The 30th International Electric Vehicle Symposium & Exhibition

October 9–11, 2017
Messe Stuttgart, Germany

Conference Program
Dear friends,

I am very proud to welcome you to the 30th International Electric Vehicle Symposium and Exhibition (EVS) in Stuttgart. The World Electric Vehicle Association (WEVA), with our partners of AVERE, EDTA and EVAAP upholds an almost 50 year old tradition to annually gather academics, industry, students, NGOs, policymakers and anyone interested for a 3-day event. EVS is the place to discuss trends and innovation and think about the future forms of mobility. There is no other EV conference that can compare to this long lasting tradition and spirit.

The EVS participants have always given me hope, and now more and more people understand the importance of EVS. Your job is important, because you, the EVS participants, are the people who will make a strong contribution to saving our climate and improving the air quality of our cities. With transport being the second biggest greenhouse gas emitting sector, we need to implement new technical developments and mobility concepts to reach set goals.

With the topic becoming more significant for industry, politics and science, we continue to grow in size and quality, at the same time we want to maintain the sense of togetherness and I hope that EVS will continue to be an arena where life-long ties are made between colleagues and friends.

Let me say thanks to the local team bringing EVS30 to life: Messe Stuttgart, Peter Sauber Agentur, e-mobil BW, bw-i, WRS, and of course BSM - Bundesverband Solare Mobilität, the German chapter of AVERE. Together with our sponsors and partners they have done a great job, and been responsible for an excellent collaboration.

I am happy, that we could bring EVS30 to the innovative and economically powerful State of Baden-Württemberg, and the, for anyone interested in cars, historic location of Stuttgart. Now, we see that Stuttgart is ready to grab the opportunity to positively impact also the next chapter of mobility history.

We all see a future with big and fast changes coming, let us keep in mind that the best way to predict the future is to invent it.

Enjoy EVS30!

Espen Hauge
WEVA President

As Minister President of the State of Baden-Württemberg and patron of EVS30 I am honoured to welcome you all here today. Baden-Württemberg is the birthplace of the car – a good 130 years ago, the automobile was invented here and today the aim is no less than to reinvent the car and rethink mobility. Electrification and digitalisation (i.e. networking and automation) imply a profound change – and not only from the aspect of technology. Climate-change, new mobility concepts and social changes are resulting in a new global situation which the automobile industry must face up to. The car of the future will drive emission-free and this will make a vital contribution towards protecting the climate. As a result we must rethink and redesign mobility.

The future will see cars with electric motors and other low-emission drive systems on the roads. These innovations will also be accompanied by a change in customer behaviour as well as in market demand. This will entail a fundamental change to the traffic system, not to mention the social, cultural and economic aspects of mobility. Demand for intermodal mobility also requires new solutions, such as the intelligent networking of public and private transport.

The task is to regard this change as an overall opportunity and to make the transformation in the car industry into a success in two respects: firstly a success for the climate and health protection and secondly a success for companies and employees. With the “Automotive Industry Strategy Dialogue BW” we have created a format which allows all the players involved to collaborate in accompanying and developing this process. The important factor for us here is the collaboration with other federal states and the federal government as we can only meet the requirements if we stand together.

EVS30 is the industry meeting point which will supply new ideas and provide valuable impulses. This is where manufacturers, users and decision-makers have the opportunity to obtain up-to-date information about all forms of electromobility and to make and discuss new trends. Let us harness the inspirations that EVS30 offers to develop the thematic field with enthusiasm and energy. Therefore I am delighted that you are all using EVS30 as a platform for international exchange to present your own product portfolios and maintain contacts.

Winfried Kretschmann
Minister President of the State of Baden-Württemberg
Rethinking mobility

Dear readers, we are going through one of the most exciting times since the invention of the automobile by Gottlieb Daimler and Carl Benz. In the future, our understanding of mobility will change even more fundamentally than has been the case over the last 131 years. Connectivity, Autonomous Driving, Shared Mobility and Electric Mobility – or as we call it: CASE. These are the topics with which we at Daimler will continue to rethink and improve mobility into the future. The focus will as always be on our customers and their very individual mobility needs.

Vehicles from Mercedes-Benz have always been trailblazers when it comes to technical innovation. No other manufacturer offers a comparable vehicle portfolio. This ranges from the city runabout smart to the Mercedes-Benz passenger car models and right up to buses and trucks. Accordingly our drivetrain systems are also technologically wide-ranging. In the interests of our customers, and with a view to our extensive vehicle portfolio, we are following a three-lane drivetrain strategy on the way to locally emission-free driving: highly efficient high-tech combustion engines, systematic hybridisation and battery-electric or fuel cell drive.

Concerning E-Mobility, we literally flipped the switch last year and consolidated our activities related to electric driving under our new EQ brand. We expect that in the year 2025, up to one quarter of our worldwide unit sales will be accounted for by electric vehicles. To this end we are investing more than 10 billion euros in the expansion of the EQ vehicle portfolio alone.

Dear readers, I believe that alternative drivetrain systems must above all be attractive. For me this means that the overall package of driving pleasure, operating range and short charging times must be convincing for our customers. We at Daimler are working on all these aspects – and many more besides – with a strong passion and therefore are very happy to invite you to our booth F44 in Hall 1.

We are not waiting for the mobility of tomorrow – we are already constantly rethinking it now!

Ola Källenius
Member of the Board of Management of Daimler AG, Group Research & Mercedes Benz Cars Development

In the face of climate change and scarcity of resources, we need to ensure resource-efficient and, where possible, zero-emission mobility. Electric Mobility is key in achieving a sustainable change of mobility: It has the potential to replace fossil fuels for mobility applications in the long term and thus to make an active contribution to the protection of climate and environment – particularly in combination with renewable energies. As electric vehicles travel locally free from emissions, they can contribute to a higher quality of life especially in large cities.

From an international point of view we can therefore recognize a high level of dynamism: Today there are already more than two million electric vehicles driving on the streets worldwide. According to various studies, this number is expected to increase to around 70 million electric vehicles until 2025. Currently, governments all over the world are supporting electric mobility in various ways. This also applies to Germany: More than 30 electric vehicle models from German companies are already on the market and their number will grow to 100 models available by the year 2020. The Federal Government has taken several measures to further boost the market, for example the environment bonus, a grant for the purchase of an electric vehicle, and a funding program for the expansion of public charging infrastructure.

Henning Kagermann
President of the National Platform Electromobility

This is why I am very happy to warmly welcome you to the Electrical Vehicle Symposium in Stuttgart. This conference will give policy makers, scientists and business representatives from all over the world the opportunity to exchange their knowledge and experiences about technological advances as well as to discuss the global market development or business models. In addition, the exhibition will provide insights into technological development – from charging infrastructure to production technologies. Further information programs and the possibility for all guests to go for a spin in an electric vehicle on their own demonstrate that electric mobility is fit for everyday use. I wish you some interesting insights, inspirations and discussions at this year’s Electrical Vehicle Symposium.
Ulrich Kromer von Baerle, Management Representative of Landesmesse Stuttgart

The anniversary of EVS30 is taking place at exactly the right time at the right place. Here in the city where the automobile was born, the theme of electromobility is being discussed as intensively as never before. Our economy is undergoing a period of transition to provide the right offers for the megatrends of mobility and digitalisation. We are delighted to provide an attractive platform for the new technical developments at our trade fair, as well as an international meeting place for the exchange of ideas and opinions between researchers, government representatives and industry experts. We are very proud to host, together with the event organizers and sponsors, the biggest and most important event in the field of electromobility.

Franz Loogen, President of e-mobil BW

Baden-Württemberg – Germany’s south-west – a place to create and design innovative mobility solutions of the future. We are home to national and international experts working in technology companies, from well-known global players to many small and medium-sized hidden champions, as well as internationally renowned universities and research institutes. I’m convinced that our international visitors to EVS30 will feel the spirit of engineering and innovation that shapes our region. We are happy to welcome you to Baden-Württemberg and are looking forward to develop and discuss new ideas for the future of mobility with you. Let’s make EVS30 to an important step in the development of future mobility technologies by creating new international partnerships.

Peter Sauber, CEO of Peter Sauber Agentur

2017’s double-bill is extremely exciting - not only for us as host of f-cell and BATTERY+STORAGE and co-organizer of EVS30. We received a record number of submissions for the EVS30 conference which allowed us to compose a rewarding program for every delegate. We demonstrate to be in line with the latest developments in the automotive and non-automotive sectors: Ever thought about the nuts and bolts of combining zero-emission cars with zero-emission housing and offshore wind farms? The f-cell and BATTERY+STORAGE conference complements the EVS30 focus on electric cars with the crucial perspective on non-automotive technologies for clean transportation, smart grids, storage and sector coupling.
f-cell and BATTERY+STORAGE complement the mobile f-cell and BATTERY+STORAGE transport transition. As electric drive technologies progressed from the classroom and laboratories into the marketplace, EVS expanded into an event both academic and business oriented, rotating between Europe, Asia and America. Following the motto “Industrialization and market – the sustainable path to electromobility”, EVS30 will be a place of sharing latest technology advances and a forum to discuss how electromobility and new mobility technologies can contribute to the solution of recent climate challenges. EVS30 will bring together leading experts from around the globe. What makes EVS30 special in 2017: f-cell and BATTERY+STORAGE are co-located to EVS and complement the world’s largest international event for electromobility with energy-specific dimensions.

f-cell and BATTERY+STORAGE f-cell and BATTERY+STORAGE complement the mobile topics of EVS30 perfectly by highlighting stationary storage solutions, fuel cell and battery materials, aircrafts, ships, ports and rail topics as well as hydrogen as one of the most important large scale storage solutions of the „Energiewende“.

f-cell has a long lasting tradition. In 2001 it started as local event for producers and users. It grew to one of the biggest events for hydrogen and fuel cell technologies worldwide. In 2012 battery topics completed the outlook and network to an efficient and practicable energy and network to an efficient and practicable energy and transport transition.

OPENING HOURS:
Conference EVS
Monday, Tuesday: 8:00 - 18:00
Wednesday: 8:00 - 13:45
Conference f-cell and BATTERY+STORAGE
Tuesday: 8:00 - 18:00
Wednesday: 8:00 - 16:45
Joint exhibition: daily 9:00 - 17:00

PRICES CONFERENCE TICKETS: (excluding 19% VAT)

<table>
<thead>
<tr>
<th>Ticket Type</th>
<th>Price</th>
<th>Delegate</th>
<th>Student</th>
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<tbody>
<tr>
<td>3-Day Ticket</td>
<td>1.050,00 EUR</td>
<td>500,00 EUR</td>
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<tr>
<td>2-Day Ticket</td>
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Conference tickets can be purchased in the Check-in area, ICS. The tickets give access to both conferences as well as the joint exhibition.

Catering Area: The catering area for exhibitors and conference participants is located on the Gallery in Hall 1.

Conference Proceedings: Conference proceedings will be available online from the first day of the conference. Each delegate will receive an email with their login details. Should you not have received this email by the end of the first day, please come to the Info Point in the Check-in area, ICS.

Exhibition Catalogues: are available at the Entrance of Hall 1

Press Center: 1st floor, Entrance East
Contact person: Wolfram Huonker, +49 711 18560-2629

Visitor Parking Electric Vehicles:
Electric vehicles can be parked and charged at no cost in carpark P33, which can be accessed through Gate 1, Messe Stuttgart. Please ask at the Info Point in the Check-in area, ICS for more information.

INFO BOXES:

SANDRA BILZ, +49 711 656960-5704
Organizers office conference:
Check-in area, ICS
Info Point:
Room 1.2, Hall 1

Sandra Bilz, +49 711 656960-5704

INFORMATION FOR SPEAKERS

Speaker Check-in
The speaker Check-in is the first port of call for all speakers to collect their badge and conference bags. Here we will also assist with any questions or queries you might have.

Speaker Room
All speakers are entitled to use the Speaker Room at CA1, ICS. The room offers space to prepare for your talk or finalize your presentation if required.

Session Chairs
If you are a session chair, we strongly recommend that you come to the Speaker Room before your session as this offers you the opportunity to meet your co-chair and the speakers in your session upfront.

Every session has two co-chairs. If a co-chair has not turned up to their session, please let the room staff or the IT team in the speaker room know.

HELPFUL INFORMATION

WHERE TO GET HELP:
First aid: at the elevated section between Hall 1 and Hall 3, Phone +49 711 18560-7777
Fire service: There are fire alarms and fire extinguishers in every hall. Emergency no. in case of fire: +49 711 18560-7777
Main fire station: +49 711 18560-3500
Police: Emergency number: 110
Esslingen Police Station: Agnespromenade 4, 73728 Esslingen, phone +49 711 3990-02
Pharmacy: Airport

SERVICE DESKS:
Businesscenter: Entrance East, Atrium
Photocopyst, Fax, Telephone
Info Point: Check-in area, ICS

Organizers office conference: Room C8.1, ICS
Organizers office exhibition: Room 1.2, Hall 1

Stuttgart Messe Service: Service center Entrance East, lower level, Phone: +49 711 18560-7101
Touristic program: Stuttgart Marketing offers a variety of tours and visits in the wider area. For more information, please visit the Info Point in the Check-in area, ICS.

Church facilities: Entrance East, lower level
Church information and meeting point, Room for encounters, phone +49 711 18560-3220, Prayer room (opposite cloakroom) at 12:45: short ecumenical services, Place for prayer for guests of Jewish faith (MIZ RACH) and Muslim faith (QIBLA)
Cloakrooms: Entrance East, lower level
Shopping center: Entrance East, lower lever
Smoking areas: The Stuttgart Trade Fair Centre is a non-smoking area. Smoking is only permitted in the designated areas.

Taxi ranks: directly at the Messepiaza, Entrance East Phone: +49 711 8888 8888, Phone: +49 711 566061 Phone: +49 711 557728
## PROGRAM OVERVIEW

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<th>DAY</th>
<th>TIME</th>
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<td><strong>MONDAY, OCTOBER 9</strong></td>
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<td>08:00 – 09:00</td>
<td>Conference Registration</td>
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<td>09:00 – 10:30</td>
<td>A1 – A5 Parallel Sessions</td>
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<td>10:30 – 10:45</td>
<td>Coffee break</td>
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<td>10:45 – 12:00</td>
<td>P1 Opening Ceremony EVS30</td>
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<td>12:00 – 12:15</td>
<td>P2 Scene-setting Keynote</td>
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<td>12:15 – 13:15</td>
<td>Lunch break</td>
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<td>13:15 – 14:45</td>
<td>D51 Dialogue Session</td>
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<td>14:45 – 16:15</td>
<td>B1 – B5 Parallel Sessions</td>
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<td>16:30 – 18:00</td>
<td>D1 – D5 Parallel Sessions</td>
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<tr>
<td>17:00 – 19:00</td>
<td>Get together – Gallery, Hall 1, sponsored by E.ON</td>
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<td><strong>TUESDAY, OCTOBER 10</strong></td>
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<td>09:00 – 10:30</td>
<td>P3 Plenary Session with panel discussion</td>
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<td>E1 – E5 Parallel Sessions</td>
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<td>D52 Dialogue Session</td>
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<td>P4 Plenary</td>
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<td>16:30 – 18:00</td>
<td>G1 – G5 Parallel Sessions</td>
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<td>18:00 – 23:00</td>
<td>Evening event with f-cell award ceremony</td>
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<td><strong>WEDNESDAY, OCTOBER 11</strong></td>
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<td>12:30 – 13:45</td>
<td>P6 Closing Ceremony EVS30</td>
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<td>13:30 – 15:00</td>
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<td>15:00 – 19:00</td>
<td>TecTours / Sight Seeing Tours</td>
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<td>15:00 – 15:15</td>
<td>Coffee break</td>
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<td>15:15 – 16:45</td>
<td>P7 Closing plenary f-cell, BATTERY + STORAGE</td>
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<td><strong>THURSDAY, OCTOBER 12</strong></td>
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<td>TecTours / Sight Seeing Tours</td>
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**INFORMATION**

Program subject to change. Check website and onsite signage for up to date version.

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We don’t make compromises.
We make sports cars.

Porsche E-Performance.

Welcome to the Porsche E-Performance family.
Built with hybrid technology, born on the race track and optimised for the road.
Discover impressive performance at porsche.com/e-performance.

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Fuel consumption (in l/100 km) combined 2.5; CO₂ emissions combined 59 g/km;
Electricity consumption (combined in kWh/100 km) 15.9
MATCHMAKING AND EVENING EVENT

GET IN TOUCH WITH INTERNATIONAL EXPERTS ON ELECTRIC MOBILITY AND ENERGY STORAGE

You want to benefit the best as possible from EVS30, f-cell and BATTERY+STORAGE and want to get in touch with international experts from all around the globe? Attending our matchmaking will give you easy access to key industry drivers and researchers, interested in shaping the sustainable energy and transport economy of tomorrow. Take this chance and become active in the different matchmaking opportunities offered on all three days during our big event.

Come and join international B2B meetings to meet potential cooperation partners and participate to our round tables to discuss challenging topics with experts! For more information: www.b2match.eu/evs30

You didn’t have the time to register in time? Don’t worry! Last minute registration is possible during the symposium. So, just come along and check-in at our matchmaking area on site!

We look forward to welcome you at the matchmaking area in hall 1, booth 1A02.

EVENING EVENT - TUESDAY, OCTOBER 10

The Evening Event of EVS30, incorporating the f-cell awards, will be held on Tuesday, October 10, 2017 at Messe Stuttgart. Admission starts at 17.30, with the program starting at 18.30.

The Evening Event is free to attend for all conference delegates, however, pre-registration is required as the number of participants is limited. If you haven’t registered for the Evening Event as part of your conference registration already, please go to the Conference Check-in, ICS to get your ticket, subject to availability. Guests can purchase a ticket for €45 + VAT.

TECTOURS

The technology location of Baden-Württemberg has a high concentration of key players in the field of electric mobility: they include world-renowned vehicle manufacturers, large automotive component suppliers and many innovative small and medium-sized enterprises from the key industries of motor vehicle manufacturing, energy, production, and information and communication technology. The region is also home to a large number of excellent research institutions and universities.

During the TecTours Baden-Württemberg International and e-mobil BW enable conference participants to visit different companies and research institutions involved in the field of electric mobility.

More details on the tours: www.messe-stuttgart.de/en/evs30/visitors/conference/side-program/testours/ (Please note: The TecTours are booked)

WEDNESDAY, OCTOBER 11, 2017

Tour 1: Factory tour - Porsche
Tour 2: Factory tour – Bosch
Tour 3: Lab tour - University of Stuttgart, Institute of Electrical Energy Conversion
Tour e: Factory tour - Lapp Systems

THURSDAY, OCTOBER 12, 2017

Tour 1: Drivetrain technologies - Heilbronn Region
  • GETRAG
  • AUDI AG

Tour 2: Battery technology – Ulm Region
  • Center for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW)
  • ADS-TEC

Tour 3: Connected and automated driving – Karlsruhe Region
  • Research Center for Information Technology (FZI) and Karlsruhe Institute of Technology (KIT)
  • IBM Lab Biblingen

Tour 4: Production technology – Stuttgart Region
  • Festo Technology Plant Scharnhausen
  • Esslingen University

You didn’t have the time to register in time? Don’t worry! Last minute registration is possible during the symposium. So, just come along and check-in at our matchmaking area on site!

International visitors in conversation with a representative of Lapp Systems. - Foto: (c) e-mobil BW / KD Busch
RIDE & DRIVE

The Ride & Drive gives visitors the opportunity to find out more about current models and technologies, while driving Battery Electric Vehicles and Fuel Cell Vehicles under real conditions on a route along local roads.

There are 40 vehicles available, including the following brands and models:
- Audi Q7 e-tron
- G4 by Goupil
- Renault Zoe
- Renault Twizy
- Share 'ngo D2
- smart fortwo electric drive
- smart cabrio electric drive
- smart forfour electric drive
- Toyota MIRAI

Book your driving slot at the Ride & Drive Check-in in Hall 1.

Light Electric Vehicles are also available to take for a spin, with the starting point situated in the back of Hall 1. Try one of the following LEVs – no pre-booking required:
- E-Scooters by Bosch and MAHLE
- M-Trike from Metazet

The Battery Electric Vehicles will get powered by charging stations of Swarco, Mennekes, EnBW as well as high power chargers with up to 150kW from GoFast and Delta Energy Systems.

Another highlight at display in the Ride & Drive area is the Station-I by ZUWESO.

EXHIBITION

The exhibition is taking place in the L-Bank Forum (hall 1). It is directly opposite of the conference center (ICS) and easy to reach through the Entrance East. The hall space is around 20,000 m² and has a gallery in addition.

THE COMPLETE RANGE OF ELECTROMOBILITY

The exhibition will focus on electromobility and electric power transmission.

In addition to the focal areas:
- Charging infrastructure
- System suppliers
- Components and accessories for the automotive industry
- Mobility concepts
- Mobility as a service

The exhibition will present:
- Regulations and standards
- Energy management systems
- Software solutions for networked and autonomous driving

The full index of exhibitors is available with our Messe Stuttgart App or online at www.evs30.org/exhibitors

Travel & Accommodation

Messe Stuttgart is easy to reach by plane, with public transport or by car. Visitors with electric vehicles are invited to park at the special charging infrastructure directly at the L-Bank Forum (hall 1). Please register online for the EVS conference or exhibition and bring your ticket with you. Follow the signs to the gate „Tor 1/Anlieferung“. From there you can drive to the parking area P33, where you will find the charging infrastructure.
Monday, October 10 - Plenaries

10:45 - 12:00

P1 EVS30 Opening Ceremony
Room C1.1
Session Chair: Espen Hauge, WEVA, NO

10:55 - 11:10
From inventing to re-inventing the car - impulses from Baden-Württemberg
Winfried Kretschmann, Minister-President of Baden-Württemberg, DE

11:10 - 11:25
Research for tomorrow's mobility
Dr. Georg Schütte, State Secretary, Federal Ministry of Education and Research, DE

11:25 - 11:40
European mobility - accelerating into the future
Maroš Šefčovič, Commission Vice-President for Energy Union, European Commission, SK

11:40 - 11:55
EQ – Electric Intelligence by Mercedes-Benz
Ola Källenius, Daimler AG, DE

Keynote Speaker
Winfried Kretschmann, Minister-President of Baden-Württemberg

Winfried Kretschmann has been politically active since his student days. After graduating from university, qualified as a teacher, he became a co-founder of the Green party (Die Grünen) in 1979. A year later, Kretschmann was a member of the first Green political party group in the state parliament of Baden-Württemberg. After being a member of the Landtag 1980-1984 and 1986-1992, he has been a member of parliament of the Landtag since 1996. In 2002 he became the caucus leader of his party. In 2016, the Landtag re-elected Winfried Kretschmann as Prime Minister of the State of Baden-Württemberg for his second term.

11:55 - 12:15

P2 Scene-Setting Keynote
Room C1.1
The global electric vehicle market: where to next?
Colin McKerracher, Bloomberg New Energy Finance, UK

Keynote Speaker
Colin McKerracher, Bloomberg New Energy Finance

Colin McKerracher manages coverage of the transport sector at Bloomberg New Energy Finance. Colin’s team covers the policy, technology and economic factors influencing the evolution of the transport sector. Colin previously managed BNFE’s coverage of global energy and commodity sectors. Colin’s work has been featured on Bloomberg TV, in The Economist and in many other media. Colin has over 10 years of experience in the clean energy sector. Colin’s past roles include Director of Sales and Marketing for Neurion, a smart grid technology company, and Business Development Manager for a Canadian biofuel company. He holds degrees from the London School of Economics and the Sauder School of Business at UBC.

Tuesday, October 10 - Plenaries

09:00 - 10:30

P3 EVS30 Plenary: The Future of Electrification
Room C1.1
Moderator: Birgit Priemer, Editor-in-Chief, auto motor sport, DE

09:05 - 09:20
A tier supplier’s perspective on e-mobility
Dr. Mathias Pillin, Bosch, DE

09:20 - 09:35
Renault, at the forefront of the electric revolution
Gilles Normand, Renault Groupe, FR

09:35 - 09:50
Electric mobility in China - developments, opportuni-
ties, challenges
Prof. Dr. Qing Zhou, Tsinghua University, CN

09:50 - 10:10
Panel Discussion: Global Outlook - Transition to Mass Mar-
ket
Prof. Dr. C.C. Chan, University of Hong Kong, HK

John Gartner, Navigant Research

John Gartner is a senior research director leading Navigant Research’s Transportation Efficiencies and Data Services programs. He has overseen custom research and consulting engagements for the world’s leading automotive companies, technology vendors, and infrastructure providers. Gartner’s key areas of expertise include electric vehicles, EV charging infrastructure and integration into the grid, vehicle-to-grid (V2G) technology, and advanced batteries. Gartner has 29 years of experience in technology evaluation, market research, and consulting. He has contributed to many key industry and business publications, including Wired, Windows Magazine, Technology Review, Inc., and McKinsey Quarterly. Gartner also founded and edited Wired’s automotive website, Autopia.

10:10 - 10:30

Keynote Speaker
Prof. Dr. Qing Zhou, Tsinghua University, CN

Dr. Gilles Normand, Renault Groupe

Gilles Normand is President of the Asia-Pacific region at Renault, and is responsible for the Asia-Pacific region's business strategy and operations. Prior to this role, Gilles served as President of the South America region at Renault. Gilles has over 20 years of experience in the automotive industry, having held various leadership positions in Europe and North America. He has a strong background in innovation and technology, and is a strong advocate for sustainable mobility solutions.

10:30 - 12:00

P4 Scene-Setting Keynote
Room C1.1
The global electric vehicle market: where to next?
Colin McKerracher, Bloomberg New Energy Finance, UK

Keynote Speaker
Colin McKerracher, Bloomberg New Energy Finance

Colin McKerracher manages coverage of the transport sector at Bloomberg New Energy Finance. Colin’s team covers the policy, technology and economic factors influencing the evolution of the transport sector. Colin previously managed BNFE’s coverage of global energy and commodity sectors. Colin’s work has been featured on Bloomberg TV, in The Economist and in many other media. Colin has over 10 years of experience in the clean energy sector. Colin’s past roles include Director of Sales and Marketing for Neurion, a smart grid technology company, and Business Development Manager for a Canadian biofuel company. He holds degrees from the London School of Economics and the Sauder School of Business at UBC.

12:00 - 12:30

Lunch Break
**TUESDAY, OCTOBER 10 - PLENARIES**

**13:30 – 14:30**

**P4 F-CELL AND BATTERY+STORAGE PLENARY**

**Room C1.1**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:30-14:00</td>
<td>Infrastructure for zero emission mobility. What does it cost?</td>
</tr>
<tr>
<td>14:00-14:30</td>
<td>The role of hydrogen in sector coupling</td>
</tr>
</tbody>
</table>

**Plenary Chair:** Thorsten Herbert, NOW Nationale Organisation Wasserstoff- und Brennstoffzellentechnologie GmbH, DE

**Dr. Graham Cooley, ITM Power plc**

Dr. Graham Cooley joined ITM Power as CEO in 2009. He has focused the company on two key areas of industry: energy storage Power-to-Gas and clean fuel for fuel cell electric vehicles. This addresses the market requirements for grid balancing due to an increase of renewables and the push for more hydrogen stations, which generate the gas onsite, eliminating fuel deliveries. Before ITM, Graham was BDM at National Power plc and spent 11 years in the power industry developing energy storage and generation technologies. Before joining ITM Power Graham was CEO of Sensortec Ltd, founding CEO of Metalysis Ltd, a spin out of Cambridge University and founding CEO of Antenova Ltd.

**Nikolas Iwan, H2 MOBILITY Deutschland GmbH & Co. KG**

Nikolas Iwan started his career with Shell. In his last position, he was responsible for the Retail business in Austria. Managing a network of 260 stations with 100,000 customer transactions a day he learned a lot about customers and infrastructure. Nikolas was always passionate about pushing the Energiewende and has now found the perfect task: building up hydrogen infrastructure in Germany. Since April 2016 he is CEO of the joint venture H2 MOBILITY Deutschland GmbH & Co. KG. The mission: Running 100 hydrogen stations by the end of 2018 and up to 400 by 2023.

**KEYNOTE SPEAKER**

Dr. Dimitrios Papageorgopoulos, U.S. Department of Energy

Dr. Dimitrios Papageorgopoulos is the Program Manager for Fuel Cells in the U.S. Department of Energy’s (DOE’s) Fuel Cell Technologies Office, where he oversees efforts focused on the development of fuel cells and fuel cell systems for transportation, stationary and early market applications. He has 20 years of combined experience in research, technology development and management in areas related to surface science, catalysis, and fuel cell technologies. Prior to joining DOE in 2009, Dimitrios was Head of Catalyst Development at CMR Fuel Cells. Previous positions include those at the Energy Research Centre of the Netherlands (ECN), the FOM Institute for Atomic and Molecular Physics (AMOLF) Amsterdam, and at the Ecole Polytechnique Fédérale de Lausanne (EPFL).

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**WEDNESDAY, OCTOBER 11 - PLENARIES**

**09:00 – 10:30**

**P5 F-CELL AND BATTERY+STORAGE PLENARY**

**Room C1.1**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>09:00-09:20</td>
<td>HyLAW: Hydrogen law and removal of legal barriers to the deployment of fuel cells and hydrogen applications</td>
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<tr>
<td>09:20-09:40</td>
<td>Contribution of FCH JU to EU energy and electricity market directives</td>
</tr>
<tr>
<td>09:40-10:00</td>
<td>Clean energy and mobility package - EU strategy on hydrogen</td>
</tr>
<tr>
<td>10:00-10:10</td>
<td>Summary and lead over from EU to US matters</td>
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<tr>
<td>10:10-10:30</td>
<td>Overview of U.S. Department of Energy hydrogen and fuel cell activities</td>
</tr>
</tbody>
</table>

**Plenary Chair:** Werner Diwald, DWV Deutscher Wasserstoff- und Brennstoffzellenverband e.V., DE

**Dr. Dimitrios Papageorgopoulos, U.S. Department of Energy**

As pupil he was thrilled from the bestseller "In the beginning there was hydrogen", as a student he promoted "Power-to-Hydrogen" and joined a political party on this subject. As Member of the European Parliament he helped to lay the cornerstone for the technology platform “Fuel Cell and Hydrogen Joint Undertaking” Today, as Secretary General of the industry association "Hydrogen Europe" he works for the energy transition, which he believes can only be achieved with an energy vector serving as a game changer called hydrogen.

**Nikolaos Lymeropoulos, Fuel Cells and Hydrogen Joint Undertaking**

Dr. N. Lymeropoulos is a Project Manager at the Fuel Cells and Hydrogen Joint Undertaking (FCH JU). He is a Mechanical Engineer actively involved in the field of energy and the environment for more than 30 years. For the last 18 years he has been working on Hydrogen energy technologies, initially leading a section at the Greek national Centre for Renewable Energy Sources and then as Director for Projects at the UNIDO International Centre for Hydrogen Energy Technologies in Istanbul that addressed Developing World Countries. In 2013 he joined the FCH JU putting his experience to good use in supporting European R&D in sustainable Hydrogen production and Energy Storage through Hydrogen.

**Dennitsa Nozharova, Deutscher Wasserstoff- und Brennstoffzellenverband e.V.**

Dennitsa Nozharova is Master in Law with 19 years’ experience in the field of renewable energies and energy efficiency. Since August 2008 she has worked as CEO for development of wind energy projects and their integration into the electricity grid. Since January 2017 she has supported the German Hydrogen and Fuel Cells Association (DOE e.V.) by the implementation of the HyLaw Project especially by the identifying and assessment of the applicable EU legislation and legal and administrative requirements and procedures for multiple fuel cells and power to gas applications.
**PLENARIES**

**ROOM C1.1**

**Session Chair:** Joeri van Mierlo, AVERE/Vrije Universiteit Brussel - MOBI, BE

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>12:30 – 13:45</td>
<td><strong>P6 EV300 CLOSING CEREMONY WITH KEYNOTE</strong></td>
</tr>
<tr>
<td>12:35 – 13:05</td>
<td>The future of urban mobility</td>
</tr>
<tr>
<td>13:05 – 13:20</td>
<td>E-Visionary Awards</td>
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<tr>
<td>13:20 – 13:25</td>
<td>EV300 in numbers</td>
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<tr>
<td>13:25 – 13:30</td>
<td>Best Paper and Best Poster Award</td>
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<tr>
<td>13:30 – 13:35</td>
<td>EV300 impressions and outlook</td>
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<tr>
<td>13:30 – 13:35</td>
<td>Passing of the baton to EV301</td>
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<tr>
<td>13:40 – 13:45</td>
<td>Closing Remarks</td>
</tr>
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</table>

**KEYNOTE SPEAKER**

- **Franz Loogen, e-mobil BW**
  - Franz Loogen, the president of e-mobil BW, Baden-Württemberg’s regional agency for electric vehicles and fuel cell technology, studied mechanical engineering at RWTH University Aachen and has more than twenty years of professional experience in executive positions in the automotive industry. e-mobil BW aims at promoting the industrialization of electric mobility to position the State of Baden-Württemberg as a leading region for sustainable and intelligent mobility solutions.

- **Prof. Dr. Hans-Christian Reuss, FKFS, Stuttgart University/Co-Chair Scientific Program Committee EV300**
  - Hans-Christian Reuss is chair of Automotive Mechatronics at the Institute of Internal Combustion Engines and Automotive Engineering (IVK) at University of Stuttgart and a member of the management board of the Research Institute of Automotive Engineering and Vehicle Engines Stuttgart (FKFS). His present teaching and research interests include automotive systems, electronic control units, optimization of power trains, hybrid vehicles, electromobility, function and software development, and test and diagnosis of mechatronic systems.
  - He was previously professor at Dresden University of Technology, where he held the first professorship in Auto-motive Electronics at a German University. In 2001 he was involved in the establishment of the DaimlerChrysler Competence Center of Electrical and Electronic Architecture and in 2002 he established the Institute of Automotive Mechatronics GmbH Dresden.

- **Prof. Dr. Joeri Van Mierlo, AVERE/Vrije Universiteit Brussel – MOBI/Co-Chair Scientific Program Committee EV300**
  - Prof. Dr. Joeri Van Mierlo is a key player in the electromobility scene. He is a professor at Vrije Universiteit Brussels where he leads the MOBI – Mobility, Logistics and Automotive Technology Research Centre. He is expert in the field of electric and hybrid vehicles (batteries, power converters, energy management simulations) as well as to the environmental and economical comparison of vehicles with different drive trains and fuels (LCA, TCO).
  - Prof. Van Mierlo is Vice-president of AVERE and its Belgian section ASBE. He chairs the EPE chapter “Hybrid and electric vehicles” and is an active member of EARPA (European Automotive Research Partner Association) and EGVIA (European Green Vehicle Initiative Association). He is director of Flanders Make department “Power electronics, actuators and energy storage”.

- **Christoph Wiegler, UBER**
  - Christoph Wiegler (born 1983) joined Uber in October 2015 and has been running the German business as General Manager of Uber Germany since August 2016. Before, he worked as a Senior Manager at Bain & Company in Munich and San Francisco. He consulted numerous automotive OEMs in several projects ranging from strategic repositioning to holistic mobility services. He also specialized on successful market entries of German automobile producers in China. Wiegler spent two years in China and one year in Silicon Valley. He studied Business Administration at the European Business School in Oestrich-Winkel and at Tsinghua University in Peking.

**WEDNESDAY, OCTOBER 11 - PLENARIES**

**P7 CLOSING PLENARY F-CELL AND BATTERY+STORAGE**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>15:15 – 16:45</td>
<td><strong>Plenary Chair:</strong> Dr. Manuel C. Scholoske, e-mobil BW GmbH, DE</td>
</tr>
<tr>
<td>15:15 – 15:45</td>
<td>The Canadian cleantech landscape and innovations in hydrogen storage</td>
</tr>
<tr>
<td>15:45 – 16:15</td>
<td>Hydrogen – gaining momentum in Norway</td>
</tr>
<tr>
<td>16:15 – 16:45</td>
<td>20 years personal retrospective on hydrogen and fuel cells – Outlook on the future - Farewell Dr. Menzen</td>
</tr>
</tbody>
</table>

**KEYNOTE SPEAKER**

- **Klaus Bonhoff, NOW Nationale Organisation Wasserstoff- und Brennstofftechnologie GmbH**
  - Dr. Ing. Klaus Bonhoff is managing director (chair) of NOW GmbH National Organisation Hydrogen and Fuel Cell Technology, which was established to run the German National Innovation Program Hydrogen and Fuel Cell Technologies (NIP) as a public-private partnership. Today NOW is managing the NIP as well as large publicly funded demonstration programmes on battery-electric mobility. Dr. Bonhoff is a member of the advisory boards of Fraunhofer ISE (Institute for Solar Energy Systems), Next Energy Institute, erdgas mobil and ZSW (Centre for Solar Energy and Hydrogen Research).

- **Dr. Georg Menzen, Federal Ministry for Economic Affairs and Energy**
  - Dr. Georg Menzen is Head of Division, Energy Research – Fund Product and International Affairs at the Federal Ministry of Economic Affairs and Energy in Germany. He was the project lead on numerous projects and programmes in the field of renewable energy and especially fuel cells, hydrogen, energy storage and grids.

- **Grace Quan, Hydrogen In Motion Inc. (H2M)**
  - Grace Quan has a strong financial and strategic background as the Senior Advisor to the CFO of the Treasury Board of Canada, the department responsible for managing Canada’s $250B dollar annual budget. Her career in the federal government also includes working in foreign aid at the Canadian International Development Agency and in the Foreign Service (DFAIT). This varied experience gives Grace an insider understanding of the functioning of business and government. This knowledge is effectively leveraged in fundraising, advocacy, policy development, and contracting with government and other institutions on behalf of Hydrogen In Motion Inc. (H2M). Grace has established at H2M a culture that fosters innovation to develop ground breaking new products.

- **Bjørn Simonsen, nel hydrogen**
  - Bjørn Simonsen has been working within the hydrogen sector for 9 years, both within research, as well as various key positions in the Norwegian hydrogen arena. In 2014 he joined Nel Hydrogen, where he holds the position as Vice President Market Development and Public Relations. Nel’s vision is “empowering generations with clean energy forever.” Bjørn is optimistic about this vision, and gets his main inspiration from nature, in addition to working with the exciting task itself.
MONDAY, OCTOBER 9 – SESSION OVERVIEW

08:00 – 09:00 Conference registration, ICS Messe Stuttgart

<table>
<thead>
<tr>
<th>09:00 – 10:30</th>
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<th>09:00 – 10:30</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1: Connected and autonomous vehicles - concepts and applications</td>
<td>A2: Setting up an efficient charging system</td>
<td>A3: Battery systems for electric vehicles</td>
<td>A4: Predicting the total cost of ownership for electric vehicles</td>
</tr>
</tbody>
</table>

Room C7.1  
Room C1.1  
Room C1.2.1  
Room C1.2.2  
Room C5.1

Coffee break – 15 min

10:45 – 12:00

P1: Opening Ceremony EVS30
Room C1.1

12:00 – 12:15

P2: Scene-setting keynote, Room C1.1
Lunch break – 60 min

13:15 – 14:45

DS1: Dialogue Session
1K40 + K50, Hall 1

14:45 – 16:15

B1: Fuel cell vehicle concepts
Room C7.1

B2: Successful management of charging infrastructure
Room C1.1

B3: Battery ageing processes - monitoring and prognosis
Room C1.2.1

B4: Aiding EV market growth with inventive models
Room C1.2.2

B5: Improving driving dynamics
Room C5.1

Coffee break – 15 min

16:30 – 18:00

D1: Hydrogen infrastructure and H2 purification
Room C7.1

D2: Implementation of a charging network
Room C1.1

D3: Thermal life cycle management of batteries
Room C1.2.1

D4: Opportunities for EV market development
Room C1.2.2

D5: Testing processes for electric vehicles
Room C5.1

17:00 – 19:00 „Get Together“, sponsored by E.ON | Gallery, Hall 1

MONDAY, OCTOBER 9 – PARALLEL SESSIONS

09:00 – 10:30

A1 CONNECTED AND AUTONOMOUS VEHICLES - CONCEPTS AND APPLICATIONS
Room C7.1  
Session Chairs: Dr. Ulrich Köhler, Hella, DE and Dr. Michael Nicholas, International Council on Clean Transport, US

<table>
<thead>
<tr>
<th>09:05-09:25</th>
<th>09:25-09:45</th>
<th>09:45-10:05</th>
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<tbody>
<tr>
<td>Dimensioning of power net for automated driving</td>
<td>Optimization of an all-electric connected taxi fleet</td>
<td>Intralog - towards an autonomous system for handling inter-terminal container transport</td>
</tr>
</tbody>
</table>

Room C7.1  
Tuneh Shen, Dr. Ahmad Kili, Robert Bosch GmbH, DE  
Pascal Bläsin, IVI, CA  
Adrie Spruijt, Hogeschool Rotterdam, NL

A2 SETTING UP AN EFFICIENT CHARGING SYSTEM
Room C1.1  
Session Chairs: Sebastian Albertus, Renault, FR and Charles Botsfard, AeroVironment, US

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<th>09:05-09:25</th>
<th>09:25-09:45</th>
<th>09:45-10:05</th>
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<tbody>
<tr>
<td>The influence of investment costs on the development of fast charging infrastructure</td>
<td>Energy management of second-life electric vehicle batteries for supporting a microgrid</td>
<td>Charging infrastructure experiences in Norway - the worlds most advanced EV market</td>
</tr>
</tbody>
</table>

Room C1.1  
Dennis Hain, University of Stuttgart, IAT, DE  
Dr. Cristina Corchero, IREC, ES  
Erik Lorentzen, Norwegian EV Association, NO

A3 BATTERY SYSTEMS FOR ELECTRIC VEHICLES
Room C1.2.1  
Session Chairs: Thomas Blank, KIT, DE and James Miller, Argonne National Laboratory, US

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<th>09:05-09:25</th>
<th>09:25-09:45</th>
<th>09:45-10:05</th>
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<tbody>
<tr>
<td>Cycle life evaluation for Lithium-ion capacitors</td>
<td>Dimensioning and optimization of hybrid Li-ion batteries for EVs</td>
<td>Assessing battery safety using a combined simulation approach from cell to vehicle level</td>
</tr>
</tbody>
</table>

Room C1.2.1  
Mahdi Soltani, Vrije Universiteit Brussel - MOBI, BE  
Jan Becker, RWTH Aachen University - Institute for Power Electronics and Electrical Drives, DE  
Bernhard Brunnerstein, AVL, AT

A4 PREDICTING THE TOTAL COST OF OWNERSHIP FOR ELECTRIC VEHICLES
Room C1.2.2  
Session Chairs: Bert Witkamp, AEFO, BE and Sven Lierzer, BridgingIT, DE

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<tbody>
<tr>
<td>Smart Charging - an efficient instrument to optimise the Total Cost of Ownership of EVs</td>
<td>Predicting the future manufacturing cost of batteries for plug-in vehicles for the U.S. EPA 2017-2025 Light Duty Greenhouse Gas Standards</td>
<td>Modelling the total cost of ownership of electric vehicles in the Netherlands</td>
</tr>
</tbody>
</table>

Room C1.2.2  
Dr. Yasmine Assef, Renault, FR  
Dr. Michael Safoutin, US Environmental Protection Agency, US  
Auke Hoekstra, TU Eindhoven, NL

A5 ELECTRIC POWER TRAINS - INNOVATION AND DEVELOPMENTS
Room C5.1  
Session Chairs: Prof. Dr. Najla Parprou, Institute of Electrical Energy Conversion, University of Stuttgart, DE and Olivier Bernatchez, TM4, CA

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<tbody>
<tr>
<td>Big Batteries: Solution for the future?</td>
<td>Driving the green revolution: Technology advances enable new efficiencies in electric cars</td>
<td>Multi-speed transmissions for electric drives</td>
</tr>
</tbody>
</table>

Room C5.1  
Dr. Olmar Scharrer, Mahle, DE  
Karl-Heinz Steinmetz, Texas Instruments, DE  
David Gagliardi, Delphi Drive Systems, DE

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<th>10:05-10:25</th>
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<tr>
<td>Low inductive power module design for tractive systems</td>
<td>The influence of investment costs on the development of fast charging infrastructure</td>
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</table>

Room C5.1  
Dr. Gil Tai, University of California Davis, US  
Dr. Cristina Corchero, IREC, ES  
Erik Lorentzen, Norwegian EV Association, NO

Program subject to change. Check website and onsite signage for up to date version.
MONDAY, OCTOBER 9 – PARALLEL SESSIONS

**14:45 – 16:15**

**B1 FUEL CELL VEHICLE CONCEPTS**

**Room C7.1**  
Session Chairs: Prof. Manuel C. Schaloske, e-mobil BW, DE and Xiao-Zi Yuan, National Research Council Canada, CA

**14:45-15:10**  
The future of fuel cell vehicles  
Yukihiro Sonoda, Toyota Motor Europe, BE

**15:10-15:30**  
A European approach for the commercialisation of fuel cell buses in public transport  
Dr. Frank Koch, EE Energy Engineers GmbH, DE

**15:30-15:50**  
The fuel cell engine of the new Mercedes-Benz GLC F-CELL  
Prof. Dr. Christian Moehlheidt, Daimler AG, DE

**15:50-16:10**  
Hyundai ix35 fuel cell electric vehicles: degradation analysis for driving and vehicle-to-grid usage  
Vincent Oldenbroek, TU Delft, NL

**B2 SUCCESSFUL MANAGEMENT OF CHARGING INFRASTRUCTURE**

**Room C1.1**  
Session Chairs: Prof. Dr. Michael Schlick, Hochschule Ulm, DE and Robert Gell, GELCOservices Pty. Ltd., AU

**14:45-15:10**  
Emerging best practices for electric vehicle charging infrastructure  
Dr. Nic Lutsey, International Council on Clean Transportation, US

**15:10-15:30**  
Predicting charging infrastructure availability based on a space-time series model  
Quentin De Clerck, Vrije Universiteit Brussel - MOBI, BE

**15:30-15:50**  
Battery health monitoring and degradation prognosis in fleet management systems  
Jurjen Helmus, Amsterdam University of Applied Sciences, NL

**15:50-16:10**  
Estimating the charging proﬁle of individual charge sessions of electric vehicles in the Netherlands  
Werner Schmid, Institute of Automotive Technology, Technical University of Munich, DE

**B3 BATTERY AGEING PROCESSES - MONITORING AND PROGNOSIS**

**Room C1.2.1**  
Session Chairs: Prof. Dr. Jari van den Hoek, Vrije Universiteit Brussel - MOBI, BE and U San, Special Committee of Electric Vehicles, China Electromobility Society, CN

**14:45-15:10**  
Battery health monitoring and degradation prognosis in fleet management systems  
Adnan Nuhic, Deutsche ACCUmotive GmbH & Co. KG, DE

**15:10-15:30**  
Online and BMS implementable SoH estimation for battery packs  
Matiane Bereczka, IK4-IKERLAN & Vrije Universiteit Brussel - MOBI, BE

**15:30-15:50**  
Analysing the influence of driver behaviour and tuning measures on battery aging and residual value of electric vehicles  
Werner Schmid, Institute of Automotive Technology, Technical University of Munich, DE

**15:50-16:10**  
Evaluation of cyclic battery ageing for railway vehicle application  
Sebastian Sigle, DLR e.V., DE

**B4 AIDING EV MARKET GROWTH WITH INCENTIVE MODELS**

**Room C1.2.2**  
Session Chairs: Erik Lorentzen, Norwegian Electric Vehicle Association, NO and Jeff Allen, Forth, US

**14:45-15:10**  
The Electric Vehicle Policy Report Card  
Prof. Dr. Joan Azez, START @ Simon Fraser University, CA

**15:10-15:30**  
Financial purchase incentives for battery electric vehicles - a systematic review of the evidence  
Dr. Scott Hardman, UC Davis, US

**15:30-15:50**  
I-CVUE: Incentives for Cleaner Vehicles in Urban Europe, final results  
Harm Weken, FIER Automotive, NL

**15:50-16:10**  
Incentives for electric vehicles: A case study of Denmark and Norway  
Jens Christian Morell Ludberg Høj, Instec A/S, DK

**16:30 – 18:00**

**D1 HYDROGEN INFRASTRUCTURE AND H2 PURIFICATION**

**Room C7.1**  

**16:35-16:55**  
Techno-economic evaluation of hydrogen refueling stations with trucked-in gaseous or liquid hydrogen  
Dr. Andreas Pfrang, European Commission, Joint Research Centre, NL

**16:55-17:15**  
NewBusFuel - Large scale hydrogen refueling infrastructure for fuel cell bus fleets  
Stefan Diersch, MANN+HUMMEL GMBH, DE

**17:15-17:35**  
Contamination control for LT PEM fuel cell systems  
Barbara Purgstall, DLR e.V., DE

**17:35-17:55**  
I-CVUE: Incentives for Cleaner Vehicles in Urban Europe, final results  
Harm Weken, FIER Automotive, NL

**D2 IMPLEMENTATION OF A CHARGING NETWORK**

**Room C1.1**  
Session Chairs: Andreas-Michael Reinhardt, BSM e.V., DE and Scott Miller, Chargepoint, US

**16:35-16:55**  
Integrated mobility and energy infrastructures - assessing centralized and decentralized grid integration of EVs  
Sven Lierzer, BridgingIT GmbH, DE

**16:55-17:15**  
Holistic methodology for generating customer related testing profiles for electrified powertrains  
Stefan Diersch, MANN+HUMMEL GMBH, DE

**17:15-17:35**  
Challenges at the construction of a comprehensive AC and DC charging infrastructure in Baden-Wuerttemberg  
Adnane Regertki, EnBW, DE

**17:35-17:55**  
EV infrastructure in the UK - plugging the gaps  
Rosalind Marshall, Office For Low Emission Vehicles, UK

**D3 THERMAL AND LIFE CYCLE MANAGEMENT OF BATTERIES**

**Room C1.2.1**  
Session Chairs: Dr. Michael Buchholz, Universitat Ulm, DE and Shmuel de Leon, Shmuel de-Leon Energy Ltd, IL

**16:35-16:55**  
Sustainability assessment of second life application of automotive batteries (SASLAB): ageing of Li-ion battery cells in automotive and grid-scale applications  
Dr. Andreas Pfaffen, European Commission, Joint Research Centre, NL

**16:55-17:15**  
Capacity recovery effect in Lithium Sulphur batteries for electric vehicles  
Amadeus Regebrink, EnBW, DE

**17:15-17:35**  
Liquid thermal management of a Lithium-ion capacitor module  
Dr. Joris Jaguemont, Vrije Universiteit Brussel - MOBI, BE

**17:35-17:55**  
Joining technologies for automotive battery systems manufacturing  
Dr. Abhishek Das, WMG, The University of Warwick, UK
MONDAY, OCTOBER 9 – PARALLEL SESSIONS

16:30 – 18:00

D4 OPPORTUNITIES FOR EV MARKET DEVELOPMENT

Room C1.2.2
Session Chairs: Paulo Pereirinha, Polytechnic Institute of Coimbra/INESC Coimbra/AVPFE, PT and Mark Simon, NYC Department of Transport, US

16:35-17:15
DOE Electrification Systems R&D Overview for FY 2016-2017
Dr. James Miller, Argonne National Laboratory, US

17:15-17:35
Taxation of electric vehicles in Europe: A methodological comparison
Dr. Karin Hauff, Daimler AG, DE

17:35-17:55
Turning municipalities into focal points for electric mobility - the SSEK model
Manfred Schmid, Institut Staat(Mobilität|Energie, DE

D5 TESTING PROCESSES FOR ELECTRIC VEHICLES

Room C5.1
Session Chairs: Thierry Coosemans, Vrije Universiteit Brussel, BE and Prof. Dr. Yutao Luo, South China University of Technology, CN

16:35-17:15
New power electronics technologies for the market evolution of EVs?
Dr. Jochen Langeheim, STMicroelectronics, FR

16:55-17:15
XIL-BW-e - Laboratory Network Baden-Wuerttemberg for Electric Mobility
Prof. Dr. Albert Albers, IPEK - Institute of Product Engineering at Karlsruhe Institute of Technology (KIT), DE

17:15-17:35
Innovative testing process for electric powertrain
David Nickel, AVL Deutschland GmbH, DE

17:35-17:55
Winter testing of electric in wheel motors
Dr. Gottow Carraz, Energie Propulsion Technologies, SI

MONDAY, OCTOBER 9 – DIALOGUE SESSION DS1

13:15 – 14:45
The Dialogue Sessions depict the poster exhibition and form part of the EVS30 conference program. Use the dedicated time slots for in-depth discussions with the presenting specialists from around the globe.

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Bonis, Laurent, VDECOM, FR
Identification of Real World Driving Scenarios for the Functional Safety of Autonomous Vehicles
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Dunkley, Dr. James, Electric Power Research Institute, US
Understanding EV charging behavior
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Easley, Ron, HPEV LLC, US
Modeling of EV Performance for Drag Racing Optimization
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Eckhoff, Udo and Engemann, Daniel, Unternehmenoberbearbeitung Udo Eckhoff, DE
LT3 Line Traction Drive (Following the Theoretical Tracking Line of a Wheel) for Substitution of the Differential Technique and Increase in the Traction and performance in Wheeled Vehicles with Axle Drives
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Eckstein, Julian, Hella KGaA Hueck & Co, DE
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Faltenbacher, Michael, thinkstep AG, DE
Zero Emission Commercial Vehicles
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Fockers, Andreas, Bombardier Primoval GmbH, DE
PRIMOVE: First Affordable Automotive Wireless Charging System Starts Serial Production
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Fuentes, Dr. Albert, Fraunhofer IAO, DE
Shaping a Clean Futur with the ‘Internet of Energy Things’: ubitricity’s Mobile Charging System
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Gabel, Prof. Hugo, Hochschule Esslingen, DE
Ultra-Light Vehicle (ULV) heading to become a lifestyle product
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Goehlich, Prof. Dietmar, Technische Universität Berlin, DE
TCO assessment of fuel versus electric heating for urban electric bus systems
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Haag, Michael, Fraunhofer IAG, DE
Strategic electrification and optimisation of commercial vehicle fleets
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Hubner, Markus, German Aerospace Center, DE
A new commuter vehicle concept based on a high temperature PEM fuel cell range extender
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Johnson, Stephen, HPEV LLC, US
Creating a 12-Ton BEV Refrigerated Delivery Truck Capable of 200 Miles Range per Charge
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Jungmeier, Gerfried, JOANNEUM RESEARCH, AT
Challenges of Battery Electric Buses - Assessment of Demonstration Activities in the IEA Technology Collaboration Program on Hybrid&Electric Vehicles.
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Kim, Bill Insup, AVL Powertrain UK, UK
Iterative Markov Chain Future Speed Prediction with Connected Vehicle technology
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Koh, Alexander, CTC cartech company GmbH, DE
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Kumle, Julian, Technical University of Eindhoven, DE
Dynamic Optimization of an Operation Strategy for Hybridand Battery Electric Vehicles
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Lansweert, Theo, Uni Stuttgart, IEW, DE
Wireless Power Transfer for Railway Vehicles
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Manthey, Andreas, BSM Bundesverband Solare Mobilität e.V., DE
Swappable GreenPack batteries for lightweight vehicles as a new worldwide standard
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Minami, Prof. Shigeyuki, Osaka City University, JP
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Miura, Kota, Tokyo R&D Co., Ltd, JP
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Ortiz, Dr. Fernando, ENEA, IT
Technical and economical evaluation of Hybrid fast-charging stations for electric public transport
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Pfoetz, Dr. Patrick, Fraunhofer Institute for Systems and Innovation Research ISI, DE
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Saravana Park, Monica, BR
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Sari, Beti, ZF Friedrichshafen AG, DE
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### MONDAY, OCTOBER 9 – DIALOGUE SESSION DS1

#### 1 VEHICLES AND TRANSPORTATION SYSTEMS

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<td>Lessons Learned from Combined Charging System and ISO/IEC 15118</td>
<td>Schmutzler, Jens, TU Dortmund, Communication Networks Institute (CNI), DE</td>
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<td>Interop Testing by organizing, hosting and participating at CCS Testing Symposium</td>
<td>Stefano, Paul, Opticsvalley, FR</td>
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<td>The autonomous and connected vehicle: photonic technologies are paving the future of intelligent mobility</td>
<td>Stuetz, Sebastian, Fraunhofer IML, DE</td>
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<td>Insights into Real-World Energy Consumption of Medium-Duty Electric Vehicles</td>
<td>Tomoli, Emmei, the University of Tokyo, JP</td>
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<td>Development of Driving Cycle of Single-shaft Parallel Hybrid Electric Bus and its Key Components</td>
<td>Veenhuizen, Dr. Bram, MUN University of Applied Science, NL</td>
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<td>On road evaluation of three Hyundai ix35 Fuel Cell Electric Vehicles</td>
<td>Wang, Malin, Bremer Institut fuer Produktion und Logistik GmbH, University of Bremen, DE</td>
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<td>Selecting an Appropriate Type of Electric Commercial Vehicles for the Sustainable Urban Freight Transport</td>
<td>Wilhelm, Dr. Erik, Nybuz Switzerland, CH</td>
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<td>Autonomous Electric Race Car Design</td>
<td>Yuhan, Li, Chang'an University, CN</td>
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<td>Optimization of Control Strategy of Single-shaft Parallel Hybrid Electric Bus Based on Driving Cycle</td>
<td>Yuhan, Li, Chang'an University, CN</td>
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<tr>
<td>Developing eco-driving algorithm at the signalized intersection using traffic information</td>
<td>Youn, Heesu, Hangyang Univ, KR</td>
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#### 2 ELECTRIC POWER TRAIN AND APPLICATION

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<tr>
<td>Derating Strategies for Electric Sports Cars</td>
<td>Engelhardt, Tobias, Porsche AG, DE</td>
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<td>Humidity Control for HV Battery Systems</td>
<td>Harenbrock, Dr. Michael, MAN+N+HUMMEL GmbH, DE</td>
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<tr>
<td>Optimal Control Strategy According to the Workload of a Fuel Cell Battery Hybrid Excavator</td>
<td>Hyun-soo, Dr. Yi, Korea Construction Equipment Technology Institute, KR</td>
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<tr>
<td>Simulation of Mileage and Fuel Efficiency of Plug-in Hybrid Electric Vehicle with Dual Clutch Transmission Considering Temperature Condition</td>
<td>Jeong, Ho-Uh, Sungkyunkwan University, KR</td>
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<td>Electric Load Simulation for 48V DC Converter Using HIL Simulator</td>
<td>Jeong, Kyun, Korea Automotive Technology Institute, KR</td>
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<td>A Cost-Effective Self-Heating Battery Method for Electric Vehicles Operating in Cold Region</td>
<td>Jiuyu, Dr. Du, Tsinghua University, CN</td>
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<td>Battery Global Value Chain and Its Technological Opportunities for Electric Vehicle in Brazil</td>
<td>Jusàni, Dr. Alton, University of Sao Paulo, BR</td>
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<td>A modular fuel cell battery hybrid propulsion system for powering small utility vehicles</td>
<td>Keller, Stefan, Fraunhofer ISE, DE</td>
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<td>Control Algorithm for Drivability and Energy Efficiency of Plug-in Hybrid Electric Vehicle</td>
<td>Kiyuhan, Sim, Sungkyunkwan University, KR</td>
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<td>Studying the spread - which future electric drive vehicles would do best under what circumstances?</td>
<td>Miller, Dr. James, Argonne National Laboratory, US</td>
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<td>Advanced Torque Vectoring for Yaw Stability Enhancement of a Four Wheel Drive Electric Vehicle</td>
<td>Nam, Kanghyun, Yeungnam University, KR</td>
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<td>Optimal Powertrain Design through a Virtual Development Process</td>
<td>Piechotka, Hendrik, Audi AG, DE</td>
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<td>Effectiveness of engine start stop systems for real world driving conditions in United States</td>
<td>Rousseau, Aymeric, Argonne National Laboratory, US</td>
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<td>Topology synthesis of hybrid electric vehicle drivetrains in the context of the integrated Product engineering Model</td>
<td>Ruoff, Sebastian, IPEX - Institute of Product Engineering at KIT, DE</td>
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<td>Battery electric vehicle requirements and legal standards</td>
<td>Seiler, Sebastian, IAV, DE</td>
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<td>Energy Storage Sizing of Hybrid Electric Vehicles with Power Efficiency Considerations</td>
<td>Shi, Ruoyun, University of Toronto, CA</td>
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<td>Green Driving Assistance System for Heavy-Duty Hybrid Electric Vehicle</td>
<td>Soye, Ryuichi, Hino Motors, Ltd, JP</td>
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<td>Hydrogen Mobility Europe (H2Me)vehicle and hydrogen refuelling station deployment results</td>
<td>Spears, Dr. Peter, Cenex, UK</td>
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<td>The specificity of the popularization of hybrid and electric vehicle in the Russian Federation</td>
<td>Terenchenko, Alek, NAMI Russian State Research Center, RU</td>
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<td>Shift Process Control of a Novel Two Speed Automatic Transmission for Battery Electric Vehicle</td>
<td>Zhang, Prof Jianwei, Shanghai Jiaotong University, CN</td>
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3 COMPONENT TECHNOLOGIES

- Brüel, Dr. Martin, Continental, DE
- Burke, Dr. Andrew, University of California, Davis, US
- Edel, Fabian, Fraunhofer IAO, DE
- Eiselt, Martin, Karlsruhe Institute for Technology KIT - IPEK Institut fuer Produktentwicklung, DE
- Gago-Calderon, Alfonsina, Universidad de Malaga, ES
- Grandjean, Dr. Thomas, WING, UK
- Hegayy, Omar, Viente University Brussels-MOBI, BE
- Kayser, Alexander U., FKFIS / IVK University of Stuttgart, DE
- Kerpoe, Dr. Jakob, TEB Dr. Kerpoe, DE
- Kim, Prof. Jonghoo, Chungnam National University, KR
- Lather, Sven, Porsche AG, DE
- Maurer, Dr. Arno, Polytec PT GmbH, DE
- Mikael, Askalad, Swedish Electronics Centre/Chalmers's University of Technology, SE
- Naegje, Meagan, Dr. Jobst, TEB Dr. Kerpoe, DE
- Nakii, Kiyomi, Tokyo University, JP
- Neupert, Steven, Technische Universitaet Berlin, DE
- Pedroso, Samuel, Transport Canada, CA
- Rohrer, Brum, KU Leuven, BE
- Sebesta, Peter, Quazarwerk GmbH, DE
- Sierszynski, Michal, Solaris Bus & Coach SA, PL
- Stewart, Alex, Element Energy, UK
- Sun Dr., Dong-Zhi, Fraunhofer IWM, DE
- Wang, Feng and Luo, Yutao, South China University of Technology, CN
- Weiler, Christian, Industry-Partner GmbH, DE
- Wilkins, Dr. Steven, TNG, NL
- Yuan, Dr. Xiao-Zi, National Research council Canada, CA

- Avoid the DC charging trap - high power everywhere charging
- Cycle Life of Lithium-ion Batteries in Combination with Supercapacitors
- Portable battery concept for light electric vehicles
- Validation of a Cooling System for Temperature Conditioning of Cylindrical Battery Cells
- Smart-Cities urban mobility management architecture for electric vehicles
- Control Design, Analysis and Comparative study of different Control Strategies of a Bidirectional DCDC Multisport Converter for Electric Vehicles
- Systematic Approach for the Cooling System Optimization of a Battery Electric Sports Car
- Multifunctional Battery Housing and their Application at a small, full electric Truck
- Systematic Approach of High-Power NCA 18650 Cylindrical Cells considering Vibration and Shock Tests for Electric-Powered Application
- Comparison of Continuous Performance of a Traction Drive for Different Steel Sheet Measurement Methods
- Smart Design of Electric Vehicle Batteries and Power Electronics Using Thermal Interface Materials
- Vehicle Independent Road Section Resistance Estimation
- Multi-Objective Optimization of the Rotor Design to Improve the Acoustic Behavior of High Power Density Interior Permanent Magnet Synchronous Machines
- Reduction of Vertical Vibration for Improvement of Ride Comfort Using In-Wheel Motors
- Inhomogeneities in Battery Packs
- Impacts of Mileage Accumulation and Fast Charging on EV Range and Energy Usage
- Predicting the remaining cycling range for speed pedelecs and its relevance on pedal assistance control strategies
- Optimized Thermomanagement with Mineral filled plastics
- Lithium batteries from electric busses for stationary storage applications
- Creating the European Vision for Hydrogen Transportation
- Testing and simplified modelling of deformation behaviour of battery cell shell
- Research on Integrated Multi-function Power Converter for Electric Vehicles
- Economical and ecological production of Li-ion pouch cells by effective automatization and climatic engineering
- Characterization of Thermal Modelling of a Battery Pack

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4 CHARGING/FUELING INFRASTRUCTURE

- Bowermaster, Dan, Electric Power Research Institute, US
- Bracklo, Claus, Charin e.V., DE
- Braun, Horst, University of Applied Science Esslingen, DE
- Cornelii, Marcel, EMCEL GmbH, DE
- Guillotet, Anne, CIRED/Ecole des Ponts ParisTech, FR
- Hata, Katuhiro, The University of Tokyo, JP
- Jachem, Patrick, Karlsruhe Institute of Technology (KIT), DE
- Kim, Yong Eun, katech, KR
- Lopes, Maria, CEN, PT
- Mahajan, Akshay, Fraunhofer-Institut fuer Solare Energie Systeme, DE
- Meroth, Prof. Arisarg, Hochschule Heilbronn (Heilbronn Univ), DE
- Mertzdorf, Marco, Fraunhofer-Institut fuer Solare Energysysteme ISE, DE
- Mora, Arnaud, Freshmile, FR
- Mueller, Dirk, UL LLC, US
- Nicholas, Michael, University of California, Davis, US
- Petterson, Prof. Stefan, Viktoria Swedish Institute, SE
- Ribbenk, Hajo, Natural Resources Canada, CA
- Rieder, Sophie, P3 Energy & Storage
- Schrader, Soeren, P3 Energy & Storage GmbH, DE
- Turmpold, Jan, DLR e.V. Institut fuer Verkehrssystemtechnik, DE
- van Eijsden, Bram, ElaadNL, NL
- van Zante, Annabel, APPM management consultants, NL

- Vision for and Implementation of a National High Power DC Fast Charging Network
- The path to a global EV charging system - How to harmonize the customer interface
- Synthetic Driving Cycles Based Modelling of Extended Range Electric Vehicle Fleet Energy Demand
- Investigation on public eMobility grids - consequences on urban infrastructure
- European harmonisation in the transition towards electromobility - the example of the charging infrastructure
- Model on charging infrastructure planning and its integration in the electric grid
- How Many Fast Charging Stations Do We Need Along the German Highway Network?
- The Method of Charging for Electric Vehicles Using Power System of Gasoline Vehicles
- Smart Charging Impact on Consumer and Environment
- Dimensioning and comparison of circular and double D coil geometries for inductive charging of electric vehicles
- Crowd Charging - An Approach To Shared Services In Charging Electric Vehicles
- Potential and Limitation of Controlled Charging of Electric Vehicle for PV Self-Consumption Maximisation in Private Households
- Interoperability of electric vehicle charging infrastructure
- Electric Vehicle Infrastructure Standardization
- Survey and Data Observations on Consumer Motivations to DC Fast Charge
- Parking support for inductive charging
- Impact of Clusters of DC Fast Charging Stations on the Electricity Distribution Grid in Ottawa, Canada
- Smart integration of electric vehicles
- Smart Charging Impact on Consumer and Environment
- Parking support for inductive charging
- Impact of Clusters of DC Fast Charging Stations on the Electricity Distribution Grid in Ottawa, Canada
- Smart integration of electric vehicles
- Public Wireless Charging in the City of Rotterdam
- Driving transitions on the local level
- MENDEL: Minimum load of electrical networks caused by charging vehicles

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### 5 ENTERING MASS MARKET AND DEMAND ISSUES

**Beeton, Dr. David, Urban Foresight, UK**
- Smart Ultra Low Emission Mobility in Dundee
- Economic Viability of Second Life Applications of Lithium-Ion Traction Batteries

**Figenbaum, Erk, Institute of Transport Economics, NO**
- Norwegian user and usage profiles for BEVs and PHEVs
- Results from a Norwegian survey of vehicle owners

**Frick, Volker, IBM Deutschland GmbH, DE**
- How to increase the charging network for EV drivers?
- A Community-based Charging solution for EV drivers.

**Grasselt, Dr. Nico, eMO, DE**
- Market development strategies for Smart Cities: How can innovation policy make Berlin a testbed for automated, connected and electrified passenger transport?

**Greenleaf, James, Energy and Environmental Economics, US**
- Entering Mass Market and Demand Issues
- How to Develop an Energy Storage System using Electric Vehicle Batteries

**Guth, Daniel, Karlsruhe Institute of Technology, DE**
- Electric Vehicle Procurement Decisions in Fleets: Results of a Case Study in South-Western Germany

**Hara, Dr. Takuya, Toyota Central R&D Labs., Inc., JP**
- Comprehensive comparison of hybrid and electric vehicles using a multi-dimensional techno-economic assessment diagram

**Helm, Hinrich, Institute for Energy and Environmental Research-Heidelberg, DE**
- My eDrive - Simulating Electric Vehicles Using a Smartphone

**Huang, Ellen, HapPhucteq NL**
- Adventures 2 a smarter world

**Noetstra, Auke, TU Eindhoven, NL**
- Characteristics of Dutch EV drivers

**Idema, Harm Jan, APPM management consultants, NL**
- PEV policy study in California

**Jenn, Dr. Alan, Institute of Transportation Studies, UC Davis, US**
- Forecasting the future of international electric vehicle adoption

**Jenn, Dr. Alan, Institute of Transportation Studies, UC Davis, US**
- Incentivizing electric vehicles in the United States

**Kato, Dr. Hitoshi, Toyota Transportation Research Institute, JP**
- Wide-spreadings situations and factors of HEVs in Japan

**Krueger, Adrian, 2Life NEV Manufacturers, ZA**
- Africa’s need for education and training on technology

**Kwon, Yongmin, KAIST, KR**
- The Relationship between Satisfaction of Electric Vehicle Owners and Their Intentions for Repurchase and Recommendation

**Leevers, Brent, Ministry of Transport, NZ**
- Electric vehicles in New Zealand - opportunities, challenges, and responses

**Luccarelli, Prof. Martin, Hochschule Reutlingen, DE**
- Material perception in alternative fuel car interiors. Increasing marketability through green design cues

**Manthey, Andreas, BSM Bundesverband Solare Mobilität e.V, DE**
- Education about energy and mobility transition from TU Berlin and business partners about German Energiewende with electric vehicles

**Mink, Andreas, Daimler AG, DE**
- Zero Emission Strategy Daimler Buses

**Olausson, Ellen, RISE Viktoria, SE**
- Public Policies for Charging of Electric Vehicles in Multifamily Dwellings - A Case Study in Gothenburg

**Prazsner, Alfons, Alpen-Adria Universität, AT**
- How to trigger mass-market adoption for electric vehicles? An analysis of potential electric vehicle drivers in Austria

**Prochazka, Ben, Electrification Coalition, US**
- Electric vehicle (EV) Group Buy: Applying a bulk purchase model to EV sales

**Rainbow-Hirschel, Kira, Robert Bosch GmbH, DE**
- A Survey on Customer Needs With regard to an Innovative Business Model

**Roeckle, Felix, Fraunhofer IAO, DE**
- Integration of roles vs. specialization: What is the best business model for fast charging?

### 6 ENERGY AND ENVIRONMENTAL ANALYSIS

**Arnold, Alexander, Fraunhofer IOSB-AST, DE**
- Impact of Electric Vehicle Charging in Low Voltage Grid Structures

**Badreddine, Yasmina, RENAULT, FR**
- How to Develop an Energy Storage System using Electric Vehicle Second Life Batteries

**Baumann, Michael, University of Stuttgart - Dept. GaBi, DE**
- Reducing the environmental impacts of electric vehicles and electricity supply: How Hourly Defined Life Cycle Assessment and smart charging can contribute

**Duschek, Daniel, czi entwicklungs technik GmbH, DE**
- Approach to an Agile Development of a Sustainable, Customer-specific Mobility Concept

**Hadj, Andrew F., Technische Universität Berlin (TU Berlin), DE**

**Ratjen, Jan, 4K3 Mobility, NL**
- INCH - Interactive Charging of Electric Vehicles

### 7 MOBILITY CONCEPTS

**Beeton, Dr. David, Urban Foresight, UK**
- Lessons Learned in Designing Integrated Low Carbon Transport Hubs

**Camacho Alcocer, David, Universityieslo, DE**
- Electric vehicles in rural demand-responsive systems: requirements and challenges for an efficient service provision

**Dogru, Antun-spin, ENEA, IT**
- Distribution of fast charge stations in urban environment

**Golub, Michael, Indiana University Purdue University Indianapolis, US**
- Hybrid-Electric Snowmobile - Design and Development

**Heilig, Michael, KIT-/IFV, DE**
- Do plug-in electric vehicles cause a change in travel behavior?

**Henkin, Zach, Drive Oregon, US**
- E-Mobility for Unrepresented Communities

**Kleiner, Florian, DLR e.V., DE**
- Development, Implementation (Pilot) and Evaluation of a Demand Responsive Transport System

**Kubaisi, Rayad, Karlsruhe Institute of Technology, DE**
- Concept of an electric inner city transport aid

**Kriebel, Alp, Alpen-Adria Universität, AT**
- Automatic Energy Supply Docking System for Electric Scooter

**Krook, Martin, Staatsverwaltungs- und Verwaltungsberatungskammer Niederösterreich, AT**
- Urban Mobile Pioneering: The City of Offenbach and its Electric Mobility Service

**Raemder, Felix, 7UMCREATE, SG**
- New Approach for an Easily Detachable Electric Drive Unit for Off-the-Shelf Bicycles
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<td>09:00 - 10:30</td>
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<td>10:45 - 12:15</td>
<td>E1: Electrifying heavy duty transport</td>
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<td>10:45 - 12:15</td>
<td>E2: Charging standardization</td>
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<td>10:45 - 12:15</td>
<td>E3: Industrialization of electric mobility</td>
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<td>10:45 - 12:15</td>
<td>E4: Implementing electromobility into daily life</td>
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<td>10:45 - 12:15</td>
<td>E5: Crash safety in electric vehicles</td>
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<td>E6: Hydrogen generation</td>
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<td>E7: Battery materials and recycling</td>
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<td>E8: Hydrogen generation</td>
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<td>9:00 - 17:00</td>
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<td>13:15 - 14:45</td>
<td>DS2: Dialogue Session EVS30</td>
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<td>13:30 - 14:30</td>
<td>F3: Life cycle assessment of electric vehicles</td>
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<td>14:45 - 16:15</td>
<td>F4: Regional examples of EV adoption</td>
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<td>14:45 - 16:15</td>
<td>F5: Advances in PHEV technologies</td>
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<tr>
<td>14:45 - 16:15</td>
<td>F6: The role of hydrogen and fuel cells in the economy</td>
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<tr>
<td>Room C5.1</td>
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<tr>
<td>14:45 - 16:15</td>
<td>F7: Stationary batteries</td>
</tr>
<tr>
<td>Room C4.3</td>
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<tr>
<td>16:30 - 18:00</td>
<td>G3: Smart grid: how can EVs contribute?</td>
</tr>
<tr>
<td>Room C1.2.2</td>
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</tr>
<tr>
<td>16:30 - 18:00</td>
<td>G4: EV market development around the globe</td>
</tr>
<tr>
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<tr>
<td>16:30 - 18:00</td>
<td>G5: Latest electric motor technologies</td>
</tr>
<tr>
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<tr>
<td>16:30 - 18:00</td>
<td>G6: Electric aircrafts and rail</td>
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<tr>
<td>Room C4.3</td>
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<tr>
<td>16:30 - 18:00</td>
<td>G7: Battery management systems</td>
</tr>
<tr>
<td>Room C5.3</td>
<td></td>
</tr>
<tr>
<td>Evening Event with f-cell awards</td>
<td>Gallery, Hall 1</td>
</tr>
</tbody>
</table>
### TUESDAY, OCTOBER 10 – PARALLEL SESSIONS

#### E1 ELECTRIFYING HEAVY DUTY TRANSPORT

Room C1.1  
**Session Chairs:** Joseph Beretta, AVERE France, FR and Moataz Mohamed, McMaster University, CA

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>10:50-11:10</td>
<td>Mobility for heavy duty commercial vehicles</td>
<td>Nicolas Du Bois, Daimler AG, DE</td>
</tr>
<tr>
<td>11:00-11:30</td>
<td>The fuel economy of MD/HD Trucks - 2015-2050</td>
<td>Andrew Burke, University of California, Davis, US</td>
</tr>
<tr>
<td>11:30-12:00</td>
<td>Electric heavy duty trucks in Europe more and more upcoming</td>
<td>Edwin Bestebreurtj, FIER Automotive, NL</td>
</tr>
</tbody>
</table>

**Room C1.2.1**  
**Session Chairs:** Lonneke Driessen-Mutters, Enexis/ElaadNL, NL and Robert Geiß, GELCOservices Pty. Ltd., AU

<table>
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<tr>
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<tbody>
<tr>
<td>10:50-11:10</td>
<td>Auxiliary model review for design analysis of hybrid electric heavy-duty long-haul vehicles</td>
<td>Frans Verbruggen, University of Technology Eindhoven, NL</td>
</tr>
</tbody>
</table>

**Room C1.1**  
**Session Chairs:** Joseph Beretta, AVERE France, FR and Moataz Mohamed, McMaster University, CA

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<tbody>
<tr>
<td>11:45-12:05</td>
<td>Measuring charging infrastructure: achievements and new developments</td>
<td>Prof. Dr. Peter Van den Bossche, Vrije Universiteit Brussels - MOBIL, BE</td>
</tr>
<tr>
<td>11:30-11:50</td>
<td>Mode 2 charging testing and certification for an international market access</td>
<td>Detter Hanauer, VDE-Prof.-Zertifizierungsinstut, DE</td>
</tr>
<tr>
<td>11:30-11:50</td>
<td>The ISO standard 15118 enables simple and intelligent charging and represents an integral part for the digital interconnection of electric vehicles</td>
<td>Christian Hahn, Hubject GmbH, DE</td>
</tr>
<tr>
<td>11:50-12:10</td>
<td>Introducing hardware security modules to embedded systems for smart charging (ISO/IEC 15118)</td>
<td>Fabian Eisele, Vector Informatik GmbH, DE</td>
</tr>
</tbody>
</table>

#### E2 CHARGING STANDARDIZATION

Room C1.2.1  
**Session Chairs:** Lonneke Driessen-Mutters, Enexis/ElaadNL, NL and Robert Geiß, GELCOservices Pty. Ltd., AU

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<td>International standardization of charging infrastructure: achievements and new developments</td>
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**Room C1.2.2**  
**Session Chair:** Florian Herrmann, Fraunhofer IAO, DE

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<tbody>
<tr>
<td>11:30-11:50</td>
<td>The new Opel-Ampera-e. Battery, propulsion system and their operation</td>
<td>Manfred Herrmann, Opel Automotive GmbH, DE</td>
</tr>
<tr>
<td>11:50-12:10</td>
<td>ARENA2036</td>
<td>Peter Froeschle, Max Hosfeld, ARENA2036 e.V., DE</td>
</tr>
</tbody>
</table>

**E3 INDUSTRIALIZATION OF ELECTRIC MOBILITY**

Room C1.2.2  
**Session Chair:** Florian Herrmann, Fraunhofer IAO, DE

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<tr>
<td>10:50-11:10</td>
<td>Measuring charging infrastructure development in selected countries: metrics and comparison</td>
<td>Dr. Fei Li, Tsinghua University, CN</td>
</tr>
</tbody>
</table>

**Room C1.1**  
**Session Chairs:** Franke Herrmann, Fraunhofer IAO, DE and Prof. Dr. Quing Zhou, Tsinghua University, CA

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<td>10:50-11:10</td>
<td>E-mobility: challenging the human sensory system</td>
<td>Prof. Dr. Ulrich Schüfer, Judith Ungewiss, Auer Universität of Applied Sciences, DE</td>
</tr>
<tr>
<td>11:00-11:20</td>
<td>E-mobility tour Gothenburg Sweden</td>
<td>Per Osterstrom, Business Region Gothenburg, SE</td>
</tr>
<tr>
<td>11:30-11:50</td>
<td>Lessons learned from electric cars in daily taxi operation</td>
<td>Prof. Dr. Stefan Pettersson, RISE Viktoria, SE</td>
</tr>
<tr>
<td>11:50-12:10</td>
<td>eTourEurope - EV rally and community event</td>
<td>Werner Hillebrandt Hansen, eProjekt TNS GmbH, DE</td>
</tr>
</tbody>
</table>

**E4 IMPLEMENTING ELECTROMOBILITY INTO DAILY LIFE**

Room C7.1  
**Session Chairs:** Prof. Dr. Frank Rieck, AVERE, NL and Dr. Wolfgang Fischer, e-mobil BW GmbH, DE

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**E5 CRASH SAFETY IN ELECTRIC VEHICLES**

Room C5.1  
**Session Chair:** Jochen Feese, Daimler AG, DE and Prof. Dr. Qing Zhou, Tsinghua University, CN

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<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:50-11:10</td>
<td>How to build a battery case</td>
<td>Dr. Alexander Betz, Daimler AG, DE</td>
</tr>
<tr>
<td>11:00-11:20</td>
<td>Introducing an approach to predict the time-dependent mechanical, electrical and thermal behaviour of Li-ion batteries due to crash loads</td>
<td>Simon Franz Heindl, Vehicle Safety Institute / Graz University of Technology, AT</td>
</tr>
<tr>
<td>11:30-11:50</td>
<td>Battery safety evaluation of electric driven motorcycles from the perspective of accident research</td>
<td>Alessio Serrini, Vehicle Safety Institute/Grass University of Technology, AT</td>
</tr>
<tr>
<td>11:50-12:10</td>
<td>Crash safety of fuel cell electric vehicles</td>
<td>Ranier Justen, Daimler AG, DE</td>
</tr>
</tbody>
</table>

**E6 HYDROGEN GENERATION**

Room C4.1  
**Session Chair:** Jürgen Mergel, Consultant electrolysis and fuel cells, DE

<table>
<thead>
<tr>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>10:45-11:05</td>
<td>PEM electrolysis: A technoeconomical approach from stack design to hydrogen applications from renewable energy sources</td>
<td>Dr. Georg Tjarks, NOW-Nationale Organisation Wasserstoff- und BrennstoffzellenTechnologie GmbH, DE</td>
</tr>
<tr>
<td>11:05-11:25</td>
<td>High-current variable-voltage chopper rectifier for hydrogen generation</td>
<td>Dr. Zhaoyi Cao, AEG Power Solutions GmbH, DE</td>
</tr>
<tr>
<td>11:25-11:45</td>
<td>Hydrogen quality measurement according to SAE J2719 using ion mobility spectrometry</td>
<td>Marcel Corneliussen, EMCEL GmbH, DE</td>
</tr>
</tbody>
</table>

**E7 BATTERY MATERIALS AND RECYCLING**

Room C5.3  
**Session Chair:** Tobias Pläcke, Westfälische Wilhelms-Universität Münster|MEET Batterieforschungszentrum, DE

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<tr>
<td>10:45-11:05</td>
<td>Rechargeable batteries – the battery technology of tomorrow?(!)</td>
<td>Dr. Iona Giusti, Math2Market GmbH, DE</td>
</tr>
<tr>
<td>11:05-11:25</td>
<td>Solid state batteries – the battery technology of tomorrow?(!)</td>
<td>Dr. Henning Lorrman, ISC Fraunhofer-Institut für Silicatforschung, DE</td>
</tr>
<tr>
<td>11:25-11:45</td>
<td>Coal derived carbon materials with enhanced performance properties for grid storage and electric vehicle applications</td>
<td>Dr. John P. Lemmon, National Institute for Clean and Low Energy, Beijing, CN</td>
</tr>
<tr>
<td>11:45-12:05</td>
<td>Recycling lithium-ion batteries from xEV: Challenges, hurdles and solutions for a circular economy by Umicore</td>
<td>Ghislain Van Damme, Umicore Battery Recycling, BE</td>
</tr>
</tbody>
</table>

**F1 ELECTRIC BUSES IN PUBLIC TRANSPORT**

Room C1.1  
**Session Chair:** Francois Badin, IFP Energies Nouvelles, FR and Harm Weken, FIER, NL

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>14:50-15:10</td>
<td>The future of urban buses is electric</td>
<td>Umberto Guida, UTP, BE</td>
</tr>
<tr>
<td>15:30-15:50</td>
<td>Public transport of tomorrow: zero emissions vehicles including electric buses and buses with fuel cell range extenders</td>
<td>Michal Sierzyński, Solaris Bus &amp; Coach SA, PL</td>
</tr>
<tr>
<td>15:50-16:10</td>
<td>Electric buses: Who’s in charge</td>
<td>Ross van der Ploeg, EVConsult, NL</td>
</tr>
</tbody>
</table>

**F2 WIRELESS CHARGING CONCEPTS**

Room C1.2.1  
**Session Chair:** Robert Stanek, P3 Group, DE and Julieta Francis, Allegheny Science Technology, US

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<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>15:00-15:10</td>
<td>Basic study on power management of wireless in-wheel motor with dynamic wireless power transfer</td>
<td>Takuma Takeuchi, University of Tokyo, JP</td>
</tr>
<tr>
<td>15:10-15:30</td>
<td>Standardization of wireless power transfer for PEV - technology, alignment and testing, SAE J2954</td>
<td>Jesse Schneider, BMW AG, DE</td>
</tr>
<tr>
<td>15:30-15:50</td>
<td>STILLE Standardization of Inductive Charging Systems Framework for interoperable wireless charging solutions</td>
<td>Johanna Heckmann, P3 Automotive GmbH, DE</td>
</tr>
<tr>
<td>15:50-16:10</td>
<td>User acceptance of wireless charging for electric vehicles</td>
<td>Daniel Fett, Karlsruhe Institute of Technology, DE</td>
</tr>
</tbody>
</table>
TUESDAY, OCTOBER 10 – PARALLEL SESSIONS

14:45 – 16:15

F3 LIFE CYCLE ASSESSMENT OF ELECTRIC VEHICLES

Room C1.1.2  Session Chairs: Maarten Messagie, Vrije Universiteit Brussel, BE and Prof. Dr. Yuto Luo, South China University of Technology, CN

14:50-15:10  Life cycle assessment of electric vehicles - The influence of geographical and temporal aspects  
Selin Erksoy-Arci, TU Braunschweig - Institute of Machine Tools and Production Technology, DE

15:10-15:30  Environmental assessment of current and future urban buses with different energy sources  
Brian Cox, Paul Scherrer Institute, CH

15:30-15:50  Life cycle assessment of electric vehicles in shuttle traffic - field test results of the project RheinMobil  
Dr. Michael Held, Fraunhofer IBP, DE

15:50-16:10  Life-cycle based environmental effects of 1.5 mio. electric vehicles on the road in 35 countries - facts and figures from the IEA Technology Collaboration Program on Hybrid & Electric Vehicles  
Gerfried Jungmeier, JOANNEUM RESEARCH, AT

F4 REGIONAL EXAMPLES OF EV ADOPTION

Room C1.3  Session Chairs: David Beeton, Urban Foresight, UK and Mark Simon, NYC Department of Transport, US

14:50-15:10  German Showcase Programme E-Mobility 2013 - 2017 - results, perspectives, legal framework  
Dr. Bertram Harendt, Deutsches Dialog Institut, DE

15:10-15:30  Measures supporting the transition to efficient mobility in the Free State of Saxony  
Martin Grisemayer, Sachsenische Energieagentur - SAENA GmbH, DE

15:30-15:50  The Dutch approach to EV  
Irene Moutaehan, Ministry of Economic Affairs, NL

15:50-16:10  Early-adoption experience and upcoming challenges from the San Francisco Bay Area  
Karen Scholnicke, Jack Broadbent, Damian Breen, Bay Area Air Quality Management District, US

F5 ADVANCES IN PHEV TECHNOLOGIES

Room C5.1  Session Chairs: Bram Veenhuizen, HAN University of Applied Science, NL and Aymeric Rousseau, Argonne National Laboratory, US

14:50-15:10  Vehicle level control analysis for voltec powertrain  
Namdo Kim, Argonne National Laboratory, US

15:10-15:30  Development of an integrated power control algorithm for a series-parallel type PHEV  
Joonbeom Wi, Sungkyunkwan University, KR

15:30-15:50  Route based energy management for plug in hybrid electric vehicles  
Dr. Joonyoung Park, Hyundai Motor Company, KR

15:50-16:10  Comparative analysis of power split characteristics for Volt PHEV considering drivetrain losses  
Hyunhwa Kim, Sungkyunkwan University, KR

F6 THE ROLE OF HYDROGEN AND FUEL CELLS IN THE ENERGY ECONOMY

Room C4.3  Session Chair: Dr. Christopher Holbling, Fraunhofer ISE, DE

14:45-15:05  Renewable hydrogen: Enabling a clean energy economy  
Wido Westbroek, Hydrogenics Corporation, CA

15:05-15:25  Building industrial supply chains for fuel cells - where will the value be created?  
Franz Lehner, E4tech Sarl, CH

15:25-15:45  Sectorial integration – an important aspect of “Energiewende 2.0”  
Dr. Ulrich Bürger, LBST Ludwig-Bölkow-Systemtechnik GmbH, DE

15:45-16:05  ENTREE100 - The research and demonstration cluster for multi-MW-application in hydrogen and flexibility  
Martin Eckhard, Entwicklungsgesellschaft Region Halle, DE

16:30 – 18:00

G1 INNOVATION IN SPECIAL VEHICLE TECHNOLOGY

Room C1.1  Session Chairs: Dr. Davor Gospodarić, TEAMOBILITY GmbH, DE and Prof. Dr. Hans-Christian Reuss, FKF, Stuttgart University, DE

16:30-16:55  Personal EV answering mega-cities transportation challenges  
Dan Hermann, Afeka Academic College of Engineering, IL

16:55-17:15  The EnergyTube System - A module based, scalable energy system, with battery and fuel cell for portable, mobility and stationary applications  
Dr. Bertram Harendt, Deutsches Dialog Institut, DE

17:15-17:35  How far can you get without a friction brake on rear axle? – The RABBIT project  
Egor Sawatski, Continental, DE

17:35-17:55  The MAHLE Range Extender Engine  
Dr. Michael Bassett, MAHLE Powertrain Limited, UK

G2 LATEST WIRELESS CHARGING TECHNOLOGY

Room C1.2.1  Session Chair: Prof. Dr. Omar Hegazy, Vrije Universiteit Brussel - MOBI, BE and Julieta Francis, Allegheny Science and Technology, US

16:30-16:55  Contactless energy transfer for charging electric and hybrid electric vehicles  
Prof. Dr. Nefza Parsoon, IEV University of Stuttgart, DE

16:55-17:15  A study of electric vehicle wireless charging system integration and vehicle alignment optimization  
Seong JaiYang, Gyeonggi-do, KR

17:15-17:35  Coil topologies for inductive power transfer in automotive applications  
Dr. Markus Springmann, Karlsruhe Institute of Technology, DE

17:35-17:55  Simple relative positioning 3-axis alignment sensors for wireless power transfer for electric vehicles  
Dr. Thomas Stout, Evatran, US

G3 SMART GRID: HOW CAN EVs CONTRIBUTE?

Room C2.2.2  Session Chair: Laurent de Vroog, ENSIE, BE and John Gartner, Navigant, US

16:30-16:55  Implementation of e-mobility architecture for providing smart grid services using EVs  
Sergejus Martinezas, Technical University of Denmark, DK

16:55-17:15  Market place based energy management for PEV grid integration  
Barry Söke, Dr. Ing. h.c. F. Porsche AG, DE

17:15-17:35  Building a smart charging ecosystem in Amsterdam - getting ready for mass market of (next generation) EVs  
Frank Geerts, ElandNL, NL

17:35-17:55  System architecture for electric vehicles used as a distributed energy resource - Perspective and vision of an EV market leader  
Sebastien Gouraud, Thomas Dreumont, RENAULT, FR
16:30 – 18:00

**G4 EV MARKET DEVELOPMENT AROUND THE GLOBE**

Room C7.1  
**Session Chairs:** Liesleot Vanhaverbeke, Vrije Universiteit Brussel, BE and Jeff Allen, Forth, US

16:35-16:55  
**What is driving the U.S. electric vehicle market?**  
Dr. Nic Lutsey, International Council on Clean Transportation, US

16:55-17:15  
**From early adopters to mass market: is the French population ready for electric mobility?**  
Marie Castelli, AVERE FRANCE, FR

17:15-17:35  
**Automotive the future of mobility**  
Prof. Dr. Frank Rock, Rotterdam University of Applied Science, NL

17:35-17:55  
**Electrifying emerging markets: the case of Costa Rica**  
Bjørn Utgard, ESCOIA, NO

**G5 LATEST ELECTRIC MOTOR TECHNOLOGIES**

Room C5.1  
**Session Chairs:** Gonzalo Langa, Elgie Propulsion Technologies Ltd, SI and Wen Xukui, Institute of Electrical Engineering, Chinese Academy of Sciences, CN

16:35-16:55  
**Design of a gearless wheel hub motor for BEV based on a switched reluctance machine**  
Martin Vosswickel, Cologne University of Applied Sciences, DE

16:55-17:15  
**Operating point adaptation for NVH-optimization of induction machines**  
Wolfgang Bischof, Robert Bosch GmbH, DE

17:15-17:35  
**Cost optimised integrated electric powertrain containing the first silent switched reluctance motor for passenger vehicles**  
Steven Benoets, Faben Chausvanicht, Punch Powertrain N.V., BE

17:35-17:55  
**Iron loss modelling of a PMSM traction motor, including the magnetic degradation due to lamination cutting**  
Sigurd Jacobs, ArcelorMittal, BE

**G6 ELECTRIC AIRCRAFTS AND RAIL**

Room 4.3  
**Session Chair:** Dr. Peter Beckhaus, ZBT Zentrum für BrennstoffzellenTechnik GmbH, DE

16:30-16:50  
**Battery requirements coming from aviation**  
Dr. Agnieszka Makowska, Siemens AG Corporate Technology, DE

16:50-17:10  
**The high flyer Velocopter x2**  
Jan-Hendrik Bienert, VelociCo PT, DE

17:10-17:30  
**Jupiter-Hz**  
Intelligent Energy, BE

17:30-17:50  
**Zero-emission fuel cell solutions for rail applications**  
Owen Uluc, Ballard Power Systems Inc., DE

**G7 BATTERY MANAGEMENT SYSTEMS**

Room C5.3  
**Session Chair:** Matthias Puchta, Fraunhofer-Institut für Windenergie und Energiesystemtechnik IWES, DE

16:30-16:50  
**End-of-life prediction of lithium-ion batteries based on mechanistic ageing models**  
Prof. Dr. Wolfgang Bezler, Hochschule Offenburg, DE

16:50-17:10  
**High-precision, high-dynamic emulation of lithium-ion cells for the entire life cycle**  
Franz Dengler, MicroNova AG Software und Systeme, DE

17:10-17:30  
**LionTelligence - Intelligent battery life cycle management**  
Alexander Kohs, CTC cartech company GmbH, DE

17:30-17:50  
**ebc - effective battery control**  
Hans Harjung, e-moove gmbh, AT
### TUESDAY, OCTOBER 10 – DIALOGUE SESSION DS2

**13:15 – 14:45**

#### VEHICLES AND TRANSPORTATION SYSTEMS

<table>
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<tr>
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<tbody>
<tr>
<td>Staub, Hannah</td>
<td>Mastering the last mile - the Commercial Segway approach</td>
</tr>
<tr>
<td>van Wijk, Thijs</td>
<td>Testing and certification of EVs and charging infra</td>
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<tr>
<td>Wiedemann, Markus</td>
<td>A Novel Decision Making Technique at the Intersection Based on Perception Navigation</td>
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<tr>
<td>Yang, Prof. Yee-Piong</td>
<td>Coupled Energy Saving and Safe Driving Strategy for an Electric Vehicle Driven by Multiple Motors</td>
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<td>Contribution of inverter and relaxation spring to the electric vehicle passive suspension with in-wheel motors</td>
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#### ELECTRIC POWER TRAIN AND APPLICATION

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<tbody>
<tr>
<td>Bachheil, Florian</td>
<td>48 V - the Future of Automotive Traction</td>
</tr>
<tr>
<td>Bause, Katharina</td>
<td>The development of electric drive systems - How to deal with the challenges</td>
</tr>
<tr>
<td>Burke, Dr. Andrew</td>
<td>Thermal Management of Lithium Batteries in PHEVs Using Supercapacitors</td>
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<td>Dehn, Dr. Steffen</td>
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<td>Diwakar, Dr. Vinten</td>
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<td>Oster Soares de Sousa Lima, Victor</td>
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<td>Roemer, Felix</td>
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<td>Roemer, Jürgen</td>
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<td>Yashua, Li</td>
<td>Simulation Study on Single-shaft Parallel Hybrid Electric Bus</td>
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<td>Zhang Prof., Jianwu</td>
<td>Control Development to Reduce the Driveline Vibrations of a Power-split Hybrid Electric Vehicle during the Engine Start</td>
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## Tuesday, October 10 – Dialogue Session DS2

### 13:15 – 14:45

#### 3 Component Technologies

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<td>Bush, Prof. C.</td>
<td>Massachusetts Institute of Technology, US</td>
<td>Design and Analysis of Partitioned Sloter Flux-Switching Hybrid-Excitation Machine for Hybrid Electric Vehicles</td>
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<td>De Sutter, Lyonsander</td>
<td>Vrije Universiteit Brussel - MOBI, BE</td>
<td>Online multi chemistry SoC estimation technique using adaptive battery model parameter estimation</td>
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<td>Dieterich, Mila</td>
<td>German Aerospace Center, DE</td>
<td>Next Generation Car – Coupled Thermochemical Reactions for Preheating Vehicle Components</td>
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<td>Doming, Dr. Joseph</td>
<td>Focus Graphite Inc., CA</td>
<td>Electrochemical Performance of Lac Knife Natural Crystalline Flake Graphite from Canada, in Lithium Ion Batteries</td>
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<td>Egoz, Martinez-Laserna</td>
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<td>GARVIER, Laurent</td>
<td>CEA Tech, FR</td>
<td>Comparison of power electronics solutions to exchange energy between high voltage batteries</td>
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<td>Goetz Prof. Stefan</td>
<td>Porsche, DE</td>
<td>Highly Dynamic Multiphase Gallium-Nitride DC-DC Converter for 48 V Systems</td>
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<td>Hamiti, Dr. Tahar</td>
<td>INTECOM, FR</td>
<td>Is multiphase gear train a competitive solution for C-segment EV powertrain</td>
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<td>HW, Prof. J.</td>
<td>Institut für Technologie, TW</td>
<td>Design and analysis method for reducing motor NVH and electric vehicle noise validation</td>
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<td>Jorg, Yingchen</td>
<td>North China University of Technology, CN</td>
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<td>Kohas, Dr. Alexander</td>
<td>ZSW Ulm, DE</td>
<td>Challenges of automotive fuel cell stack testing</td>
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<td>Manderey, D. E.</td>
<td>Eberspächer Controls Landau GmbH &amp; Co. KG, DE</td>
<td>Safety Switches for xHEV and Autonomous Driving Vehicles</td>
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<td>Nasi, Mounir</td>
<td>German Aerospace Center (DLR), DE</td>
<td>A/C-APU - Innovative air conditioning unit based on hydrogen to extend the driving range of EVs and FCEVs</td>
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<td>Otczul, Stefan</td>
<td>Dr. Ing. h.c. F. Porsche AG, DE</td>
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<td>Oterzoi, Dr. Fernando</td>
<td>ENEA, Italy</td>
<td>Ageing effects on batteries of high discharge current rate</td>
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<td>Pajio, Dr. Andrea</td>
<td>European Commission, Joint Research Centre, NL</td>
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<td>Fuchta, Matthias</td>
<td>Fraunhofer-Institut für Windenergie und Energiesystemtechnik (IWES), DE</td>
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<td>Highly Integrated Axle Drive for EV Traction and Charging</td>
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<td>Hydrogen Mobility France – De-risking the roll out of hydrogen vehicles and infrastructure in France</td>
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<td>Sun, Ji, North China University of Technology, CN</td>
<td>The Simulation of Ni-MH Battery Based on Optimized Thevenin Model</td>
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<td>Tamasi, Anton</td>
<td>MACCON GmbH, DE</td>
<td>Optimized model based control for an outer rotor surface permanent magnet machine with temperature influence</td>
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<td>Kybura Switzerland, CH</td>
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### 14:45 – 16:15

#### 4 Charging/Fueling Infrastructure

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<td>Lj, SE</td>
<td>Thermal Design of an Electric Road System</td>
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<td>Boehrle, Lukas</td>
<td>BRUSA Elektronik AG, CH</td>
<td>Taking Inductive Charging to mass production</td>
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<td>Brauchle, Moritz</td>
<td>Robert Bosch GmbH, DE</td>
<td>New approach of ultrasonic sensor system in inductive charging infrastructure for live object protection</td>
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<td>Chabano, Dr. Rakan</td>
<td>Hyundai America Technical Center (HATCI), US</td>
<td>Laboratory Performance and Safety Test Results of the Hyundai / Mojo Mobility 7.0 kW WPT System</td>
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<td>Ferndowski, Roland</td>
<td>NKE, NL</td>
<td>Advancing eRoaming in Europe: towards a single &quot;language&quot; for the European charging infrastructure</td>
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<td>Frances, Julia</td>
<td>former Director EV, US DOE, US</td>
<td>Challenges and Opportunities of Grid Modernization and Electric Transportation</td>
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<td>Fremont, Aurelia</td>
<td>SyDEV, FR and Guerrini, Yann, SyDEV Vendee</td>
<td>The Vendee area, a rural territory of excellence for the French electric mobility</td>
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<tr>
<td>Friese, Volker</td>
<td>IBM Deutschland GmbH, DE</td>
<td>On the road towards seamless electromobility services in Europe: NeMo Hyper-Network project and challenges</td>
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<tr>
<td>Gnan, Till</td>
<td>Fraunhofer ISI, DE</td>
<td>How much charging infrastructure is needed and how does it affect the load shift potential of electric vehicles?</td>
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<tr>
<td>Gustavsson, Dr. Martin</td>
<td>RISE Viktoria, SE</td>
<td>Automatic conductive charging of electric cars</td>
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<td>Hidami, Harm</td>
<td>APMM Management consultants, NL</td>
<td>The Dutch revolution in smart charging electric vehicles</td>
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<td>Jochem, Patrick</td>
<td>Fraunhofer Institut for Systems and Innovation Research, DE</td>
<td>Combining the demand for interim and opportunity charging - a case study from Stuttgart</td>
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<td>Mathiaisen, Herve</td>
<td>Smart Green Batteries EV Chagers &amp; Jr, FR</td>
<td>SmartGreenCharge an off-grid mini-grid to charge till 24 electric vehicles simultaneously with 100% local renewable electricity</td>
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<td>Neven, Heuberger</td>
<td>Park&amp;Hire GmbH, DE</td>
<td>Park&amp;Hire’s first self-powered parking sensor for EV-charging stations</td>
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<td>Managing risk for unbalanced load situations of three-phase supply systems in charging facilities providing one-phase charging for electric vehicles</td>
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<td>Thodoropoulos, Theodoros</td>
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<td>Dynamic wireless EV charging system design for efficient e-mobility systems and market adoption</td>
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<td>Van den Brink, Harm</td>
<td>ElaadNL, NL</td>
<td>The need for cybersecurity within the electric vehicle infrastructure</td>
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<td>Weiken, Harm</td>
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<tr>
<td>Wilkins, Dr. Steven</td>
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<td>Fandrich, Mark, Electric Excitement (IG), DE</td>
<td>Education of mass market- and demand issues</td>
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<td>Farley, Blae, Southern Company Services, Inc, US</td>
<td>Revolutionizing Plug-in Electric Vehicle Education</td>
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<td>Gago-Calderon, Alfonso, Universidad de Malaga, ES</td>
<td>Consolidation of an EVs Project Based Learning program integrated within a complete Bachelor Engineering Degree</td>
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<td>Henkin, Zach, Drive Oregon, US</td>
<td>Pacific Northwest Electric Vehicle Showcase</td>
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<td>Heydamp, Constanze, Universität Stuttgart iAT, DE</td>
<td>User Types for Sustainable Mobility Incentive Models</td>
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<td>Hoekstra, Auke, TU Eindhoven, NL</td>
<td>Agent-based Model for the Adoption and Impact of Electric Vehicles in Dutch Neighborhoods</td>
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<td>Horn, Denis, University of Stuttgart, IAT, DE</td>
<td>Establishment of fast-charging stations: false assumption or right decision?</td>
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<td>Kandasamy, Selvakumar, Mahindra Reva Electric Vehicles Limited, IN</td>
<td>e2o plus – An energy efficient and smart urban mobility solution for India</td>
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<td>Karlsson Prof., Sten, Chalmers University of Technology, SE</td>
<td>BEV range management in two-car households</td>
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<td>Dynamic business model for electric vehicles (EV) over the product life cycle</td>
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<td>Maintenance and repair cost calculation and assessment of resale value for different alternative commercial vehicle powertrain technologies</td>
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<td>Kleiner, Florian, German Aerospace Center, DE</td>
<td>Scenario analyses for the techno-economic evaluation of the market diffusion of future commercial vehicle concepts</td>
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<td>Kramer, Corinna, SAP SE, DE</td>
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<td>Kuetl, Niklas, Karlsruhe Institute of Technology (KIT), DE</td>
<td>White spots in business and IT. An explorative study for e-mobility services</td>
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<td>Maas, Simone, Amsterdam University of Applied Sciences, NL</td>
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<td>Miller, Dr. James, Argonne National Laboratory, US</td>
<td>International Cooperation on Hybrid &amp; Electric Vehicles under the International Energy Agency’s Energy Technology Network</td>
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<td>Neidt, Tobias, Webasto, DE</td>
<td>Establishing a comprehensive residential/workplace charging solution provider</td>
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<td>Plötz, Patrick, Fraunhofer ISI, DE</td>
<td>Can Models Predict Electric Vehicle Users?</td>
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<td>‘Carbon-free island Jeju by 2030’ Plan and its Progress from the Perspective of EV</td>
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<td>Comparing Range between the Tesla Model S and the Chevrolet Bolt Electric Vehicles</td>
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<td>Strategic Marketing Plan to Help Facilitate the Development of the Electric Vehicle Market</td>
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<td>Schreiber, Giorgia, CONSUMER REPORTS, US</td>
<td>The customer perspective of a user-oriented public charging infrastructure</td>
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<td>Real-World Fuel Consumption Performance of Hybrid Vehicles in Japan as examples</td>
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<td>Dittus, Holger, DLR, DE</td>
<td>Economic and Environmental Viability of using a PV plant as an energy source for battery electric vehicles</td>
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<td>Fagenbaum, Eric, Institute of Transport Economics, MO</td>
<td>Estimating real-world emissions of PHEVs in Norway by combining laboratory measurement with user surveys</td>
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<td>Galioti, Giorgio, Protasoff SA, CH</td>
<td>SUNZIVEHICLE: an autarchic concept for EV charging</td>
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<td>Hoefnanz, Niels, Vrije Universiteit Brussel - MOBI, BE</td>
<td>The environmental potential of an electric vehicle with an in-life modular range extension</td>
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<td>Jenn, Dr. Alan, Institute of Transportation Planning and Development, UC, LA, US</td>
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<td>Juysi, Dr. Du, Tsinghua University, CN</td>
<td>Tracing global lithium trade: Implications for securing lithium supply for electric vehicle batteries</td>
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<td>Kadok, Dr. Yuki, National Institute of Advanced Industrial Science and Technology, JP</td>
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<td>Mantl, Andreas, BMW Group and Sobe, Thorsten, Quarzwerke GmbH, DE</td>
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<td>Economic and sustainability-potential of carbon-neutral charging services for electric vehicle customers</td>
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<td>Domingo, Gabriel, Lund University, SE</td>
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<td>Hoerter, Daniel, car2go Europe GmbH, DE</td>
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<td>Lambergh-Cocco, Sabrina, Fraunhofer IAO, DE</td>
<td>Service Empathy Board: A Method for the Agile Development of Mobility as a Service</td>
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<td>Lopes, Mario, Clavia, PT</td>
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<td>Kudoh, Dr. Yuki, National Institute of Advanced Industrial Science and Technology, JP</td>
<td>Real-World Fuel Consumption Performance of Hybrid Vehicles in Japan as examples</td>
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Ms. Nathalie Esenwein
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Phone +49 711 656960-5702

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Program overview:
WEDNESDAY, OCTOBER 11 – SESSION OVERVIEW

08:00 – 09:00 Conference registration, ICS Messe Stuttgart

09:00 – 10:30
H1: Thermal management of electric vehicles and charging stations
Room C1.2.1

H2: V2G as enabling technology for smarter EV grid integration
Room C1.2.2

H3: Electrification of the supply chain
Room C4.3

H4: Mobility as a Service
Room C5.1

H5: Barriers and opportunities for an intelligent charging infrastructure
Room C7.1

P5: Plenary f-cell, BATTERY+STORAGE
Room C1.1

Coffee break – 15 min

10:45 – 12:15
J1: Developments in LEV technology
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Room C7.1

J6: Fuel cell materials and components
Room C4.3

J7: Electric ships, ports and operations
Room C5.3

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12:30 – 13:45
P6: Closing Ceremony EVS30
Room C1.1

13:45 – 15:00
Lunch break

15:00 – 19:00
Technical Tours – Sight Seeing Tours

15:15 – 16:45
P7: Closing plenary f-cell, BATTERY+STORAGE
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Mobility and energy supply must be both efficient and low in emissions in tomorrow’s world. The technological fields of hydrogen, fuel cells and battery-electric drives offer great potential for clean mobility, efficient electricity and heat supply as well as storage media for renewable energies.
The spheres of industry, science and politics have realised this and within a strategic alliance, are working to prepare the market for these technologies.

We coordinate the future

Partner:
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Program overview:
WEDNESDAY, OCTOBER 11 – SESSION OVERVIEW

08:00 – 09:00 Conference registration, ICS Messe Stuttgart

09:00 – 10:30
H1: Thermal management of electric vehicles and charging stations
Room C1.2.1

H2: V2G as enabling technology for smarter EV grid integration
Room C1.2.2

H3: Electrification of the supply chain
Room C4.3

H4: Mobility as a Service
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Rainy days in Stuttgart:
WEDNESDAY, OCTOBER 11 – PARALLEL SESSIONS

09:00 – 10:30

**H1 THERMAL MANAGEMENT OF ELECTRIC VEHICLES AND CHARGING STATIONS**

**Room C1.1.1**

Session Chairs: Prof. Dr. Joris Jaguemont, Vrije Universiteit Brussel, BE and Aaron Loislle-Lapointe, Environment and Climate Change Canada, CA

- 09:05-09:25 Using liquid cooling to minimize temperature impact in high power charging (HPC) systems
  - Ralf Slecker, HIT, Cannon, UK

- 09:25-09:45 Efficient cabin preconditioning for EVs with a compact heat pump system
  - Dr. Andre Calvetella, DENSO AUTOMOTIVE Deutschland GmbH, DE

- 09:45-10:05 Next generation car thermal energy storage systems: Power-to-Heat concept in solid media storage for high storage densities
  - Sergey Belik, DLR, DE

- 10:05-10:25 A method to analyze thermal comfort and energy consumption of heating systems for electric cars
  - Eva-Maria Knoch, Karlsruhe Institute of Technology, DE

**H2 V2G AS ENABLING TECHNOLOGY FOR SMARTER EV GRID INTEGRATION**

**Room C1.1.2**

Session Chairs: Manuel Santa, Catalonia Institute for Energy Research, ES and Prof. Dr. Onckasteck Lim, Ulsan University, KR

- 09:05-09:25 CHAdeMO V2X protocol: design concept, benefits and world-wide applications
  - Tomoko Blech, CHAdeMO Association Europe, FR

- 09:25-09:45 Vehicle-to-everything (V2X) technology insights
  - Dr. Cristina Corchero, IREC, ES

- 09:45-10:05 Smart solar charging: bi-directional AC charging (V2G) in the Netherlands
  - Bram van Eijden, Baerte de Brey, ElaadNL, NL

- 10:05-10:25 V2G - An economic gamechanger in e-mobility?
  - Jens Christian Morel Loiberg Høg, Innova A/S, DK

**H3 ELECTRIFICATION OF THE SUPPLY CHAIN**

**Room C4.3**

Session Chair: Gary Wilson, APC, UK

- 09:05-09:25 EV R&D - a key pillar of a modern industrial strategy
  - Dr. Bob Moran, Office for Low Emission Vehicles, UK

- 09:25-09:45 Modular battery design for automated battery manufacturing in niche applications: AMPLIFIER Project
  - Mark Ellis, WMG - University of Warwick, UK

- 09:45-10:05 EV transmissions - lessons learnt
  - Alex Tyler, Biirksball, Drive System Design Ltd., UK

- 10:05-10:25 Borderless world: 2.0
  - Prof. Dr. Peter Wells, Cardiff University, UK

**H4 MOBILITY AS A SERVICE**

**Room C5.1**


- 09:05-09:25 Charging free floating shared cars in metropolitan areas
  - Robert van den Hoed, Over Morgen, NL

- 09:25-09:45 MobilitySchool - How to act multi - mobile daily?
  - Andreas-Michael Reinhardt, BSM e.V., DE

- 09:45-10:05 Statistical data for free-floating car sharing versus public transport
  - Prof. Dr. Stefan Pettersson, RISE Viktoria, SE

- 10:05-10:25 Development mode for integrating electric car-sharing into different types of Chinese cities
  - Prof. Dr. Xiaoyuan Wu, Tongji University, CN

**H5 BARRIERS AND OPPORTUNITIES FOR AN INTELLIGENT CHARGING INFRASTRUCTURE**

**Room C7.1**

Session Chairs: Prof. Dr. Peter Van den Bossche, Vrije Universiteit Brussel - MOBI, BE and Charles Botsford, AeroVironment, US

- 09:05-09:25 Tax barriers and smart charging
  - Baerte De Brey, ElaadNL, NL

- 09:25-09:45 The positive effects of workplace charging on electric vehicle ownership and utilization
  - Steven Henderson, Ford Motor Company, US

- 09:45-10:05 Success of electrification in France: strong political involvement and effects
  - Joseph Beretta, Avenue-France, FR

- 10:05-10:25 Impact of charging infrastructure growth on EV market in India
  - Snejakumar Nair, Mahindra Electric, IN

**J1 DEVELOPMENTS IN LEV TECHNOLOGY**

**Room C1.1.1**

Session Chair: Andreas Matthey, BSM e.V., DE

- 10:50-11:10 An intelligent energy management system for an electric bicycle
  - Stefan Sterkenburg, HAN University of Applied Sciences, NL

- 11:10-11:30 The rise of the speed pedelec, restrained by legislation?
  - Bram Rothier, KU Leuven, BE

- 11:30-11:50 A booming development of electric scooters in Taiwan
  - Theresa Su, Industrial Technology Research Institute, TW

- 11:50-12:10 Low voltage and low cost interior permanent magnet (IPM) motor for Indian EV applications
  - Praful Shanmugam, Mahindra Reva Electric Vehicles Ltd, IN

**J2 CHARGING INFRASTRUCTURE: ACCESS AND LOCATION MANAGEMENT**

**Room C1.1.2**

Session Chair: Martina Wilksmeier, Swedish Energy Agency, SE and Zach Henkin, Forth, US

- 10:50-11:10 EV related protocol study
  - Arjan Vlaers, ElaadNL, NL

- 11:10-11:30 Method for the definition of the optimal sites for fast chargers
  - Giorgio Gobba, Protocar, CH

- 11:30-11:50 Perceived usage potential of fast-charging locations
  - Julia Krause, Institute for Automotive Engineering, RWTH Aachen University, DE

- 11:50-12:10 Implementation of interoperability solutions for public charging infrastructure in Europe
  - Dr. Sebastian Albertus, KENATAL, FR

**J3 RENEWABLE ENERGY AND ELECTROMOBILITY - SYNERGIES AND OBSTACLES**

**Room C1.1.3**

Session Chair: Detlef Schumann, BridgingIT GmbH, DE

- 10:50-11:10 Electrification of transport by renewables
  - Dr. Frank Mayer, ENERCON, DE

- 11:10-11:30 Useful mobility service derived from renewable electricity: a comparison between battery electric and hydrogen fuel cell vehicles infrastructure
  - Yoric Ligen, EPFL Valais, CH

- 11:30-11:50 Intelligent photovoltaic-grid system for electric vehicles charging station
  - Abdellah Hassoun, Hassan II University of Casablanca, ENSEM, MA

- 11:50-12:10 Synergies and conflicts of integrating electrification and renewable energies into the urban micro grid at train station Berlin Südkreuz
  - Norman Pieniak, Reiner Lemoine Institut, DE

**J4 EVALUATING CONSUMER EXPERIENCE AND INCREASING ACCEPTANCE**

**Room C5.1**

Session Chairs: Prof. Dr. Anna Nagl, Aalen University, DE and John Gartner, Navigant, US

- 10:50-11:10 The 2017 ZEV consumer survey: Understanding latent consumer demand
  - Prof. Dr. Jann Axsen, START @ Simon Fraser University, CA

- 11:10-11:30 Put a price on carbon to fund EV incentives - Norwegian experience
  - Petter Haugeneland, Norwegian Electric Vehicle Association, NO

- 11:30-11:50 A customer’s view on policy measures to promote electric vehicles
  - Dr. Ulrike Kugler, Deutsches Zentrum für Luft- und Raumfahrt e.V., DE

- 11:50-12:10 Understanding demand for hybrid and electric vehicles using large-scale consumer profile data
  - Steven Henderson, Ford Motor Company, US
WEDNESDAY, OCTOBER 11 – PARALLEL SESSIONS

J5 ENTERING THE MASS MARKET WITH ELECTRIC MOBILITY
Room C7.1  Session Chairs: Robert Evans, CENEX, UK and Sang-kyu Hwang, The Korea Transport Institute, KR
10:50-11:10  Overcoming the barriers of mass EV introduction  Rob Winkel, Ecofys Netherlands BV, NL
11:10-11:30  The Green Electric Mobility Tool: An ex-ante assessment tool contributing to the advancement of e-mobility in urban areas in middle-income countries  Dr. Roland Steiermetz, EVConsult, NL
11:30-11:50  European strategic processes towards competitive, sustainable and user-friendly road transport  Dr. Gereon Meyer, VDI/VDE-IT, DE
11:50-12:10  Building the electric mobility market through public-private partnerships: the Oregon case study  Jeff Allen, Forth, US

J6 FUEL CELL MATERIALS AND COMPONENTS
Room C4.3  Session Chair: Prof. Dr. Josef Kallo, Deutsches Zentrum für Luft- und Raumfahrt e.V., Stuttgart/Universität Ulm, DE
10:45-11:05  Cost efficient manufacturing of bipolar plates  Dr. Martin Skrikerud, Cell Impact AB, SE
11:05-11:25  Sealing, coating and quality control of bipolar plates: scaling up for mass production  Dr. Jörg Karsste, ZBT Zentrum für Brennstoffzellen Technik GmbH, DE
11:25-11:45  Computer based design of porous transport layers of PEM fuel cells  Dr. Jürgen Becker, Math2Market GmbH, DE
11:45-12:05  In-Situ testing methods for membrane electrode assemblies  Ulf Gross, ISF Fraunhofer-Institut für Solare Energiesysteme, DE

J7 ELECTRIC SHIPS, PORTS AND OPERATIONS
Room C5.3  Session Chair: Erik Schumacher, NOW Nationale Organisation für Wasserstoff- und Brennstoffzellentechnologie, DE
10:45-11:05  IMO/CESNI – International codes and standards for fuel cells in ship applications  Lars Langfeldt, DNV GL - Maritime, DE
11:05-11:25  Powercell: Maranda and other marine fuel cell applications  Per Ekdunge, PowerCell, SE
11:25-11:45  Maritime development on hydrogen & fuel cell applications in Norway – ferries and passenger vessels  Kristian E. Vik, Norwegian Hydrogen Association, NO
11:45-12:05  Fuel cell electric trucks for ports: Operational, economic & societal benefits  Giampaolo Sibilia, Nuvera, IT

13:30 – 15:00

K1 STATIONARY FUEL CELLS
Room C4.3  Session Chair: Alexander Dauensteiner, Initiative Brennstoffzelle (IBZ), DE
13:30-13:50  FCH JU support to stationary fuel cells development and application  Nikolaos Lymperopoulos, Fuel Cells and Hydrogen Joint Undertaking, BE
13:50-14:10  Fuel cell 1.4 MW stationary power plant in industrial application  Michael Schäfer, Friatec AG, DE
14:10-14:30  Renewable energy projects of the future – From Surf ’n’ Turf to Big Hit – from stationary to mobile  Uwe Hartlmeier, Proton Motor Fuel Cell GmbH, DE
14:30-14:50  Fuel cell Vitovalor from Viessmann - Heat and power supply for residential application  Andre Vollmer, Heiss AG, CH

K2 SECTOR COUPLING - POTENTIAL MARKETS FOR FUEL CELLS AND BATTERIES
Room C5.3  Session Chair: Jan Frederik Steper, Ernst & Young, DE
14:10-14:30  Sector coupling – the pathway to 99% Greenhousegas-Reduction  Maike Schmidt, ZSW Zentrum für Sonnenenergie- und Wasserstoff-Forschung, DE
14:30-14:50  A clean switch to clean energy – World’s first energy autonomous multi-family home  Rahat Prasad, Proton Motor Fuel Cell GmbH, DE

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Here in Baden-Württemberg, inventing new things and making things even better has always been our drive. Automated, connected, electrified – that is how the future of mobility looks. The jump we now dare to take is similar in magnitude to the one from the horse-drawn carriage to the first engine-powered automobile made by Carl Benz and Gottlieb Daimler. This new, multifaceted transformation will offer our society great opportunities. Together with our partners, we will shape the future of mobility – for you, for us, for all.

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The conference program, consisting of lecture and dialogue sessions and complemented by high-level keynotes and plenary sessions was put together by the EVS30 Program Board:

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The papers for all presented lectures and posters were generated through a call for papers process. They were subsequently subject to an extensive peer review, conducted by the international Scientific Program Committee and resulting in an outstanding line-up of international expert speakers.
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