Welcome to the 3rd Electric Road Systems Conference

Tuesday 7th May, 2019

Time	Program
9:30-10:45	**Setting the scene: ERS becomes reality**
11:00-12:00	**Welcome by government representatives**
13:15-14:30	**Scientific sessions or site visit** (site visit starts 13:00)
14:45-16:30	**Scientific sessions or site visit**
16:30-18:15	**Poster session, roundtables or site visit**
	Bus transfer to conference dinner
19:00	**Conference dinner**

Wednesday 8th May, 2019

Time	Program
9:00-10:15	**Broadening the horizon: worldwide technology developments and demonstration projects**
10:30-12:00	**Scientific sessions or site visit**
13:15-14:45	**Scientific sessions or site visit**
15:00-16:15	**Launching large-scale implementations**
16:15-17:00	**Final remarks & invitation to 4th ERS conference in 2020**

Twitter: **#ERS2019**

The conference is organized on behalf of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Strom bewegt Elektromobilität Hessen

VDI|VDE|IT

Erneuerbar mobil

Tuesday 7th May

Plenary 1 (09:30-10:45): Setting the scene: ERS becomes reality

- Key Speech Stef Cornelis (Transport & Environment): How EU policies can drive ERS systems in Europe
- Key Speech Arnd Stephan (TU Dresden): Perspectives for electric road traffic – chances and challenges
- Key Speech Renato Mazzoncini (Politecnico Milano): The technical uptake of E-Highway concept in Italy

Welcome by government representatives (11:00-12:00)

- Rita Schwarzelühr-Sutter, Parliamentary State Secretary at the Federal Ministry for Environment, Nature Conservation and Nuclear Safety
- Mattias Landgren, State Secretary, Ministry of Infrastructure, Swedish Government Offices
- Jens Deutschendorf, Secretary of State at the Hessen State Ministry of Economics, Energy, Transport and Housing

- Ferdinand Schöpp (Technische Universität Darmstadt): Electrified? – Right in the thick of things

Scientific sessions (13:15-14:30 and 14:45-16:30)

- Session status of test tracks (planning / implementation)
- Session business models / framework conditions
- Session interaction with energy system
- Session stakeholder / acceptance
- Site Visits (13:00-14:30 and 14:45-16:15)

Poster session (16:30-18:00), roundtables (17:00-17:45/17:30-18:15)

- Poster Session
- Roundtable on Standardization, hosted by Helena Andersson (Swedish Transport administration) and Michael Lehmann (Fachhochschule Erfurt)
- Roundtable on Operator's perspectives, hosted by Kristin Kahl (Cantargo) and Tobias Bernecker (Hochschule Heilbronn)
- Roundtable Road administrations, hosted by Hans Säll (NCC) and Achim Reußwig (Hessen Mobil)
- Roundtable on Public awareness and acceptance, hosted by Uta Burghard (Fraunhofer ISI) and Henner Weithöner (Freelance Journalist)
- Roundtable "ERS: The first test tracks are in operation - which next steps have to follow?", hosted by Stef Cornelis (Transport & Environment) and Florian Hacker (Öko-Institut)
- Site Visit

Conference dinner (19:00) at restaurant Druckwasserwerk

Wednesday 8th May

Plenary 2 (09:00-10:15): Broadening the horizon: worldwide technology developments and demonstration projects

- Key Speech Suyash Singh (Grenovators Motor Work): Current scenario and future road map of electric vehicles in India
- Key Speech Zhang Jianjun (Ministry of Transport, People's Republic of China): Current status and progress of Chinese Highways‘ Smart and Electric Transformation
- Key Speech Manfred Boltze (Technische Universität Darmstadt): Validators, Demonstrators, Facilitators – The Roles of eHighway Field Tests on the Way to Large-scale Implementation
- Gereon Meyer (VDI/VDE Innovation + Technik GmbH): Progress in Electric Mobility Worldwide

Scientific sessions (10:30-12:00 and 13:15-14:45)

- Session simulations along test tracks
- Session system perspective and strategic development
- Session Techno-economic analysis
- Session Large-Scale implementation
- Site Visits

Plenary 3 (15:00-16:15): Launching large-scale implementations: What are next steps, what do we need?

- Key Speech Jan Pettersson (Swedish Transport administration): Setting up a 20-30km ERS pilot in Sweden
- Panel discussion with Elna Holmberg (Volvo), Andrea Schön (Schenker), Axel Hausen (EnBW) and Jan Pettersson (Swedish Transport administration)
- Short Reports from the Roundtables

Closing plenary (16:15-17:00): Final remarks and invitation to ERS conference 2020

Moderator of Plenary Sessions: Urs Maier (Agora Verkehrswende)

Digital Graphic Recording: Nicole Lücking (www.poasworld.de)

Scientific Sessions (7th May)

For reasons of clarity, only first authors are mentioned in the following.
Abstracts can be downloaded on www.electricroads.org.

Interaction with energy system
Tue 7th 13:15-14:30 (room Holm_max1)

Moderator: Jonas Jansson (Swedish National Road and Transport Research Institute VTI)

M. Staub (Technische Universität Dresden): Combined simulation of electric road traffic and power supply system of eHighway tracks

M. Lehmann (Fachhochschule Erfurt): Electric grid integration of a large scale overhead contact line ERS for truck applications

J. Olovsson (Chalmers University): The Impact of ERS on the electricity system – an energy system model comparison for Sweden and Germany

Stakeholder / Acceptance
Tue 7th 13:15-14:30 (room Holm_max2)

Moderator: Michael Lüken (VDI/VDE-IT)

M. Gustavsson (RISE Research Institutes of Sweden): Socioeconomic Analysis of Electric Road Systems

J. Jöhrens (ifeu - Institute for Energy and Environmental Research Heidelberg): Requirements regarding supply and funding regimes for the introduction of ERS

A. Scherrer (Fraunhofer Institute for Systems and Innovation Research ISI): Social acceptance of catenary hybrid trucks in Germany - first results from the accompanying research of eWayBW

Status of test tracks (planning / implementation
(Tue 7th 14:45-16:30, room Holm_max1)

Moderator: Manfred Boltze (Technical University Darmstadt)

B. Lehmann-Matthaei (Forschungs- und Entwicklungszentrum Fachhochschule Kiel): Planning, approval, construction and commissioning of the e highway route on the BAB 1 in Schleswig-Holstein

O. Ezer (Electreon, Hadasa Neurim, Beit Yanai): Demonstration of a wireless electric road concept

I. Krüger (Ministry for Transport Baden-Württemberg): eWayBW - pilot project with a catenary-based electric road system

I. Rudgartser (Hessen Mobil Road- and Traffic Management): Experiences with planning and construction of the ELISA pilot site / eHighway Hessen

A. Rigoni (Concessioni Autostradali Lombarde): eHighway Pilot Project on A35 Brebemi (Italy)

Business models / framework conditions
(Tue 7th 14:45-16:30, room Holm_max2)

Moderator: Håkan Sundelin (RISE Research Institutes of Sweden)

T. Bernecker (Hochschule Heilbronn): The market dilemma - Implications of an introduction of Electric Road Systems on markets and possible business models

B. Hasselgren (Swedish Transport Administration): Business models for ERS-systems – a system with many stakeholders

S. Tongur (RISE Research Institutes of Sweden): Defining ERSO: The Electric Road System Operator

M. Hartwig (IKEM – Institut für Klimaschutz, Energie und Mobilität): Regulative framework for overhead contact lines for trucks on motorways – The AMELIE project aiming at a European approach of financing and billing for ERS

M. Gustavsson (RISE Research Institutes of Sweden): Revenue Management for Electric Road Systems

Poster Session
(Tue 7th 16:30-18:00, on the gallery)

F. Pavand (Dynamic Charging Platoon Technology): EVs Dynamic Charging Platoon Technology

P. Linné (VTI, Statens väg- och transportforskningsinstitut): Standardisation of Electric Road Systems – An Inventory of Standards for Vehicles, Electric Power Supply, and Infrastructure

D. Wauri (Technische Universität Darmstadt): ELISA – Initial Analyses of Impacts of the eHighway System on Traffic Flow

Y. Algret (Algret Innovations): A Unique ERS Technology for Urban Use – Conduit Current Collection

Ö. Öztürk (Technische Universität Darmstadt): Verification of the ELISA eHighway Evaluation Concept

S. Giebel (Siemens Mobility): The construction of ELISA eHighway Hesse

T. McGarvey (Swedish National Road and Transport Research Institute VTI): Increased Road Surface Unevenness after the Installation of an Electric Road System

Q. Wang (KTH Royal Institute of Technology): ERS Stakeholder concerns inspiration

H. Bhatti (Halmstad University): Electric Roads: Energy Supplied by Local Renewable Energy Sources and Microgrid Distribution System

M. Staub (Technische Universität Dresden): Public Perception of the eHighway – an Analysis based on online media coverage *(extra contribution / not peer-reviewed)*

Scientific Sessions (8th May)

For reasons of clarity, only first authors are mentioned in the following.
Abstracts can be downloaded on www.electricroads.org.

Techno-economic analysis
(Wed 8th 10:30-12:00, room Holm_max1)

Moderator: Florian Hacker (Öko-Institut)

K. Rolko (Technische Universität Darmstadt): Coaches as a part of the eHighway system: A feasibility study

D. Speth (Fraunhofer Institute for Systems and Innovation Research ISI): A techno-economic comparison of battery swap and electric road systems for heavy road transport. A German case study.

M. Alaküla (Lund University): A Hybrid ERS Cost Perspective

G. Gidofalvi (KTH Royal Institute of Technology): Delivery Route Based ERS Network Optimization

Simulations along test tracks
(Wed 8th 10:30-12:00, room Holm_max2)

Moderator: Julius Jöhrens (ifeu - Institut for Energy and Environmental Research Heidelberg)

M. Hellgren (KTH Royal Institute of Technology): Efficiency of AC conductive eRoad charging system – Analysis of experimental data

T. Tajima (Honda R&D): Study of 450-kW Conductive ERS at 150km/h

L. Nordin (Swedish National Road and Transport Research Institute VTI): Changes to Road Maintenance and Operations on Electric Roads

F. Márquez-Fernández (Lund University): Electric safety assessment in conductive ERS: grounded vs. ungrounded systems

New technologies beyond traditional ERS, OEM strategies
(Wed 8th 13:15-14:45, room Holm_max1)

Moderator: Arne Nåbo (Swedish National Road and Transport Research Institute VTI)

M. Danilovic (Halmstad University, Sweden & Shanghai Dianji University, China): The Status of Electric Roads in China

A. Sue (Volkswagen): The Catenary ERS from the Truck Perspective

D. Zethraeus (Elonroad): Elonroad

H. Sundelin (RISE Research Institutes of Sweden): Architectural description of ERS: Analyzing implications of short and long electric road segments

Large-Scale implementation
(Wed 8th 13:15-14:45, room Holm_max2)

Moderator: Magnus Lindgren (Swedish Transport Administration)

R. Blanck (Öko-Institut): Modelling market uptake of ERS in Germany

M. Allekotte (ifeu - Institut for Energy and Environmental Research Heidelberg): ERS – optimising a rollout Scenario for Germany

M. Motschall (Öko-Institut): Costs of the energy supply infrastructure for trucks with alternative driving system from a user and macroeconomic perspective in Germany

T. Gnann (Fraunhofer Institute for Systems and Innovation Research ISI): Market potential of catenary hybrid electric trucks in different world regions

The organizers would like to thank the members of the Scientific Committee for reviewing submissions and selecting the contributions for the scientific sessions:

Manfred Boltze (Technical University Darmstadt)

Florian Hacker (Öko-Institut)

Julius Jöhrens (ifeu - Institute for Energy and Environmental Research Heidelberg)

Magnus Lindgren (Swedish Transport Administration Trafikverket)

Arne Nåbo (Swedish National Road and Transport Research Institute VTI)

Arnd Stephan (Technical University Dresden)

Håkan Sundelin (RISE Research Institutes of Sweden)

Roundtables

The purpose of roundtables is to stimulate and foster exchange and discussion among experts on special topics – without formal presentations and in an intentionally short time period.

Each roundtable is hosted by two experts who initiate the exchange with a short introduction, and moderate the discussion.

Number of participants is limited to approx. 20.

If you like to participate in a particular roundtable: Please sign in advance and write down in a few words which expertise you can contribute to the roundtable. Lists for signing in are available at the helpdesk.

Standardization (Tue 7th May 17:00-17:45, room Holm_max1)

Hosted by Helena Andersson (Swedish Transport Administration) and Michael Lehmann (Fachhochschule Erfurt – University of Applied Sciences)

Technical standardization and regulation reduce uncertainties and support project deployments as well as interaction of actors and institutions. The discussion is based on a common understanding of ERS system definition, including both – their integral components and the socio-economic environment. In a next step participants inform each other on ongoing standardization activities and identify, discuss and prioritize future fields of cooperation.

Operators (Tue 7th May 17:00-17:45, room Holm_max2)

Hosted by Kristin Kahl (Cantargo) and Tobias Bernecker (Hochschule Heilbronn – University of Applied Sciences)

Even if the implementation of ERS will have a major impact on the infrastructure and the energy market, the road transport market will probably not head for ERS automatically. Hence, the idea of the round table is to outline and discuss the key success factors of commercial ERS truck operations in order to create a „market pull“ scenario for ERS.

We also invite operators to join the roundtable to exchange about their experiences and expectations concerning ERS and/or ERS field test projects.

Road Administrations (Tue 7th May 17:30-18:15, room Hörsaal 4)

Hosted by Hans Säll (NCC) and Achim Reußwig (Hessen Mobil)

The planning, procurement, operation and maintenance of ERS demonstration sites creates new challenges for road administrations/road services, for example regarding security and traffic control aspects. On this roundtable, we would like to invite experts to exchange on previous experiences but also current challenges and future prospects how to manage ERS, and how to integrate ERS into the daily business of road administrations/road services.

Public Awareness and Acceptance (Tue 7th May 17:30-18:15, room Open Lounge)

Hosted by Uta Burghard (Fraunhofer ISI) and Henner Weithöner (Freelance Journalist)

We would like to exchange experiences and research findings on the social acceptance of ERS. In this context, we will consider the different stakeholders that are relevant for the diffusion of ERS (e.g. logistic companies, technology providers, political actors and authorities, but also residents and road users). In addition, measures to increase acceptance of ERS on the local but also on the societal level are discussed.

ERS: The first test tracks are in operation - which next steps have to follow? (Tue 7th May 17:30-18:15, room Daimler)

Hosted by Stef Cornelis (Transport & Environment) and Florian Hacker (Öko-Institut)

The pressure to act in order to decarbonise road freight transport is high. At the same time, no technology has yet turned out to be a clear favorite, especially in long-haul freight transport. Technology testing of ERS on public roads at a small scale is underway, and in Sweden attempts are being made to test various ERS technologies in a next step at a larger scale. At the same time, freight transport is characterised by a high proportion of international traffic, which calls for early EU-wide harmonisation. Germany and Sweden seem to be leading the way but other Member States and Brussels need to follow if we want an EU-wide solution.

Against this background, this roundtable will discuss what possible next steps in the expansion of ERS could look like and which framework conditions would be necessary.

Conference Dinner

on Tuesday 7th May, 19:00
Druckwasserwerk, Rotfeder Ring 16, 60327 Frankfurt am Main

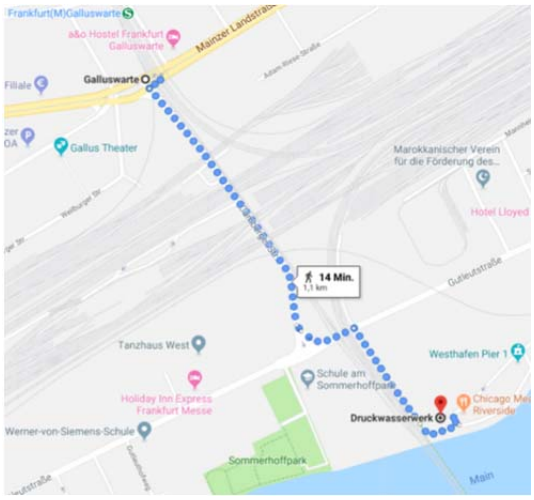
Sophisticated German gastronomy, an exquisite selection of wines and spirits and the pleasant charm of the house serve the customer a complete enjoyment for all the senses. The former machine hall in the neo-Romanesque style with its two towers, its own wine cellar as well as a generous outdoor area including a parking lot of its own, offers multiple opportunities for impressive events.

How to get there?

We provide a bus transfer from the conference venue HOLM to the restaurant. Busses depart between 18:00 and 18:30.

After dinner, we provide a bus transfer back to HOLM. On its way back to HOLM, the bus also stops nearby Frankfurt Hauptbahnhof / main station. The bus leaves at 22:30, 23:00 (2 busses), and 23:30. The bus stops for boarding in front of the restaurant – but only for a very short time. Please come in time and enter the bus quickly.

If you come / leave by public transport on your own: Next local train (S-Bahn) station is “Galluswarte” (see map, approx. 15 min. walk).



RESTAURANT DRUCKWASSERWERK

Site Visit

During the site visit, a bus will take you to the ELISA demonstration site (catenary ERS). Experts from the ELISA project team will give you an introduction to the technology, the planning and construction, and to the previously launched operation phase.

Please choose one of the following time slots and register in advance at our registration & help desk.

The number of seats is limited!

Tue 7th May: 13:00-14:30, 14:45-16:15, 16:30-18:00

Wed 8th May: 10:30-12:00, 13:15-14:45

Please be at the bus at least 5 minutes before the departure time.

The organizers would like to thank Ferdinand Schöpp (Technical University Darmstadt) for coordinating the site visit.

The ELISA Project

In the first phase of ELISA (2017-2018), a 5 km section of the federal highway A 5 between the junctions Langen/Mörfelden and Weiterstadt) was equipped with a catenary infrastructure in both directions.

The section is part of the connection between Frankfurt am Main and Darmstadt within the Rhine-Main metropolitan area and an important north-south route in the European long-distance transport network. It has therefore a high potential for the use of heavy duty vehicles and ensures a high level of public visibility of the project.

From 2019 on, a multi-year field test constitutes the second phase of ELISA. Five operators will use the route in day-to-day operation. The field test enables a comprehensive testing and investigation of ERS operation under practical conditions.

Project partners are Hessen Mobil – Road and Traffic Management, Technical University Darmstadt, ENTEGA and Siemens Mobility.

The ELISA project is supported by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in the funding program “Erneuerbar Mobil”.

Key note speakers

in alphabetic order

Manfred Boltze

Technical University Darmstadt, Institute of Transport Planning and Traffic Engineering. Chair of the Institute

Validators, Demonstrators, Facilitators – The Roles of eHighway Field Tests on the Way to Large-scale Implementation

Abstract:

Based on Technology Readiness Levels, the presentation summarizes gained achievements in developing the eHighway system and explains the principle role of field tests as validators and demonstrators.

Using the ELISA project as example, it highlights research questions to be answered by implementing the eHighway in a real road and traffic operations environment, in real transport companies and logistic processes, and in a real electric power system. The field tests also contribute with complementary developments, e.g. procedures for planning, building approval, and tenders, for emergency operations and for electricity billing. Finally, the role of the field tests as facilitators is addressed. They create awareness and provide opportunities to experience the eHighway.

Therefore, to promote acceptance, careful system implementation is as important as public relations management during the test. The test sites are also a nucleus for system extensions, and by analyzing real use cases, they help identifying further potential users and needs for system amendments.

Biography:

Manfred Boltze is professor for Transport Planning and Traffic Engineering at Technische Universität Darmstadt (Germany) since 1997. He studied civil engineering and received a doctor degree for his work on traffic signal control in 1988.

His research covers a broad range of traffic and transport related topics, such as planning methodology, traffic management, Intelligent Transport Systems, road traffic signals, traffic safety, and transport and health.

35 doctoral students and more than 200 Diploma and Master students graduated under his supervision. 190 publications, memberships in editorial and advisory boards, and many other activities indicate his comprehensive commitment to promote research and education in his discipline.

Since 2017, he is involved in the eHighway field test ELISA.

Stef Cornelis

Transport & Environment, Manager Clean Trucks

How EU policies can drive ERS systems in Europe

Abstract:

Electronic road systems are getting traction in countries such as Sweden, Germany and Italy.

But in the end we need a European solution to decarbonise international road freight.

The European Union can and should play an important role in promoting cross-border zero emission trucking by for example supporting infrastructure projects in Member States and make sure that trucks can travel cross-border without facing any barriers.

In this presentation we will discuss the current and upcoming EU initiatives that can play a key role in the deployment of ERS in Europe.

Biography:

Stef joined T&E in March 2016 after three internships at the Belgian Embassy, Flanders Investment & Trade, both in Berlin, and a one year internship at PubAffairs Bruxelles.

He joined T&E's freight and climate team and works on cleaner trucks.

Stef completed two master degrees in history and EU studies at the KU Leuven and Università Roma Tre.

Renato Mazzoncini

Politecnico di Milano, Adjunct Professor

The technical uptake of E-Highway concept in Italy

Abstract:

In light of the various pilot projects launched in Sweden and Germany, Italy is also looking with interest at e-highways, which could become a new important European infrastructure capable of contributing heavily to the goal of decarbonising freight transport.

The Milan-Brescia section, part of the East-West European corridor, is one of the busiest routes in Italy, and the new Brebemi motorway is a candidate to realize the first Italian section of ERS. The European coordination is fundamental and the quick decision about the technological standards to be adopted to avoid the risk of non-inoperability which unfortunately already characterizes European railways.

The presentation will illustrate the first considerations about feeding models and vehicle-infrastructure mechanical interactions.

Biography:

Since September 2017 Professor at Polytechnic of Milan for the course “Mobility-Infrastructures and Services”. Freelance and senior advisor for mobility systems management and investments in infrastructures.Former CEO of Ferrovie dello Stato S.p.A. – Italian Railways Company. 1-12-2015 - 3/08/2018.

Graduated in Electro Technical Engineering at the Polytechnic in Milan in 1992.Involved on public transport systems since 1992 as electric designer in the railway sector for Transystem Spa (AnsaldoTrasporti Group). Manager in Public Transport Companies, both private and municipally from 1998 to 2012.

In 2012 he has been engaged by Ferrovie dello Stato as CEO of the BusItalia, bus company of the Group. On the 1st December 2015 the Italian Government appointed him General Manager and Managing Director of FS, at the age of 47 he was the youngest CEO of the history of FS.

Jan Pettersson

Swedish Transport administration, Director at department for strategical development

Setting up a 20-30km ERS pilot in Sweden

Abstract:

The Swedish Transport Administration have received a governmental assignment to investigate and report the conditions for whether electric road systems may be part of the state owned road network (4). The assignment includes the following steps:

- Costs, tax/fee models, financing models and taking into account the current funding principles for state transport infrastructure.
- Environmental and climate impact in a lifecycle perspective including impact on landscapes as well as valuable natural and cultural environments
- need for changes in regulations
- spread of technology, as well as
- impact on the ability to achieve the transport policy objectives

In the roadmap one of the tasks is to deploy an ERS-pilot. The focus for a pilot is not the technique since the technique that will be used must at least have reached TRL 7. The purpose is to deploy an ERS section and analyse legal aspects, planning procedures, accesscontrol, power supply, energy measurement, charging etc.

Biography:

Jan Petterson works as a Director at the Department for Strategic Development at the Swedish Transport Administration. Jan Pettersson is the Head of the Swedish national program for electrified roads in Sweden. He coordinate the Swedish – German partnership on behalf of the Swedish ministry.

Mr Jan Pettersson have a long experience as Executive Director for both roads and railways regarding maintenance and operations. He is also active in european benchmarkning projects within PRIME (Plattform for Railway Infrastructure managers across Europe) and CEDR (Conference of European Directors of Roads).

Mr Jan Pettersson is a cuivil engineer and studied at the Royal Technical University in Stockholm.

Suyash Singh

Grenovators Motor Work Private Limited, Founder & CEO

Scope of ERS adoption as a futuristic electric mobility solution for India

Abstract:

India is aggressively working on to adopt electric mobility at a faster rate in a huge number of several schemes and technological developments are taking place. One of them is by giving a direct subsidy to end customer on all types of vehicles, setting up charging infrastructure within the city premises and also on the highways of the selected cities, exemptions on road taxes, parking fees, registration fee, etc. which is attracting customers and corporate to use the electric mobility for saving the carbon footprints and also in the overall operational cost.

The Electric road system (ERS) will be the most economic development, to be adopted by India as an advanced electric mobility solution for 100 smart cities. This drive helps in converting several public transports, logistics, last mile connecting vehicles etc. on ERS. It can be used well during the taxi ranks at the airports, metro stations, railway stations etc. and also on the regular routes of the Government offices & public transport networks. With a target to achieve 100% of electric mobility by 2030, Faster Adoption and Manufacturing of Electric Vehicles (FAME) and has allocated 10,000 crores INR for the period three years 2019-2022 towards the advancement of electric mobility. This helps ERS, to get introduced in India for the commercial development. Several ERS corridors can be built for different types of vehicles in India.

Biography:

Suyash Singh is the Founder and Chief Executive Office of Grenovators Motor Work Private Limited, a start-up recognized company in India. He holds the majority share in the company. Mr. Singh is a very active member of Society of Automotive Engineers (SAE) India and mentor for several engineering college teams participating in National & International events. Mr. Suyash Singh has very vast exposure about the electric vehicles scenario in India and has published several research studies on the same. He is working on EV projects, 1. Converting the old conventional vehicles into battery operated electric vehicles with a retro-fitment kit for Indian smart city project and 2. Developing three-wheelers for smart city. He is working with their partner company NCC from Sweden to introduce the ERS in India for three-wheelers and heavy vehicles.

Suyash has a bachelor’s degree in Mechanical Engineering and a Master’s degree in Business Administration from India’s first Indian Institute of Information Technology & Management a Govt. of India Institute.

Arnd Stephan

Technical University Dresden, Chair of Electric Railways. Full Professor

Perspectives for electric road traffic – chances and challenges

Abstract:

Electric transportation systems exist since more than 140 years – but currently they are successful only on rails. To fulfil the efficiency demands and the environmental responsibility of the worldwide growing road transport a promising solution could be the highway electrification based on railway technology - using contact lines and hybrid trucks with electric power train. This results in a new kind of a road transportation system with larger infrastructure parts in public areas.

As the history of railway electrification shows, an intensive period of design, testing, validation and approval is necessary to achieve systems availability, safety and performance. In Germany it was decided to take up this challenge using the long-term experience and the engineering potentials of the railway and automotive sector as well, supported by a Federal funding.

The talk will highlight the special chances and challenges of road electrification from the view of an electric railway expert.

Biography:

Professor Arnd Stephan holds the chair of Electric Railways at the TU Dresden since 2008. He studied electrical engineering/ electrical railways at the Hochschule für Verkehrswesen (University of Transport) in Dresden and finished his doctoral studies with the awarding of the doctoral title in 1995.

Since 1993 he worked in the international railway business and became a certified expert of the German Federal Railway Authority EBA for electrical installations, magnetic levitation trains and converter systems.

His areas of expertise include rolling stock technology, electric and hybrid drive systems and railway power supply as well as approval processes and railway safety issues. Since 2012, he is involved in the development and testing of the eHighway system.

Jianjun Zhang

Director of Technology Administration Division, Highway Department, Ministry of Transport, P.R. China

Current status and progress of Chinese Highways‘ Smart and Electric Transformation

Abstract:

By 2018, China’s road mileage has exceeded 4.7 million kilometers and the highway mileage reach 137,000 kilometers, which rank first in the word. The highway network basically cover all cites with a population more than 200,000.

In recent years, the transportation industry has actively implemented the requirements of the ecological civilization construction and energy-saving and environmental protection policies. The construction of a sustainable transportation system is mainly focus on low carbon and intelligent transportation, and the Ministry of Transport has issued “Opinions on Implementing Green Highway Construction” and “Notice on Accelerating Pilots of the New Generation of National Traffic Control Networks and Intelligent Transportation”.

The Ministry of Transport has successively carried out the pollution control of diesel trucks, the promotion and use of clean energy vehicles, the integration of internet-based traffic big data, the intelligent construction of road infrastructure, and cooperative technology of autonomous driving and cooperative vehicle infrastructure system (CVIS), strive to build safe, convenient, efficient, green and economical high quality road transport systems.

Biography:

Mr. Jianjun Zhang is the Director of Technology Administration Division of Highway Department, Ministry of Transport P.R. China. From 1990 to 2007, he is mainly engaged in review the highway construction project, manage the design industry, set technical standards, and international cooperation items. From 2007 to 2009, he served as the deputy commander of the construction headquarters of the Yangtze River Highway Bridge in Taizhou, Jiangsu Province. From 2009 to 2013, he worked in the Engineering Management Division of Highway Department, Ministry of Transport, and was responsible for the coordinated management of the construction of key highway construction projects such as the Hong Kong-Zhuhai-Macao Bridge and the Yalu River Bridge. From 2013 to 2017, he served as the director of Construction Market Supervision Division of Highway Department, Ministry of Transport. From 2018 to now, he is the Director of Technology Administration Division of Highway Department, Ministry of Transport.

Panelists and Roundtable Hosts

in alphabetic order

Helena Andersson

Swedish Transport Administration,
Strategic planner, advisor on legal matters and financing

Helena Andersson holds an LL.M from the University of Uppsala, specialized in European law and Public procurement. She holds a position as Strategic Planner and advisor on legal matters on ERS in the Swedish Transport Administration.

She has worked within the former Swedish Road Administration and in the Ministry of Transport with regulations on planning of roads and railways, infrastructure charges and financing.

Tobias Bernecker

Heilbronn University of Applied Sciences, LOGWERT Institute, Academic Director

Tobias Bernecker is a full professor at Heilbronn University since 2011. He holds a Dr. rer. pol. from the University of Stuttgart.

Before joining Heilbronn University, Tobias Bernecker has been working for the Ministry of Transport of Baden-Württemberg as an advisor.

He is specialized in the field of transport policy and transport economics, especially in infrastructure development and financing strategies. Business and market modelling for ERS are main aspects of his current research.

Uta Burghard

Fraunhofer Institute for Systems and Innovation Research ISI

Uta Burghard studied Social Sciences with Psychology at the universities of Mannheim, Giessen and Brussels, specializing in Micro-sociology, Consulting and Advisory Services.

Since January 2012 researcher in the Competence Center Energy Technology and Energy Systems at the Fraunhofer ISI.

She finished her PhD at the Leuphana Universität Lüneburg in Summer 2016 on norms and guiding principles related to cars and electric mobility in families.

Her work is focused on the social acceptance of new mobility technologies and infrastructure and also qualitative and quantitative methods.

Florian Hacker

Öko-Institut, Deputy Head Resources & Transport Division

Florian Hacker holds a degree in Geoecology and joined Öko-Institut in 2007.

He is deputy head of the Resources & Transport Division. His research activities focus on technology assessment from different perspectives, the development of CO2 reduction strategies for the transport sector and the calculation of transport emissions.

His special expertise lies in the examination of alternative propulsion technologies with a particular focus on electric mobility. He is currently project leader of several projects on the electrification of commercial vehicles, including battery-electric and ERS technology solutions.

Axel Hausen

Netze BW GmbH (as part of EnBW AG), Head of Product Management (incl. Marketing and Business Development)

Axel Hausen has got a degree in mechanical engineering and MBA. He works at the Netze BW GmbH in the position as the head of product management & business development for critical Infrastructure services. The following themes are included:

- eMobility Charging Infrastructure / Electric Road Systems
- Street Lightning
- Utility Services (build, run and service grids of power, gas, water & heat)
- Grid Connection Services B2B (commercial, industrial, renewable energy), Communal Street Asset Management

Elna Holmberg

Group Trucks Technology,
Vice President Volvo Group Electromobility

Dr. Elna Holmberg is Vice President Volvo Group Electromobility. She received a PhD in Combustion physics from the Royal Institute of Technology, Stockholm. After graduation, she joined Volvo as CFD specialist.

Holmberg has since hold various management positions in automotive industry, in the areas of product development, product design and governmental affairs, both for cars and for heavy vehicles.

She also worked as director for Swedish Electromobility Centre, a national centre of excellence for hybrid and electric vehicles and charging.

Kristin Kahl

Contargo GmbH & Co. KG, New Business and Digitalization

As a member of the Contargo Sustainability Department I am managing the interaction of ecological, economic and social needs, which have a major impact on our future development. Contargo's primary goal is to be decarbonized by 2050. This can mainly be achieved through technical changes in the different modes of transport and in our activities at our inland terminals.

Digitalization contributes significantly to this, but the digitization process must take place in a positive and smooth way for every employee within Contargo.

Michael Lehmann

Fachhochschule Erfurt – University of Applied Sciences
Faculty of Economics, Logistics and Transportation
Professor for International Railway Systems

Michael Lehmann (38) studied transport and traffic engineering at Dresden University of Technology (TU) specializing in electric transport systems.

From 2006 to 2009 he conducted research into railways with higher system voltages as a Siemens AG research stipend at the chair for Electric Railways at TU Dresden. In 2009 he joined Siemens as specialist for system design of railway power supplies; from 2010 on he concentrated on electric road systems with focus on R&D projects, system integration and standardization, and was nominated as Senior Engineer eHighway in 2013. Since May 2019 he is appointed professor for International Railway Systems at Fachhochschule Erfurt, Germany.

Achim Reusswig

Hessen Mobil, Head of Department "Intelligent Traffic Systems"
Project Leader "ELISA – eHighway Hessen"

- Born 1971
- 2000 Studies of civil engineering at Darmstadt University of Technology
- 2000-2005 Research Associate and doctorate to Dr.-Ing. at Darmstadt University of Technology
- 2005-2010 Project manager
- since 2010 Hessen Mobil – Road and Traffic Management, currently responsible for the Traffic Control Center Hessen (Verkehrszentrale Hessen) and research activities of Cooperative, connected and automated mobility
- Committee and task force member of the German Road and Transportation Research Association (FGSV).

Andrea Dorothea Schön

Schenker AG, Sr Mgr Carbon Controlling and Consulting

Andrea Dorothea Schoen holds a Diploma in Psychology and a Master of Arts in Political Science.

As officer of corporate management she is in charge of DB Schenker's Climate Protection program, focusing on carbon controlling, related carrier management and customer consulting. Andrea Schoen has been Project Partner and Advisory Body member in various EU projects on transport emissions. She represents DB Schenker in CCWG (Clean Cargo Working Group), SAFA (Sustainable Air Freight Alliance), GLEC (Global Logistics Emissions Council) as well as in DIN, CEN and ISO standardization bodies. In her daily work Andrea Schoen works closely with carriers and customers to support them in their climate emission reduction targets.

Hans Säll

Head of Business development at NCC Infrastructure

I've held a number of leading positions within NCC, which is the leading construction company in the Nordics, since 2001. It has mainly been in the areas of human resources, strategy, communication, marketing and business development.

As educational background I have a degree in Master of Law. For the last ten years or so, I have been focusing on sustainable business development and Nordic business within asphalt, aggregates, road services and infrastructure.

This includes working with electric road systems and I'm currently Chairman of the Board and CEO of eRoadArlanda as well as part of the Steering committee of Västsvenska Elvägar, which is an ERS consortium in cooperation with Alstom and Volvo.

Henner Weithöner

Freelance Journalist, Berlin

Henner Weithöner is a free-lance journalist based in Berlin. Amongst others he has been writing for tagesschau.de, taz, Wiwo Green and the Climate News Network. As a tutor for advanced journalism training he has been working for Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), International Institute for Journalism (IIJ) and Deutsche Welle Akademie. Specialized in Environmental Reporting he conducted classes and workshops in Egypt, Indonesia, Kenya, Laos, Malaysia, Namibia, Uganda and Ukraine.

Henner Weithöner built up and hosted several E-Learnings titled "Reporting on Climate Change" ahead of UN Climate Summits, e.g. COP 21 in Paris in 2015.

Moderator and further speakers

Urs Maier

Agora Verkehrswende, Senior Associate Freight Transport

Urs Maier is an expert on freight transport and the integration of the transport and the energy sector. At Agora Verkehrswende he is responsible for handling topics related to electric vehicles and power grids, electricity-based fuels, and the strengthening of rail transport. Prior to Agora Verkehrswende, Urs was employed at the environmental organization “Deutsche Umwelthilfe” and the Universtity of Luxembourg’s Institute of Geography and Spatial Planning.

He received a PhD for thesis work on path dependencies and green technology in the automobile sector and holds a Diplom degree in Geography. He studied in Cologne, Bonn, and Gothenburg.

Gereon Meyer

VDI/VDE Innovation + Technik GmbH
Deputy Head of Department Future Mobility and Europe

Dr Gereon Meyer, Deputy Head of the Future Mobility and Europe Department of VDI/VDE Innovation + Technik GmbH, earned his Ph.D. in Physics from the Freie Universität Berlin.

Before joining VDI/VDE-IT in 2007, he was a research associate at Stanford University, Palo Alto, CA (USA) and a visiting scientist with Hitachi Global Storage Technologies, San Jose, CA (USA) as well as Lawrence Berkeley National Laboratory, Berkeley, CA (USA).

At VDI/VDE-IT, Dr. Meyer is an expert for the electrification and automation of the transport system and the related enabling technologies. He serves as an Operating Agent of Task 1 “Information Exchange” in the Technology Collaboration Programme Hybrid and Electric Vehicles of the IEA.

Ferdinand Schöpp

Technical University Darmstadt, Institute of Transport Planning and Traffic Engineering

After his study of Traffic and Transport Engineering at Technische Universität Darmstadt (TU Darmstadt), Ferdinand Schöpp (25) has begun to deepen his research activities as a scientific associate at the Institute of Transport Planning and Traffic Engineering of TU Darmstadt.

Even if his previous orientation was based on the sector of aviation, he nowadays focuses intensively on the questions of interest related to society as a whole within the research project ELISA - Electrified, innovative heavy traffic on highways. His current investigations deal with the evaluation if and how affected persons assess the innovative technology of catenaries on highways.

The venue and how to get there

House of Logistics and Mobility
Bessie-Coleman-Straße 7
60549 Frankfurt am Main

10 minutes by bus or taxi from Frankfurt Airport and Train Station Frankfurt Airport

Bus timetable from Frankfurt Airport to HOLM

FROM: the airport terminal 1 plattform 17
TO: HOLM GmbH Kreisel Unterschweinstiege
BusX19, 77: Monday to friday every 20 minutes

Bus timetable from HOLM back to the airport

FROM: HOLM GmbH Kreisel Unterschweinstiege
TO: the airport Terminal 1 plattform 17
BuX19, 77: Monday to Friday every 20 minutes
The buses are driving all day long from 4.30h until 22.30h.
The driving time for each ride is only 10 minutes.

If you come by your own car: No parking options are available directly at HOLM. Please use car parking in the hotels close-by.