

## 28<sup>th</sup> - 30<sup>th</sup> MARCH 2017 JAARBEURS UTRECHT THE NETHERLANDS

3 day event:

ERTMS: 28<sup>th</sup> March 2017 DIGITALISATION IN RAILWAYS: 29<sup>th</sup> March 2017 MAINTENANCE OF INFRASTRUCTURE: 30<sup>th</sup> March 2017

HOSTED BY: **ProRail** 



RailTe EUROPE UTREC'

Dear railway expert,

Thank you for your interest in the RailTech Europe 2017 Conference. This conference provides an extensive platform and the most dynamic meeting place for the experts and professionals in this sector from all over the world to share their impactful breakthroughs, sophisticated and modern ideas on railway-related infrastructure and potential fields of improvement.

ERTMS, Digitalisation and Maintenance are very important subjects in the railway industry, if we want to keep up with our competitors on the road. Therefore, a high level international speaker programme has been composed by several experts. More than 40 international speakers from all over the world will enlighten you with state-of-theart information during this three-day conference.

A big thank you to our partner ProRail for making everything possible. We look forward to welcoming you during these three days.

Kind regards,

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Marieke van Gompel Conference Programme Manager E: Marieke.van.Gompel@railtech.com

## DAY ERTMS Tuesday 28<sup>th</sup> March 2017

The ERTMS Conference takes place on the first day of RailTech Europe 2017 on 28<sup>th</sup> March. European countries are implementing the European Railway Traffic Management System (ERTMS) that will improve interoperability and safety. At the conference you will learn about the implementation strategy of the Dutch Ministry of Infrastructure and the Environment. High level speakers will give an international view about harmonisation and compatibility and you will be updated on the latest development of the Baselines.

### DAY Digitalisation in Railways Wednesday 29th March 2017

In recent years the rail infrastructure managers, train operating companies and the rail maintenance companies have started to collect and store data in order to monitor different assets and rolling stock. The digitalisation of railways is an opportunity to create 'intelligent rail systems'.

# DAY 3

### Maintenance of Rail Structure Thursday 30<sup>th</sup> March 2017

High level speakers will give an international view about standardisation, reducing maintenance costs, the maintenance of the future and creating a safe workplace for rail workers. You will also learn about the latest innovation on rail infrastructure maintenance and new contract models which will reduce costs.



## RailTe EUROPE UTREC

ERTMS is the new standard in European rail. Our mission is to set the best scene for deployment in the Netherlands, by working closely together with partners and stakeholders

## CONFIRMED SPEAKER: WIM FABRIES

ERTMS Programme Director, Dutch Ministry of Infrastructure and the Environment

# Implementing ERTMS in the Netherlands

The ERTMS programme is a collaborative programme between the Dutch Ministry of Infrastructure and the Environment, ProRail and NS. These parties work together with other stakeholders on elaborating the ERTMS (European Rail Traffic Management System) implementation in the Netherlands.

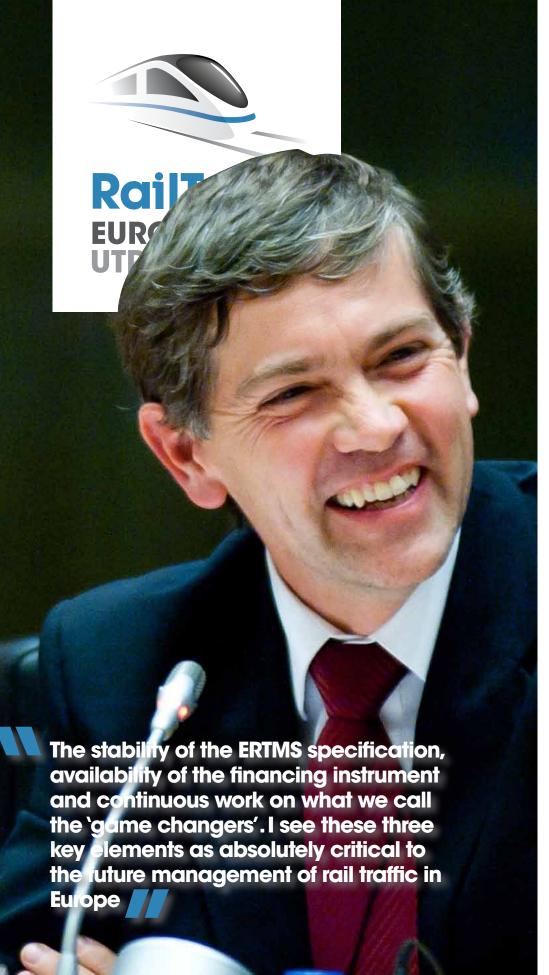
#### BIOGRAPHY

Before starting as ERTMS Programme Director, Wim Fabries worked in various management positions for the Dutch National Railways (in Dutch, Nederlandse Spoorwegen, or 'NS'). As a Director of Transport he was responsible for the timetable, rolling stock and crew planning, disruption management, passenger information, customer service, rolling stock management, process quality & innovation.

Together with his counterpart at ProRail, he was also responsible for daily operations of the Dutch railway system and joint projects such as the Winter programme.

Wim Fabries studied Electrical Engineering at the Technische Hogeschool Rijswijk. He also has a broad experience outside the railway industry and worked at Philips, KPN Telecom and Logica Consulting in several consulting and management positions.

SEE ALL SPEAKERS



## CONFIRMED SPEAKER: LIBOR LOCHMAN

Executive Director of the Community of European Railway and Infrastructure Companies (CER)

# A positive ERTMS business case - the sector priority

The ERTMS large scale implementation has started, growing number of actors do have an inservice experience even if most operation still rely on legacy systems. Developments are also starting to get potential high value for operation through an increased level of automation and high capacity communication.

Achieving a positive business case is an absolute must at the situation when the competing road sector progresses rapidly with its further internal efficiency increase. The legal basis is set; now all the actors have to contribute to make the ERTMS not only the cornerstone of the interoperability, but to make it a commercial success.

#### **BIOGRAPHY**

Libor Lochman has been Executive Director of the Community of European Railway and Infrastructure Companies (CER) since January 1st 2012. Born in 1963 in Czechoslovakia, he graduated at the Transport University in Zilina and has a Doctorate in Electronics from the West-Bohemian University Plzen. He has a strong background in control-command and signalling systems.

Prior to his role as CER Deputy Executive Director and leader of technical affairs (2007-2011), he acted as director of the Railway Test Centre, a facility for testing European rolling stock, infrastructure and signalling components, in Prague (2000-2005).

SEE ALL SPEAKERS



Despite all challenges during the project, the implementation of ETCS L2 was finally successful

## CONFIRMED SPEAKER: ULRICH ROTH

Head of Engineering Train Control Systems at Swiss Federal Railways SBB

# Commissioning of ETCS L2 in Switzerland

The presentation will give an overview of the Swiss ETCS strategy and the so far realized ETCS Level 2 projects - in particular the Gotthard base tunnel and its approaching lines in the north and south which are also equipped with ETCS L2 and are in commercial operation since December 2016.

It will focus on the challenges in realising these projects, starting from the concepts and the requirements to the development of the technical systems and the operational processes. It will also deal with some aspect regarding the homologation process of train & trackside system.

#### BIOGRAPHY

Ulrich Roth was born 1973 in Berne, Switzerland. Ulrich has a MSc in Physics and Mathematics from the University of Berne. He holds a PhD in Physics followed by an EMBA in General Management. He has five years work experience in the R&D of an engineering industry in the field of laser cutting tools. Since 2006 he has been working in different positions for the Swiss Federal Railways (SBB).

Ulrich started as a System Engineer in the field of risk analysis and approval and homologation of both train and trackside ATP and ETCS systems. In 2011 he became the Head of the Engineering Department of Train Control Systems dealing with all ETCS aspects from strategy, requirement to test & commissioning.

#### SEE ALL SPEAKERS

## ALL CONFERENCE DELEGATES ARE INVITED TO JOIN THE RAILTECH AWARDS DINNER

## LET'S WINE & DINE DURING THE RAILTECH AWARDS DINNER

Tuesday 28<sup>th</sup> March Janskerk Utrecht

Church doors open at 19.00 hours

Wednesday 29<sup>th</sup> March | Digitalisation

## CONFIRMED SPEAKER: DIEGO GALAR

Professor Dr. Diego Galar, Head of Maintenance & Reliability, Tecnalia Lulea University of Technology

# Big data and data science in railways: The way forward

Two concepts currently at the leading edge of today's digitalisation revolution are Analytics and Big Data. The public transportation industry has been at the forefront in utilising and implementing Analytics and Big Data, from ridership forecasting to transit operations. Rail transit systems have been especially involved with these IT concepts, and tend to be especially amenable to the advantages of Analytics and Big Data because they are generally closed systems that involve sophisticated processing of large volumes of data. The more that public transportation professionals and decision makers understand the role of Analytics and Big Data in their industry in perspective, the more effectively they will be able to utilise its promise. This keynote gives an overview of Big Data technologies in context of railways.

#### BIOGRAPHY

Prof. Diego Galar holds a M.Sc. in Telecommunications and a PhD degree in Design and Manufacturing from the University of Saragossa. He has been Professor in several universities, including the University of Saragossa, the European University of Madrid, researcher in the Department of Design and Manufacturing Engineering in the University of Saragossa, researcher also in I3A, Institute for engineering research in Aragon, director of academic innovation and subsequently provice-chancellor. He has authored more than three hundred journal and conference papers, books and technical reports in the field of maintenance, working also as member of editorial boards, scientific committees and chairing international journals and conferences.

Digitation and pervasive computing in railways is the only option to deal with such complex systems interacting among them trying to balance the growth in technical complexity together with stable and acceptable dependability indexes

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## CONFIRMED SPEAKER: MATTHIAS LANDGRAF

Senior Scientist at the Graz University of Technology

## Smart Data in Asset Management for Railway Track

As a crucial precondition, any asset management of track requires proper data management. Since 2003, a data warehouse has been established at Graz University of Technology in close cooperation with the Austrian Federal Railways (ÖBB). Currently, this data warehouse contains track information of more than 4,000 track km of Austria's main network consisting of over one billion data records. The challenge is to transfer the big data into a smart data application for Railway Track Asset Management. Thus, we developed a two sided approach to gather relevant information out of the data warehouse. It combines a strategic top down approach based upon asset data as well as a bottom up approach based on in depth analyses on track measurement data. This enables a prognosis of renewal and maintenance demands for railway track.

- Generate Smart Data out of Big Data for ideal use in Railway Track Asset Management
- Strategic prognosis of future renewal and maintenance demands
- Innovative data analytics of track measurements in order to gain additional information for specific components of track

#### **BIOGRAPHY**

Matthias Landgraf is a graduate of Graz University of Technology, where he composed his PHD-Thesis on asset management within railway infrastructure. Since 2011 he is a scientific research associate at the Institute of Railway Engineering and Transport Economy. He focuses on big data in railways allowing for efficient asset management in railway infrastructure, considering the costs of the whole life cycle.

The amount of data is neither the problem nor the big deal. A proper Railway Asset Management requires functional knowledge - both IT and railway skills - in order to get smart data out of big data

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Wednesday 29<sup>th</sup> March Digitalisation

## CONFIRMED SPEAKER: ANNA NICODEMI

# RFID, a digitalisation and service development project

RFID started off as a technology development project, and a needed a business plan, as RFID is not only managed by Trafikverket but involves a lot of stakeholders. As Trafikverket only manages part of the system RFID is a perfect example of how we need to cooperate in the business, sharing information to succeed with digitalisation.

The digital opportunities as well as service management is important to develop and create customer value and efficiency for the sustainable transport system. Technology development provides the opportunity for automated data capture and dissemination. Together with the increasing demand on the availability of information availability today we need to use the digital opportunities to increase customer satisfaction and efficiency in our deliveries. For several years, The Swedish Transport Administration has worked on vehicle identification using RFID.

#### BIOGRAPHY

Anna Nicodemi holds a position since 2013 as Service Manager in the Business Development Department at Trafikverket. She's involved in several research projects regarding digitalisation and logistics. She is managing and developing railway services in the network statement and looking at new soultions for railway services.

With a degree in Risk Management she started her career att Trafikverket as a Safety and Security manager at one of Trafikverkets eight dispatch centres. She has also been project manager and responsible for several electrical safety projects. Prior to her current position she worked with safety management system at Trafikverket and was head of the analyst team.

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Thursday 30<sup>th</sup> March | Maintenance

## CONFIRMED SPEAKER: MARC ANTONI

Director of the Rail System Department and the Rail System Forum of the UIC

## International maintenance from international perspective

Antoni earlier has emphasized that rail professionals should take the opportunity at the RailTech Europe Conference to share their 'best practices' so they know which technologies can reduce costs of the exploitation of rail and which can enhance security. At the conference he will focus on several key issues including asset management, the safety of signaling and maintenance of ERTMS. He will discuss the issue of cyber security on railways, especially with the use of new technology in the security system ERTMS.

Antoni's view is that the systems which operators must develop, should be 'complicated, but not complex'. "Security is safety and safety is security – the two have to be considered together. The UIC is working on different guidelines that international railway undertakings can use in their daily operation.

#### BIOGRAPHY

The field of the rail System Department covers all the technical aspects of infrastructure and Rolling stock including Asset Management, Traffic Management, Safety and Security management and Innovation Management. Director of the UIC Railway Professional standardisation in coherence and complementarity with the other Normalisation Bodies and Regulation Bodies. Building bridges between continents for more brotherhood in railway.

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System approach in railways will result in efficiency of maintenance costs via smart innovations and proven technology. This system knowledge is missing in railway organisations and young engineers. Smart, safe, proven technology and innovation on railways

## CONFIRMED SPEAKER: ROLF DOLLEVOET

Professor Railway Engineering, Delft University of Technology, The Netherlands

# Smart, safe, proven technology and innovation on railways

Starting one step ahead on railways to build up a better, safer train systems is not based just on a good technical idea. The idea must be supported by research, a balanced business case and a stakeholder analysis in order to get a green light to continue technological innovation that can be tested and implemented. Most people think only of the technology behind this, but railways are much more complicated and it takes time to develop, prove and implement new ideas in general. The focus on a better rail transport starts with understanding of the basics and to understand the relationship between many assets in the railway system.

#### BIOGRAPHY

Rolf Dollevoet studied Mechanical Engineering at TU Eindhoven. He developed an R&D department at Bosch Rexroth Hydraudyne, where he also designed several test machines for hydraulic cylinders and systems. He continued his research work in the railway sector at ProRail. He was awarded his PhD in 2010 at the University of Twente for his rail research on Rolling Contact Fatigue. In addition to his appointment at TU Delft, Dollevoet also works at ProRail as a Railway System Expert.

In this role, he is responsible for all the scientific research and innovation for the civil engineering division of ProRail Asset Management.

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## RailTech® EUROP UTRP

Efficiency and sustainability within maintenance and renewal strategies can only be achieved by predicting, which measure has to be executed at which point of time! Thursday 30<sup>th</sup> March | Maintenance

## CONFIRMED SPEAKER: JOHANNES NEUHOLD

Teaching and Research Associate at Institute for Railway Engineering and Transport Economy at Graz University of Technology

## **Networkwide Ballast Strategy**

By combining the results of the technical and economical evaluation, a method is developed to find the most reasonable ballast-strategy. Therefore, only three parameters are required: (1) the current condition of ballast evaluated by fractal analyses, (2) the age of track and (3) the estimated service life of track. This method enables us to calculate current demands as well as predict future demands for ballast cleaning as a maintenance action and as a part of total renewal. The method is applied to 4,200 km of track in Austria and shows promising results.

#### BIOGRAPHY

Johannes Neuhold studied Civil Engineering at Graz University of Technology. Since 2014 he has been Teaching and Research Associate at the Institute of Railway Engineering and Transport Economy. His main research topics are track-maintenance, analysis of measuring data and economic evaluations of railway infrastructure projects. Currently he is working on his PHD-Thesis that is focused on automatic maintenance planning. As teaching staff, he gives lectures that are dealing with the basics of railway engineering and demand based infrastructure development.

SEE ALL SPEAKERS

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### **RAILTECH EUROPE AWARDS DINNER**

The RailTech Awards dinner takes place on Tuesday 28<sup>th</sup> March 2017 at the Janskerk, Janskerkhof 26, Utrecht. Meet your rail sector sector colleagues in an informal setting. During this dinner you will have sufficient time for networking with your industry colleagues.

Conference delegates have free access to the RailTech Awards Dinner. During the RailTech Europe Awards dinner there will be Innovation Awards ceremonies: Innovation Award; Best Innovative Product / Service

Young Innovation Award; best innovative product / service by persons under the age of 30 years

Startup Award: young company with the latest and most innovative development, product or service

Visit the website www.railtech.com for the latest information.

### **VENUE, TRAVEL & HOTEL ACCOMMODATION**

Jaarbeurs is located in the centre of Utrecht, right next to the Central Station and within walking distance of the historical city centre. This makes Jaarbeurs easy to reach, both by public and by car. A number of hotels have been blocked for conference delegates close to the venue. For more information on the venue, travel information and hotel accommodation, please visit the website.

You can register now by pressing the button at the bottom of this page.

### **CONTACT US**

For more information about the RailTech Europe 2017 Conference, you can contact me:



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