – 14:00 

INNOVATIONS WITH DISTRIBUTED ACOUSTIC SENSING

 14:00

TBA

tba

FIBRE OPTIC SENSING – GAME CHANGER IN MAINTENANCE AND OPERATION

Max Schubert | DB Netz AG | DE

- Development of Fibre Optic Sensing (FOS) in railways since first test in 2012
 - Test of several applications and proof of usage in live operation – focus on train tracking and security
 - FOS is just about to get a substitute for different techniques and will soon add new features to the operation and maintenance process
-

FOAD TECHNOLOGY IN NORTH AMERICAN RAILROADS

**Matthew Holcomb | Transportation Technology
Center Inc. (TTCI) | US**

**Kane Sutton | Transportation Technology
Center Inc. (TTCI) | US**

- Fibre Optic Acoustic Detection (FOAD) in the North American freight railroad industry
 - Identification of FOAD technology applications of the railroads as well as guide future application development strategies
 - Development of a draft FOAD fibre cable installation guideline document as well as a FOAD Interface Control Document (ICD)
-

 15:30 – 16:00



LOCALISATION OF SHORT CIRCUITS IN THE OVERHEAD CONTACT LINE NETWORK OF ÖBB USING OPTICAL FIBRES

Klaus Leithner | ÖBB Infrastruktur AG | AT

- No accurate detection of the location of the short circuit with conventional technologies
 - Research on short circuit localisation using an optical fibre installed parallel to the line
 - Initial results show that short circuits can be localized accurately to 10 m
-

TBA

tba

DISTRIBUTED ACOUSTIC SENSING: VISIONS AND BENEFITS IN THE RAILWAY

**Michael Thiel | Frauscher Sensor Technology
| AT**

- Status quo of DAS capabilities
- Lessons learnt from 10 installations around the globe
- Approaches how to harness this promising technology for specific railway applications



BEST PRACTICES IN WHEEL DETECTION AND AXLE COUNTING

 09:00

WHEEL SENSORS USED IN TRAIN DETECTOR SYSTEMS

Martin Novak | Prosoft Süd Consulting GmbH | AT

- Train detector systems are used to identify trains and wagons at specific locations within a railway network
- Information based on wheel sensor signals are used to accurately allocate information delivered by RFID (identification of wagons) and/or WTMS equipment
- Benefits of using a wheel sensor within train detector systems output, examples and experiences

INTEGRATING WHEEL SENSORS INTO LASER BASED WAYSIDE MONITORING SYSTEMS

Denis D'Aoust | Wayside Inspection Devices Inc. (WID) | US

- Usage of wheel sensors as a key component of the TBOGI system
- BOGI-HD, a laser based wayside monitoring system

WHEEL DETECTION BY RADAR FOR MOBILE TRACK WARNING SYSTEMS

Roger Kessler | Schweizer Electronic AG | CH

- RSK-R: a mobile train detector
- RSK-R detects wheels with radar technology
- Combination of various techniques of signal processing

 10:30 – 11:00 

APPLICATION OF WHEEL SENSOR TECHNOLOGY ON RAILWAY NETWORK IN SERBIA

**Ivan Ristic | SIGNALLING SOLUTIONS | RS
Tatjana Simic | TAK&TRACK | RS**

- Present technologies applied on railway network in Serbia
 - Different technical solutions from suppliers of wheel sensor/axle counter equipment
 - Proposed modifications for application of these systems
-

HOUSTON METRO USES HIGHLY RELIABLE AXLE COUNTERS FOR INCREASED EFFICIENCY AND PUNCTUALITY

Mark Williams | Mass Electric Corporation | US

- The Houston METRO Phase II project
- System elements: Train control, communications systems, overhead catenary, traction power
- Axle counter solution for vital signaling in interlocking and grade crossings as well as non-vital applications for train tracking and location

THE EVOLUTION OF LEVEL CROSSING CONTROL SYSTEMS

**Stewart Rendell | John Holland Rail | AU
Neil Popplewell | RCS Australia Rail Control Systems | AU**

- New level crossing concept to increase safety, reliability and cost effectiveness of level crossing control throughout Australia
- Intelligent level crossing solution using a GENELEC SIL 4 HIMA F35 PLC and the Frauscher Advanced Counter FAdC
- Maximum flexibility in architecture and the use of the Frauscher Safe Ethernet FSE software protocol, including hardwired as well as Wi-Fi strike in points



Speakers

International railway operators, researchers as well as association representatives will be the speakers for the WDF 2017. Across the various themes and trends, they present the most transformative ideas for the future of train tracking.



PHILIPP BÜHRSCH
DB Netz AG | DE



DIETMAR DAHMEN
Visionary and innovation expert | AT



DENIS D'AOUST
Wayside Inspection Devices Inc. (WID) | US



MATTHEW HOLCOMB
Transportation Technology Center Inc. (TTCI) | US



ANTONIO IELE
University of Sannio | IT



HOWELL JORDAN
Altran UK Limited | UK



ROGER KESSLER
Schweizer Electronic AG | CH



KLAUS LEITHNER
ÖBB Infrastruktur AG | AT



MARTIN NOVAK
Prosoft Süd Consulting
GmbH | AT



GIRI PENTAKOTA
Alstom Transportation India Pvt
Ltd | IN



NEIL POPPLEWELL
RCS Australia Rail Control
Systems | AU



STEWART RENDELL
John Holland Rail | AU



IVAN RISTIC
SIGNALLING SOLUTIONS | RS



JÖRN SCHLICHTING
DB Netz AG | DE



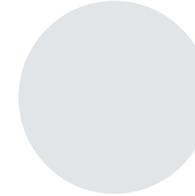
MAX SCHUBERT
DB Netz AG | DE



MONISH SENGUPTA
Ricardo Rail | UK



TATJANA SIMIC
TAK&TRACK | RS



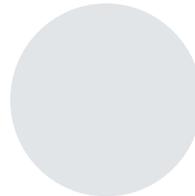
HANNES STEFKO
IBM | AT



KANE SUTTON
Transportation Technology
Center Inc. (TTCI) | US



MICHAEL THIEL
Frauscher Sensor
Technology | AT



MARK WILLIAMS
Mass Electric Corporation | US

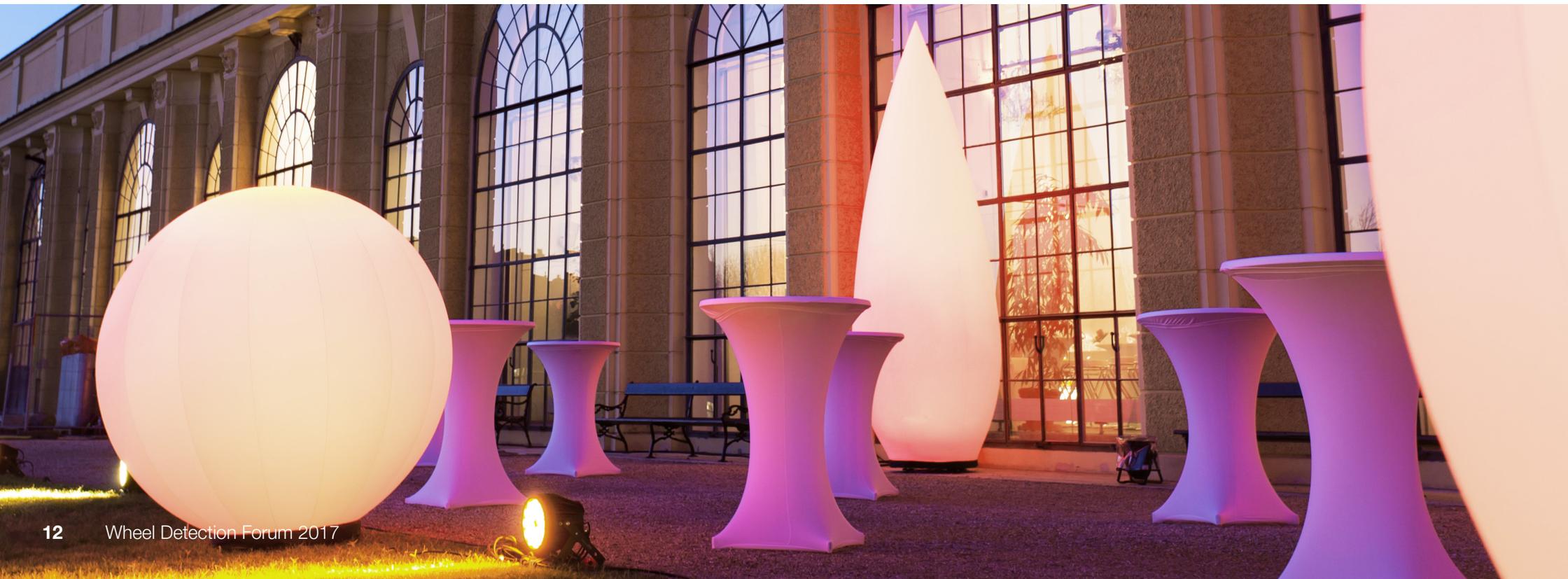
Venues

Event Location Wheel Detection TALK

The location for the gala event on the second evening will be the Schönbrunn Orangery. Its elegant, yet reticent appearance is ideal for staging the Wheel Detection Forum's gala dinner in a style that is both traditionally imperial as well as modern.



Schönbrunn Orangery
Schönbrunner Schloßstraße 47 | 1130 Vienna | AUSTRIA



Event Location Conference

The Wheel Detection Forum 2017 will take place at the conference hall and foyer of the Austria Trend Hotel Park Royal Palace. Golden metal panels cover the facade of the hotel, which is equipped with the most modern amenities and state-of-the-art technology.



Austria Trend Hotel Park Royal Palace
Schlossallee 8 | 1140 Vienna | AUSTRIA

 **+43 1 89110**

 **park.royal.palace@austria-trend.at**

 **www.austria-trend.at/prw**



PARKING AREA

The public parking garage with direct access to the hotel provides a convenient and safe place to park your car.

Garage fee per day: 25 €



METRO MAP

For a detailed plan of Vienna's metro system please visit the website of Wiener Linien: www.wienerlinien.at



TOURIST INFORMATION

For more practical information about Vienna visit:
www.wien.info

NOTE

Information on hotels and accommodation can be found online at: www.wheeldetectionforum.com/en/accommodation

Registration

PARTICIPATION FEE:

370 € (incl. VAT)
Incl. documents, catering and networking events

REGISTRATION CLOSURE:

20 September 2017

NOTE:

Accommodation must be booked
and paid individually.



WWW.WHEELDETECTIONFORUM.COM



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For queries and further information

QUESTIONS ABOUT THE EVENT



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Gewerbestraße 1 | 4774 St. Marienkirchen | AUSTRIA

www.wheeldetectionforum.com



The future of train tracking



ABOUT THE EVENT

The Wheel Detection Forum provides an ideal platform for a wide range of railway experts from across the globe to share their latest insights and exchange their experiences.

More than 200 senior decision makers from international railway operators and system integrators, as well as manufacturers, consultants, researchers and association representatives will come together in Vienna to make the most of this excellent networking possibility.

FACTS



4–6 October 2017
Austria Trend Hotel Park Royal Palace | Vienna

Participation fee: 370 € (incl. VAT)
Incl. documents, catering and networking events

Event language: English

www.wheeldetectionforum.com