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Schedule at a Glance Fold-out

Welcome from the Co-Chairs

Dear Conference Attendees, Exhibitors and Guests:

On behalf of the Conference organizing committee and our sponsoring organizations IEEE Power & Energy Society (PES), IEEE Industry Applications Society (IAS), the IEEE Power Electronics Society (PELS), the IEEE Vehicular Technology Society (VTS), IEEE-USA, and the Society of Automotive Engineers (SAE International), we invite you to be part of the inaugural 2012 IEEE International Electrical Vehicle Conference (IEVC). We have chosen to locate this first of its kind conference in Greenville, South Carolina, a location where automotive innovation is reflected in unique new R&D and manufacturing facilities supporting international collaboration.

The IEVC provides a multi-national and interdisciplinary forum for engineers, researchers and government professionals to discuss advances in the emerging field of vehicle electrification. We have arranged a comprehensive and attractive technical program covering more than 200 presentations from different continents in paper sessions, panel sessions and keynotes, supported by technical tours, receptions, exhibitions and social events.

After an introduction to the conference theme by the IEEE President and an overview speech from our guest of the US Department of Energy we will kick off the event with a plenary session of invited keynote speakers from world-class companies that are investing in developing and manufacturing electrical vehicles and the related infrastructure. The plenary session will be followed by parallel paper and panel session tracks which will allow you to learn more about system design, component, infrastructure, manufacturing and operational aspects of electric mobility. The subsequent reception and gala dinner will provide you with ample opportunities to network with your international peers and to learn more about advances in vehicle electrification from keynote speakers from leading organizations such as SAE, EDTA, Duke Energy and FEDEX.

The following conference days provide a large choice of options to meet your specific interests in electrical vehicle technologies – both from a vehicle as well as an infrastructure perspective. We encourage you to visit the campus of the Clemson University International Center of Automotive Research to learn more about educational aspects in sustainable mobility as well as related research activities. Also, you will have the option to get a practical driving experience of electrical vehicles and to learn more about the different aspects of operating such a vehicle. We will also offer the possibility to see an EV bus production facility and a brand new production facility of capacitors that are specifically designed to be used in EV's.

As Greenville is considered as one of the TOP 10 most livable cities in the US, we also hope that you will find some time to explore the downtown area with its beautiful restaurants and parks.

We would like to thank you for attending this conference and contributing to create an international electrical vehicle community for IEEE.

With best regards,
Joachim Taiber

Schedule of Events

Sunday, March 4 2012

6:30 p.m. – 9:30 p.m. - Welcome Reception, hosted by Mayor of Greenville

Monday, March 5 2012

7:30 a.m. – 8:00 a.m. - Breakfast

8:00 a.m. – Plenary Session
Keynote Speakers:
Gordon Day, IEEE President
Dr. Mladen Kezunovic, IEEE IEVC 2012 Technical Program Chair
Pat Davis, DOE Program Manager of Energy Efficiency and Renewable Energy's Vehicle Technologies Program Office
Dr. John Kelly, Mission Vice President of Clemson University for Economic Development

9:45 a.m. -10:00 a.m. - Break

10:00 a.m. – 5:00 p.m. – Exhibits

10:00 a.m. – 11:45 a.m. - Plenary Keynote Panel
Moderator:
Russ Lefevre
Panelists:
Dr. Julian Weber, Head of Innovation Projects e-Mobility, BMW Group, Project i
Jay Iyengar, Chrysler
Dr. Andrew Brown, Executive Director & Chief Technologist Delphi
Jean-Luc Di-Paola-Galloni, Corporate Vice President Sustainable Development, Valeo
Jake Ring, Chief Marketing Officer, GE Energy Management

11:45 a.m. - 1:00 p.m. - Lunch

1:00 p.m. – 2:30 p.m. - Parallel Paper and Panel Sessions

Paper Session	Paper Session	Paper Session	Panel Session
EV Systems Architecture I	EV Component & Energy Storage I	Power Grid Opportunities I	EV Fleet Management

2:30 p.m. – 3:00 p.m. - Break

3:00 p.m. – 4:30 p.m. - Parallel Paper and Panel Sessions

Paper Session	Paper Session	Paper Session	Panel Session
EV Systems Architecture II	EV Component & Energy Storage II	Power Grid Opportunities II	New Manufacturing Concepts

5:00 p.m. – 7:00 p.m. – Networking Reception
Speakers:
Dr. James Barker, President Clemson University
George B. Patrick III, Deputy Secretary of Operations, South Carolina Department of Commerce

7:00 p.m. – 10:00 p.m. - Gala Dinner
Speakers:
Frank O. Klgon, SAE President EDTA President
Brian Wynne, President EDTA VP Global Vehicles of FEDEX
Mark Wyatt, Vice President, Smart Grid and Energy Systems, Duke Energy
Dennis R. Beal, VP Global Vehicles, FEDEX Express

Tuesday, March 6 2012

7:30 a.m. – 8:00 a.m. - Breakfast

8:00 a.m. – Plenary Session
Keynote Speakers:
Dr. Peter Frise, Scientific Director and CEO of Auto21
Heiko Weller, Director e-mobility Group, Bosch Engineering GmbH
Dale Hill, Co-Founder ProTerra

9:15 a.m. – 10:45 a.m. – Panel Session "New Trends in Battery Technologies"

9:30 a.m. - 11:30 a.m. - Paper Sessions

Paper Session	Paper Session	Paper Session	Paper Session
EV power electronics I	EV Systems Modeling, Simulation & Testing I	EV component & Storage Technologies III	Power Grid Opportunities III

10:00 a.m. – 5:00 p.m. – Exhibits

11:00 a.m. – 12:30 p.m. – Panel Session "EV Infrastructure Solutions"

11:30 a.m. – 1:00 p.m. - Lunch

12:45 p.m. – 2:15 p.m. – Panel Session "International EV Market Development"

1:00 p.m. – 2:30 p.m. - Paper Sessions

Paper Session	Paper Session	Paper Session	Paper Session
EV Power Electronics II	EV Systems Modeling, Simulation & Testing II	Information & Communication Control for EV's I	Power Grid Opportunities IV

2:30 p.m. – 3:00 p.m. - Break

2:30 p.m. – 4:00 p.m. – Panel Session "New Trends in EV Development"

3:00 p.m. – 5:30 p.m. - Paper Sessions

Paper Session	Paper Session	Paper Session	Paper Session
EV Power Electronics III	EV Systems Modeling, Simulation & Testing III	Information & Communication Control for EV's II/Global Standards/ EV Mobility/ EV Systems Modeling, Simulation & Testing	Power Grid Opportunities V

3:30 p.m. – 6:00 p.m. – Technical Tours:
Option 1: CUICAR campus tour
Option 2: SCTAC Drive along event

Wednesday, March 7 2012

7:30 a.m. – 8:00 a.m. - Breakfast

8:00 a.m. – Plenary Session
Keynote Speaker:
Michael Austin, Vice President, BYD USA
Walter Kulyk, Director, Office of Mobility Innovation, Federal Transit Administration

9:15 a.m. – 10:45 a.m. – Panel Session "Information and Communication Technologies"

9:15 a.m. - 11:45 a.m. - Paper Sessions

Paper Session	Paper Session	Paper Session
EV Infrastructure/ International View EV	EV Systems Modeling, Simulation & Testing V	EV-Related Educational Programs

10:00 a.m. – 5:00 p.m. – Exhibits
11:30 a.m. – 1:00 p.m. – Panel Session "EV Standards"

11:45 a.m. – 1:00 p.m. - Lunch

1:00 p.m. – 3:30 p.m. - Paper Sessions

Paper Session	Paper Session	Paper Session
EV Systems Modeling, Simulation & Testing IV	Information & Communication Technologies in EV Development III	Power Grid Opportunities VI

1:30 p.m. – 3: 00 p.m. – Panel Session "EV Safety"

3:30 p.m. – 4:00 p.m. - Break

4:00 p.m. – 6:00 p.m. - Poster Session

Thursday, March 8 2012

7:30 a.m. – 8:00 a.m. - Breakfast

8:00 a.m. – Plenary Session
Keynote Speakers:
Dr. Phil Lessner, CTO, KEMET
Johnny Boan, VP Sales, KEMET
Michael Taljonik, Manager, MBTech

9:15 a.m.-10:45 a.m. - Panel Sessions

Panel Session	Panel Session	Panel Session
EV Policies	P2030.1 Working Group	Success Factors of Being an EV Start-up

9:30 a.m. – 12:00 p.m. - Presentation and Discussion of Clean Cities Program

10:45 a.m. - Farewell Note

11:15 a.m. - Technical Tours:
Option 1: KEMET Lab & Plant Tour & ProTerra Tour
Option 2: Clemson Main Campus Tour

Useful Information

CONFERENCE INFORMATION

The first IEEE International Electric Vehicle Conference (IEVC) will facilitate the exchange of information on new global trends in technology, engineering, standards and deployment aspects among academic and industrial thought leaders of the fast-growing electric mobility ecosystem via a unique cross-organizational platform.

Conference Venue

TD Convention Center is one of the nation's largest convention and meeting facilities, featuring 280,000 square feet of exhibit space and 60,000 square feet of meeting and conference space. With a recently completed $22 million enhancement, the TD Convention Center continues to offer unbeatable flexibility and value to people hosting any type of event. Centrally located between Atlanta and Charlotte, the TD Convention Center is a popular regional destination for corporate meetings, tradeshows, banquets and special events.

Visit http://www.tdconventioncenter.com/ for additional information on the TD Convention Center.

TD CONVENTION CENTER
1 Exposition Drive
Greenville, SC 29607

Parking Information:

The center's parking lots can accommodate 2,500 automobiles. All parking operations are under control of the Center. The daily parking fee currently is $5 per vehicle for trade shows and events open to the public. This fee is subject to change.

CONFERENCE HOTELS

The IEVC Conference Committee has arranged shuttle service to and from each of the hotels listed below and the TD Convention Center.

The Westin Poinsett, Greenville
120 South Main Street,
Greenville, South Carolina 29601, USA
Tel: +1 864 421 9700

Hyatt Regency Greenville
220 North Main Street,
Greenville, South Carolina 29601, USA
Tel: +1 864 235 1234

Hilton Greenville
45 West Orchard Park Drive,
Greenville, South Carolina 29615, USA
Tel: +1 864 232 4747

TRANSPORTATION INFORMATION

Transportation to and from the Greenville-Spartanburg International Airport (GSP).

Rental Cars:

These companies provide car rental services to Greenville Spartanburg International Airport customers. Please call them for all your car rental needs. Or, click on the logos to go to their World Wide Web site. Companies served include Alamo, Avis, Budget, Enterprise, and Hertz.

Taxis:

Traveling from the airport to your final destination should be quick and easy. Atchison Transportation Services, Inc. (ATS) can always get you where you're going safely, efficiently and comfortably. Our well-trained, professional and courteous drivers are at your service. For travel reservations, please call toll-free, 877-ATS-2001.

GENERAL AREA INFORMATION

- **International Calling Code for United States**: 001
- **Local Currency**: US Dollar
- **Language**: English
- **Time Zone**: Eastern Standard Time (EST)

Conference Information

On Site Registration

On Site registration for 2012 IEVC will be available in the TD Convention Center outside the Conference Hall. Registration hours are:

Day	Time
Sunday, 4 March	3:00 p.m. – 7:00 p.m.
Monday, 5 March	7:30 a.m. – 7:00 p.m.
Tuesday, 6 March	7:30 a.m. – 5:30 p.m.
Wednesday, 7 March	7:30 a.m. – 6:30 p.m.
Thursday, 8 March	7:00 a.m. – 12:00 p.m.

Exhibit Hall Hours

Day	Time
Monday, 5 March	10:00 a.m. – 5:00 p.m.
Tuesday, 6 March	10:00 a.m. – 5:00 p.m.
Wednesday, 7 March	10:00 a.m. – 5:00 p.m.
Thursday, 8 March	10:00 a.m. – 2:30 p.m.

Plenary Session Hours

Day	Time
Monday, 5 March	8:00 a.m. – 11:45 a.m.
Tuesday, 6 March	8:00 a.m. – 9:15 a.m.
Wednesday, 7 March	8:00 a.m. – 9:15 a.m.
Thursday, 8 March	8:00 a.m. – 9:15 a.m. 10:45 a.m. – Closing Remarks

Technical Session Hours

Day	Time
Monday, 5 March	1:00 p.m. – 4:30 p.m.
Tuesday, 6 March	9:30 a.m. – 5:30 p.m.
Wednesday, 7 March	9:15 a.m. – 3:30 p.m.

Panel Session Hours

Day	Time
Monday, 5 March	1:00 p.m. – 4:30 p.m.
Tuesday, 6 March	9:15 a.m. – 4:00 p.m.
Wednesday, 7 March	9:15 a.m. – 3:00 p.m.
Thursday, 8 March	9:45 a.m. – 10:45 a.m.

Poster Session Hours

Day	Time
Wednesday, 7 March	4:00 p.m. – 6:00 p.m.

Technical Tours

Day	Time
Tuesday, 6 March	3:30 p.m. – 6:30 p.m. Option 1: CUICAR Campus Tour Option 2: SCTAC Drive Along Event
Thursday, 8 March	11:30 a.m. Option 1: KEMET Lab & Plant Tour & ProTerra Tour Option 2: Clemson Main Campus Tour

Social Events

Event	Day/Time
Coffee Breaks	Monday, 5 March 9:45 a.m. – 10:00 a.m. & 2:30 p.m. – 3:00 p.m. Tuesday, 6 March 9:15 a.m. – 9:30 a.m. & 2:30 p.m. – 3:00 p.m. Wednesday, 7 March 9:00 a.m. – 9:15 a.m. & 3:30 p.m. – 4:00 p.m. Thursday, 8 March 9:15 a.m. – 9:30 a.m.
Lunches	Monday, 5 March 11:45 a.m. – 1:00 p.m. Tuesday, 6 March 11:30 a.m. – 1:00 p.m. Wednesday, 7 March 11:45 a.m. – 1:00 p.m.
Welcome Reception	Sunday, 4 March 6:30 p.m. – 9:30 p.m.
Networking	Monday, 5 March 5:30 p.m. – 7:00 p.m.
Gala Dinner	Monday, 5 March 7:00 p.m. – 10:00 p.m.

Internet Access

Wireless is provided throughout the convention center for your convenience.

Unauthorized Audio/Video Recording

Unauthorized Audio/Video Recording of tutorial, plenary, or technical sessions is not permitted.

NOTES

Keynote Speeches

Sunday, March 4

Welcome Reception
6:30 p.m. – 9:30 p.m.

6:30 p.m.: Opening Welcome and Comments

- Dr. Russ Lefevre, Chair, TAB FDC Electric Vehicle Committee
- Dr. Joachim Taiber, Chair IEEE IEVC 2012, Research Professor at Department of Automotive Engineering and Institute Director, CUI-CAR
- Lee Stogner, Vice Chair IEEE IEVC 2012, IEEE Board of Directors 2011
- Imtiaz Haque, Founding Chair and Executive Director Department of Automotive Engineering, Clemson University
- Knox White, Mayor of Greenville

7:00 p.m.: Networking Begins

9:30 p.m.: Reception Concludes

Monday, March 5

Start	Speaker	Topic
8:00 a.m.	**Gordon Day,** *IEEE President (introduced by Dr. Joachim Taiber, IEEE IEVC 2012 Conference Chair)*	IEEE President – positioning IEEE as key driving force for vehicle electrification and the creation of associated infrastructure
8:30 a.m.	**Dr. Mladen Kezunovic,** *IEEE IEVC 2012 Technical Program Chair*	Overview of technical program, review process, statistics
9:00 a.m.	**Pat Davis,** *DOE Program Manager of Energy Efficiency and Renewable Energy's Vehicle Technologies Program Office*	Viewpoint from DOE on vehicle electrification and infrastructure development
9:30 a.m.	**Dr. John Kelly,** *Mission Vice President of Clemson University for Economic Development*	Clemson's role in implementing new economic development models in Clean Transportation and Clean Energy Infrastructure

9:45 a.m.	AM Break	
Start	**Speaker**	**Topic**
10:00 a.m. *Moderated by Russ Lefevre*	**Dr. Julian Weber,** *Head of Innovation Projects e-Mobility,* BMW Group, Project i	BMW Group's approach to Sustainable Individual Mobility
	Jay Iyengar, *Chrysler*	Diverse and dynamic automotive propulsion landscape and impacts on adoptions of electric vehicles
	Dr. Andrew Brown, *Executive Director & Chief Technologist Delphi*	New Energy Vehicle (NEV) Market & Technology Opportunities & Challenges
	Jean-Luc Di-Paola-Galloni, *Corporate Vice President Sustainable Development, Valeo*	Valeo's view on scalability of an EV component platform
	Jake Ring, *Chief Marketing Officer, GE Energy Management*	GE's view on EV infrastructure

Start	Speaker	Topic
5:00 p.m.	**Dr. James Barker,** *President Clemson University*	Higher Education's Commitment to a Sustainable Future
5:15 p.m.	**George B. Patrick III,** *Deputy Secretary of Operations, South Carolina Department of Commerce*	South Carolina; the role of the automotive sector and the transition to Clean Transportation

Start	Speaker	Topic
7:30 a.m.	**Frank O. Klgon,** *SAE President*	The role of SAE in the EV standardization, collaboration with IEEE
7:50 a.m.	**Brian Wynne,** *President EDTA*	The role of EDTA in the EV ecosystem
8:10 a.m.	**Mark Wyatt,** *Vice President, Smart Grid and Energy Systems, Duke Energy*	The Electric Vehicles Theatre of Operations
8:30 a.m.	**Dennis R. Beal,** *VP Global Vehicles, FEDEX Express*	The Road to Vehicle Sustainability

Tuesday, March 6

Start	Speaker	Topic
8:00 a.m.	**Dr. Peter Frise,** *Scientific Director and CEO of Auto21*	The Future Electric Car; more than just a battery and a motor
8:20 a.m.	**Heiko Weller,** *Director e-mobility Group , Bosch Engineering GmbH*	Individual E-Mobility Solutions for Automotive and Off-Highway Applications – A System View
8:40 a.m.	**Dale Hill,** *Co-Founder ProTerra*	Fast Charge Battery Electric Buses – A Paradigm Shift in the international transit industry

Wednesday, March 7

Start	Speaker	Topic
8:00 a.m.	**Michael Austin,** *Vice President, BYD USA*	The New Energy Revolution
8:20 a.m.	**Walter Kulyk,** *Director, Office of Mobility Innovation, Federal Transit Administration*	DOT and its view on the impact of vehicle electrification in the public transportation sector

Thursday, March 8

Start	Speaker	Topic
8:00 a.m.	**Dr. Phil Lessner,** *CTO, KEMET* **Johnny Boan,** *VP Sales, KEMET*	E-Supply chain investment: Business and Technology overview from a capacitor manufacturer
8:30 a.m.	**Michael Taljonik,** *Manager, MBTech*	OBDII Compliance of PHEV's

Keynote Speakers Biography

Gordon W. Day

Gordon Day currently serves as the 50th President of the IEEE. He spent most of his career in research and management at the National Institute of Standards and Technology, where he founded and led the NIST Optoelectronics Division. His personal research ranged from fundamental optical measurements to the development of standards for optical fiber and new concepts in instrumentation. More recently, he has served as science adviser to Sen. Jay Rockefeller and Director of Government Relations for the Optoelectronics Industry Development Association. He has been a Professor Adjoint at the University of Colorado, a Professor Adjunct at the Colorado School of Mines, a Visiting Fellow at the University of Southampton (UK), and a Visiting Scholar at the University of Sydney (Australia), and has served on many industry, government, and academic advisory groups. He is a past President of the IEEE Photonics Society and of IEEE-USA, and is a Fellow of IEEE, AAAS, the Optical Society of America, and the Institute of Physics (UK). He received B.S., M.S., and Ph.D. degrees in electrical engineering from the University of Illinois.

Dr. Mladen Kezunovic

Dr. Mladen Kezunovic is a Professor at the Department of Electrical and Computer Engineering at Texas A&M University where he holds the Eugene E. Webb Endowed Professorship.

He worked for Westinghouse Electric in the U.S.A. as a Systems Engineer on development of the first all-digital substation during 1979-1980 and for Energoinvest Company in Europe as the Technical Lead for substation automation development during 1980-86. He also spent sabbaticals at EdF's Research Centre in Clamart, France in 1999/2000 and at the University of Hong Kong in the fall of 2007. Dr. Kezunovic served as a consultant to over 50 utilities and vendors worldwide. He is TAMU's Site Director of the Power Systems Engineering Research Center (PSerc), and a Deputy Director of the Electrical Vehicles Transportation and Electricity Convergence (EV-TEC) Center, both Industry/University Cooperative Research Centers (I/UCRC) of the National Science Foundation.

Dr. Kezunovic acted as a Principal Investigator on close to 100 R&D projects ranging from implementation of real-time and open-loop digital simulators for relay testing to development of software solutions for automated analysis of faults and power quality disturbances. His current research activity is related to development of new concepts for substation automation and condition-based asset management, as well as advanced relaying and control solutions.

Dr. Kezunovic has published more than 400 papers and has given over 100 invited lectures, short courses and seminars around the world. He is an IEEE Fellow and Distinguished Speaker, CIGRE member, and registered PE in Texas. He is also a recipient of the Inaugural 2011 IEEE Educational Activities Board Standards Education Award "for educating students and engineers about the importance and benefits of interoperability standards"

Patrick Davis

Patrick Davis is the Program Manager of Energy Efficiency and Renewable Energy's Vehicle Technologies Program Office at the U. S. Department of Energy. The Vehicle Technologies Program supports over $200 million in annual research funding for hybrid drivetrains, advanced batteries, lightweight materials, advanced combustion and fuels, vehicle systems integration, and deployment activities. He is responsible for two major government industry partnerships, the FreedomCAR and Fuel Partnership and the 21st Century Truck Partnership. He also serves on the Board of Directors of the American National Standards Institute. Formerly he served as a senior advisor for transportation technologies in the office of Energy Efficiency and Renewable Energy and as DOE coordinator of the President's 20-in-10 Initiative to reduce gasoline usage in the United States by 20 percent in the next 10 years. He previously served as the Acting Program Manager of the Office of Hydrogen, Fuel Cells and Infrastructure Technologies, Team Leader for Hydrogen Production, Team Leader for Fuel Cell Technology, co-chair for two FreedomCAR and Fuel Partnership Technical Teams, and the U.S. representative to the International Energy Agency's Hydrogen Implementing Agreement. Mr. Davis is a Chemical Engineer with 25 years of experience in the development of vehicle, alternative fuel, and electrochemical technologies.

John W. Kelly, Ph.D.

John Kelly is the vice president for economic development at Clemson University and executive director of the Clemson University Restoration Institute. He provides leadership for programs, personnel and budgets, and strategic planning for the Restoration Institute and the university's economic development, agriculture and public service programs.

Kelly has formed faculty-led program teams at the Restoration Institute to direct research in the areas of advanced materials, historic preservation and materials conservation, resilient infrastructure, restoration ecology and renewable energy. He is responsible for development of the Institute's research campus on the former Navy base in North Charleston with a focus on developing an energy systems industry cluster centered on the wind turbine drivetrain testing facility.

He leads overall strategic planning to translate research discoveries into economic development opportunities at Clemson University's International Center for Automotive Research in Greenville, Advanced Materials Center in Anderson, and biomedical research facilities at the Greenville Hospital System and Greenwood Genetic Center. He also oversees the statewide Clemson Cooperative Extension Service and five research and education centers focused on agriculture, forestry and economic development.

Kelly has served as chair of the Administrative Heads Section of the National Association of State Universities and Land Grant Colleges, chairman of the board of directors for the American Distance Education Consortium and President of the Southern Association of Agricultural Scientists.

He earned his bachelor's degree from Clemson University and his master's and doctoral degrees from Ohio State University.

Dr. Julian Weber

Dr. Julian Weber is currently Head of Innovation Projects E-Mobility within project i, BMW Group's EV think tank and product line. Among his responsibilities is the management of the world wide MINI E and BMW ActiveE fleet operations. He began working for the BMW Group in 1997 after graduating in Mechanical Engineering with a major in Design and Development at the Technical University of Munich, Germany, and receiving a doctorate at the Karlsruhe University, Germany. As a member of the BMW team, Dr. Weber has worked in Process Consulting, Experimental Vehicle Build, as Manager of Purchasing Strategy and Innovation Management North America located in Spartanburg, South Carolina, in different management positions in the development division for Electrics/ Electronics and Driver Environment, and as a strategy manager for product strategy E-Mobility. He is an Adjunct Associate Professor at Clemson University - International Campus for Automotive Research (CU-ICAR) in Greenville SC (USA), where he lectures graduate courses in Automotive Development and has published numerous papers as well as the book "Automotive Development Processes". Abstract: "At the IAA 2011 in Frankfurt, Germany, BMW presented the i3 and i8 – an Electric Megacity Vehicle and a Plug-in Hybrid Super Sports Car that together will be the first series vehicles of the new subbrand BMW i. This presentation shows how BMW has prepared for years to ensure this challenge will eventually become a success story in sustainable mobility.

Jay Iyengar

Global Director, Head of Electrified Propulsion Systems, Chrysler Group LLC

Over 22 years of professional experience in the auto industry, with experience in powertrain components & systems development, embedded controls and calibration, diagnostics and torque security, quality engineering processes and program management. Experience working with global engineering organizations in multi-company environment to develop and commercialize complex technologies and systems.

Her current responsibilities include leading global engineering of electrified powertrains and systems for Chrysler Group LLC. She is also responsible for strategic technology roadmap & innovation, in addition to delivering Electrified powertrain to the vehicle platforms by managing all aspects of product development, cost and quality. Chrysler group is the lead for electrified powertrain development for Chrysler and Fiat.

Education: M.S. Mechanical Engineering, Wayne State University; M.S. Mechanical Engineering, Indian Institute of Technology, Bombay, India; B.S. Mechanical Engineering, Mysore University, India

Dr. Andrew Brown, Jr.

Dr. Andrew Brown, Jr. is an Executive Director & Chief Technologist for Delphi. His career spans 40 years and includes leadership assignments at Delphi, General Motors and Allied Signal. He

progressed in the engineering field as a senior project engineer, staff development engineer, and manager of R&D. He has worked on a variety of engineering and manufacturing processes and systems with an emphasis on energy systems, productivity improvement, and environmental efficiency. Currently, Dr. Brown leads Delphi's corporate innovation and technology initiatives on a global basis.

Recently, Dr. Brown participated on the Cummins Science & Technology Council and currently serves on the Deere & Company Global Technology and Innovation Advisory Council (GTIAC). He was a member of the Capstone Focus Group for the DOE Quadrennial Technology Review and serves as a member of the Scientific Advisory Committee of the Oak Ridge National Laboratory (ORNL) Energy and Environmental Sciences Directorate.

Dr. Brown has been an adjunct professor at Wayne State University, University of Michigan, and Tsinghua University in Beijing, China. He is a member of the National Academy of Engineers, chair of the National Research Council (NRC) Board on Energy and Environmental Systems, and previous member of the SAE Foundation Board of Trustees. He was previously appointed by the NRC to serve as chair of the Committee on Fuel Economy of Medium and Heavy Duty Vehicles which President Obama referenced in setting the new challenge on fuel economy. He is also a past president of SAE International – where he represented 125,000 members in over 100 countries.

He is Editor of the following books:
- Active Safety and the Mobility Industry, Green Technologies and the Mobility Industry and Connectivity and the Mobility Industry.

Jean-Luc di Paola-Galloni

Born in 1970, Jean-Luc di Paola-Galloni is Valeo Group Corporate Vice-President for Sustainability and External Affairs since October 2010. He was previously CEO's delegate, member of the executive committee at Valeo since December 2006. He joined the technological platform European Road Transport Research Advisory Council as Vice-Chairman in July 2008 representing the automotive suppliers industry reporting to the European Commission.

In this respect, he's also member of the strategic group advising the board of CLEPA (European Association of Suppliers) and takes part to the electro-mobility working group within this business federation. His commitment to establish fair relationships between the automotive industry and international bodies, with a multi-stakeholder approach is also reflected by his commitment to the advisory board of the International Forum of OECD Transport Ministers from the beginning (2008) and to the Global Council of Automotive Industry of the World Economic Forum since its creation (2010). Since January 2010, Valeo Board member to the Modernization Fund of Automotive Suppliers (belonging to the state owned French Sovereign Fund - FSI).

He was previously advisor to the CEO of Gaz de France (2002-2004) and has a research experience in the field of defence, international relations and strategic affairs at Harvard University (Cambridge, Massachusetts), École Normale Supérieure and Institut des Hautes Etudes de Defense Nationale (in France). He was a research fellow at the Weatherhead Center for International Affairs at the Harvard University (1998-2000).

He holds several degrees in geography, urban planning and humanities. He had teaching positions at the University of Massachusetts at Boston, Preparatory Classes to French Grandes Écoles, Jean Monnet European studies center of Università di Trento (Italy), Tamkang University in Taiwan. In July 2011, by nomination of Minister of Economics, Christine Lagarde, he has been appointed member of the Terminology Commission to the Académie Française.

Jake Ring

Chief Marketing Officer, GE Energy Management

John (Jake) Ring is Chief Marketing Officer for GE Energy Management, where he is responsible for strategic growth across the Energy Management portfolio. He is accountable for setting and driving the vision that leverages GE's Energy Management business and services into a comprehensive solutions portfolio to drive customer and business success. He leads the development of strategy and commercialization initiatives across Energy Management globally, and guides the development of markets, adjacencies, and new technology areas for the business.

Most recently, Jake was COO for MTek Holdings, a private equity portfolio of electronics companies. Prior to that, VP Sales & Marketing for a private-equity owned manufacturer and distributor of RF/Microwave components and assemblies, where he managed call-center and distribution sales, direct marketing and e-commerce, and also product development.

Before his career in private equity, Jake was SVP Americas of Newark Electronics where he led marketing and product management, sales, and e-commerce initiatives. Jake has also held growth leadership roles with American Superconductor Corp., Magnequench, and several within Emerson Electric, the last of which he served as Director of Marketing & Product Management for the Liebert division.

Jake received a B.S. degree in Math and Computer Science from Vanderbilt University and an M.B.A. from Washington University in St. Louis. Jake is an active member of the Direct Marketing Association.

James F. Barker

Jim Barker began his career at Clemson as an architecture student and track athlete. After years as a practicing architect, teacher and dean, he was named Clemson president in 1999 and has since presided over a dramatic era of growth in academic quality to see Clemson become a top-25 public research university. His love for all things Clemson is obvious, from sports to interactions with alumni, faculty and students and the class he still teaches each spring. In what little spare time he has, President Barker enjoys traveling, skiing, drawing, painting and spending time with his wife Marcia and their two grandchildren.

George B. Patrick III

George B. Patrick III joined the South Carolina Department of Commerce as the Deputy Secretary of Operations in February of 2011. He is a successful small business entrepreneur and a retired United States Air Force general officer. Patrick, the previous Executive Coordinator of the South Carolina Military Base Task Force, brings to Commerce extensive experience working with business, political and military leaders as well as numerous federal, state and private entities.

For 22 years, Patrick was engaged in diversified agribusiness operations, restaurant ventures and other business enterprises, while actively serving with the South Carolina Air National Guard and US Air Force. Spanning a 35-year military career, Patrick served extensively at all command levels of the U.S. Air Force. He is a highly decorated combat veteran who returned to active duty after September 11, 2001 and served in leadership roles in support of Operation Noble Eagle, Operation Enduring Freedom and Operation Iraqi Freedom. Patrick flew 50 combat missions in Operation Desert Storm. His military awards and decorations include the Legion of Merit, Distinguished Flying Cross, Bronze Star, Air Medal (4) and Defense Meritorious Service Medal.

Patrick is a native South Carolinian from Bowman and graduated magna cum laude from the University of South Carolina School of Business. He has three children - Jared, a career Air Force officer in Texas; Sarah, a commercial insurance underwriter in Columbia; and Matthew, a defense contractor in Virginia.

Patrick is passionate about advancing economic development in the Palmetto State and will assist the Secretary of Commerce with a variety of functions including job and investment recruitment, defense and energy related projects, as well as operational support for the agency

Frank O. Klegon

SAE International's voting membership elected Frank O. Klegon as its 2012 President. Klegon is President of FOKUS Associates LLC, a product/technology assessment and development consulting company.

Prior to founding FOKUS Associates LLC, Klegon held several key leadership positions with Chrysler and DaimlerChrysler. These included Executive Vice President–Product Development and Design; Vice President–Core Components & Process; Vice President–Truck Platform Team; and Director–Vehicle Development–Large Car Platform. Earlier in his career, Klegon worked for American Motors, where he served as Senior Manager/Product Engineer.

Klegon has been a member of SAE International for 25 years. He worked with Formula SAE from 2004-2008; served on the 2005 Commercial Vehicle Congress Executive Planning Council; and served as General Chairman of the SAE 2008 World Congress. Klegon holds a Bachelor's degree in Electrical Engineering from Wayne State University and an MBA from Michigan State University. Also, he attended Harvard Business School, concentrating in Managing Global Opportunities.

He begun his presidential term in January 2012.

SAE International is a global association of more than 128,000 engineers and related technical experts in the aerospace, automotive and commercial-vehicle industries. SAE International's core competencies are life-long learning and voluntary consensus standards development. SAE International's charitable arm is the SAE Foundation, which supports many programs, including A World In Motion® and the Collegiate Design Series.

Brian Wynne

President, Electric Drive Transportation Association

Brian Wynne is the President of the Electric Drive Transportation Association (EDTA). Appointed in April 2004, he acts as chief staff executive of this member-based international organization, which promotes battery, hybrid, plugin hybrid and fuel cell electric vehicles and infrastructure. Mr. Wynne brings in-depth experience in transportation and technology applications gained in leadership roles with trade associations and public-private partnerships. He has previously served as Senior Vice President for business and trade at the Intelligent Transportation Society of America. Prior to that role, he led a global technology association as CEO of AIM International, Inc. Mr. Wynne started his career as a legislative assistant to US Senator Charles Percy and has served on several not-for-profit Boards. Currently, Mr. Wynne serves on the US Department of Energy's Electricity Advisory Committee, as a key representative for the electric drive industry, as well as the Industry Advisory Board for the GATE Center for Electric Drive Transportation at the University of Michigan-Dearborn. Mr. Wynne is also the President of the World Electric Vehicle Association (WEVA), an international organization launched in 1990 with the objective of promoting the research, development and dissemination of electric vehicles on a global scale. Mr. Wynne holds a Bachelor's degree from the University of Scranton, a Masters degree from the School of Advanced International Studies, Johns Hopkins University, and was a Fulbright Scholar at the University of Cologne in Germany.

Mark D. Wyatt

Vice President – Smart Grid and Energy Systems

Mark Wyatt is vice president of smart grid and energy systems for Duke Energy's U.S. Franchised Electric and Gas organization. Wyatt has more than 29 years of experience in the information management and electric and gas utility fields. He joined the company in July 1980 as a programmer analyst. Throughout his career, he has been instrumental in establishing and managing information technology strategy, processes and mechanisms that have allowed the information technology function at Duke Energy to support both a regulated and nonregulated business model.

After a series of promotions in the information technology area, he was named director of IT for global asset development in 1998, where he established a service delivery process supporting both domestic and international information management business needs. He advanced to managing director of information management in January 2000, and was named vice president of information management for Duke Energy Generation Services in October 2001. He was named vice president of information management for Duke Energy North America in January 2003 and vice president of information technology for Duke Power in November

2003. Following the merger between Duke Energy and Cinergy in April 2006, Wyatt was named vice president of enterprise business applications. He was named to his current position in November 2009 and is the lead executive for Duke Energy's Smart Grid program.

Wyatt is a member of several advisory boards including the Computer Science Strategic Advisory Board at North Carolina State University and the Customer Services Week board of directors.

The Statesville, N.C., native earned a bachelor of science degree in computer science from North Carolina State University.

Wyatt and his wife, Robin, live in Concord, N.C.

Dennis R. Beal

Vice President, Global Vehicles, FedEx Express

As Vice President of Global Vehicles for FedEx Express, Dennis Beal is responsible for setting strategic direction and managing all aspects of the company's global fleet of over 43,000 motorized vehicles. Under Beal's leadership FedEx has taken a holistic approach to fleet management and fuel efficiency with a significant expansion in lower polluting, higher efficiency vehicles. Beal was instrumental in increasing the number of hybrid-electric and all-electric vehicles in service by 20% during 2011, and under his direction FedEx will integrate close to 4,000 new, fuel-efficient Sprinters during 2012. Beal's scope of control includes four core teams responsible for all dimensions of the FedEx global fleet including capital planning, equipment purchase, equipment maintenance, technical training, financial analysis and safety and reliability research. FedEx is the world's largest express transportation company using a global air-and-ground network to deliver more than 3.5 million packages a day to more than 220 countries and territories around the world.

Beal joined FedEx in 2001 and has over 40 years of experience in the transportation industry. Prior to assuming his current role, Beal served as Vice President of Physical Assets for FedEx Freight. Throughout his career he has held leadership positions in operations, engineering and fleet management. Before joining FedEx, Beal was with American Freightways where he served in a variety of corporate management positions including the Executive Committee.

A native of West Tennessee, Beal earned his Bachelor's degree from the University of Memphis. He is a former board member for Share & Care Food Bank and currently serves as a member of the Presidential Advisory Council for the College of the Ozarks.

Dr. Peter R. Frise

Dr. Peter Frise holds degrees in mechanical engineering from Queen's University in Kingston and Carleton University in Ottawa. He began his industrial career as an oil well wireline data logging engineer working for Schlumberger Wireline Services in Nigeria. He then moved to Husky Injection Molding Systems in Bolton, Ontario as an R&D engineer and later as a design group leader.

In 1985 he joined Carleton University and beginning in 1988, he taught mechanical design there until moving to Windsor where he held the Chrysler

Canada/NSERC/University of Windsor Senior Industrial Research Chair in Mechanical Design and was instrumental in founding Canada's first university program in Automotive Engineering in 1998.

Dr. Frise works with a number of automotive companies in his present capacity as the Scientific Director and CEO of the AUTO21 Network of Centres of Excellence, Canada's national automotive R&D program. AUTO21 brings together nearly 200 researchers and 440 graduate students from 46 institutions in partnership with 110 industry and public sector companies and organizations to engage in applied automotive R&D. Through 2012, AUTO21 and its partners will have completed more than $112M worth of automotive research.

Dr. Frise is a member of Defence Research and Development Canada and has been appointed to a second term on the National Research Council of Canada and the Defence Science Advisory Board of Canada. He serves on the boards of the Yves Landry Foundation, the Ontario BioAuto Council and SAE Foundation Canada. Dr. Frise is active on several sub-committees of the Canadian Automotive Partnership Council (CAPC).

Heiko Weller

Mechanical engineering degree. Since 1996 with the Robert Bosch Corporation. Many years experience as project manager of engine management system projects in the US and Germany. After an assignment at Corporate Research, in charge of the Project "Electric Vehicle 2nd Generation", now since 2011 with the Bosch Engineering Group overall responsible for the topic "E-Moblity".

Dale Hill

Founder, Proterra

Dale Hill is a pioneer in clean transit solutions with more than 40 years of experience in executive management and sales in transportation and engineering. Dale founded Proterra in 2004 to design and manufacture advanced technology vehicles that are powered by clean, domestic fuels. Prior to Proterra, Hill founded TransTeq, a company that designed and manufactured the nation's first alternative fueled hybrid electric bus fleet in the US for the Denver Regional Transportation District's 16th St. Mall. These buses distribute 65,000 passengers each day and have carried more than 200 million passengers during 10 years of revenue service. As a career entrepreneur, Hill also founded Alumatech, which manufactures aluminum dump trailers and won the 1992 trucking industry award for the "Most Significant Contribution to the Trucking Industry for Non Powered Vehicles." In addition, he founded Tech-Weld, a Houston based welding supply company which became Houston's third largest supplier to the welding industry prior to its sale in 1992. Hill earned a bachelor of science in mechanical engineering from LeTourneau University in Longview, Texas. He holds numerous patents, is a member of the Society of Automotive Engineers and the American Welding Society, and has published several papers.

Michael Austin

Vice President – BYD America

Micheal Austin received his degree in Design Engineering and completed a Masters in Mechanical Engineering from BYU. He worked for Motorola 15 years in functions including ODM Director for the Mobile Devices Business responsible for over $3B in purchases annually and serving as Motorola's Global Energy Commodity Manager purchasing Motorola's battery products. He was selected as Motorola's Distinguished Innovator (with 22 US patents) in 1999. He has considerable Asian International business experience which proves invaluable in his current role as Vice President for BYD America. BYD is a $40B Chinese company listed on the HKE and has over 200,000 employees.

Walter Kulyk

Mr.Walter Kulyk is Director, Office of Mobility Innovation, FederalTransit Administration. He is in charge of executing U.S. Federal programs of research, analysis, demonstrations, and evaluations affecting bus, rail, and ferry systems. This includes programs involving Bus Operations and Electric Drive Propulsion Subsystems; Intelligent Transportation Systems (ITS) including those affecting bus and rail; Bus Rapid Transit Services; and Maglev. He is a registered Professional Engineer.

Mr. Kulyk has over 30 years of responsible professional experience. This includes a tour of duty as a military officer in the Air Force with responsibilities for managing programs involving base operations, maintenance, and construction. He has also worked for the Federal Aviation Administration conducting federal oversight for the design and construction of new airports and airport extensions. With the Federal Transit Administration he has conducted federal oversight of Washington and Miami's Metro Rail design and construction programs. He has also directed research and demonstration programs involving rail construction technology, rail car subsystems, and advanced group rapid transit. He has also directed the initiation, development, and management of innovative federal research and demonstration programs involving capital financing, joint development, privatized bus operations, transportation demand management, geographic information systems, livable communities, and turnkey construction. In recent years, he has directed efforts involving ITS subsystem development, Bus Rapid Transit demonstrations and guidelines, electric drive subsystem initiatives, and Maglev studies and tests.

Phillip Lessner

Kemet Electronics, Greenville, SC
Most Relevant Publications

[1] "Electrochemical Deposition and Characterization of Poly(3,4-ethylenedioxythiophene) from Aqueous Solutions," Synthetic Metals, 135-136, 435, (2003) (with T. el Moustafid, R. V. Gregory and K. R. Brenneman)., [2] "Electrical Characterization of Tantalum Capacitors with Poly(3,4-ethylenedioxythiophene) Counter Electrodes", J. Electrochem. Soc., 156, G65-G70, (2009); (with Y. Freeman, W.R. Harrell, I. Luzinov, and

B. Holman), [3] "Influence of the Anion of the Supporting Electrolyte on the Formation and the Electrochemical Properties of Poly(3,4-ethylenedioxythiophene) Films," Polymer Preprints, 43(2), 1320 (2002); (with T. el Moustafid, R. V. Gregory, and K. R. Brenneman)., [4] "Influence of the Anion of the Supporting Electrolyte on the Formation and the Electrochemical Properties of Poly(3,4-ethylenedioxythiophene) Films," Polymer Preprints, 43(2), 1320 (2002); (with T. el Moustafid, R. V. Gregory, and K. R. Brenneman)., [5] "Electrode Compositions Containing Carbon Nanotubes for Solid Electrolyte Capacitors," U.S. Patent 7,348,194, March 25, 2008.

John Charles Boan

Kemet, Mauldin, SC
1980 – 1984: Manufacturing & Quality Supervisor
1984 – 1987: Quality Engineer

Matamoras, Mexico – Brownsville, TX
1987 – 1990: Production Control Superintendent
1990: Brownsville Distribution Center Manager

Farmington Hills, MI
1990 – 2000
Sales Representative, Account Manager, District Sales Manager, Automotive Sales Director

Simpsonville, SC
2000 – 2002: Product Manager
2002 – 2004: Director, Product Management
2004 – 2006: Senior Director, Strategic Marketing
2006 – 2008: Senior Director, Alliances and Integration
2008 – 2010: Senior Director, Business Development
2010 – Present: Vice President, Sale – Specialty Products Development

Michael J Taljonick

Key projects:

-2012 Fisker Karma EREV (Fisker Automotive) – Technical Consultant for OBDII Compliant Electronic Data Diagnostic Strategies.

-2010 ML HEV (MB Hybrid LLC) –Technical Consultant for OBDII Compliant Diagnostic Strategies.

-2009 Durango/Aspen HEV (Chrysler LLC)-Technical Consultant for OBDII Compliant Diagnostic Strategies

-2007 Saturn VUE HEV (GM) – Overall vehicle responsibility for the development, calibration, and validation of OBDII Compliant on board system diagnostics.

Paper & Poster Sessions

Monday, March 5 2012

1:00 p.m. – 2:30 p.m.
EV Systems Architecture (PT3) -Session 1

Title	Authors
Optimization of the trade-off between fuel consumption and performance of PHEV's in different driving scenarios	Sebastian Buerger, ITK Engineering AG, Walter Huebner, BMW Group, Germany
ChargeCar Community Conversions	Harry Brown et al, Carnegie Mellon University, USA
Local Electric Vehicle Infrastructure Smart Charging	Liran Katzir, Better Place, Israel
Re-Inventing Carmaking With Truly Electric Cars: Using a Modular Car Architecture to Build New Cars and a New Carmaking Industry	Edward Durney, A Truly Electric Car Company, USA

3:00 p.m. – 4:30 p.m.
EV Systems Architecture (PT3) -Session 2

Title	Authors
Electric Transit Bus for Variable Grade Terrain	Bryce Baker, University of Kansas, USA
Hybrid Electric Vehicles Challenges: Strategies for Engine Speed Control	Francis Assadian, Sajjad Fekriasl, Sajjad Fekri, Cranfield University, Matt Hancock, Jaguar Cars Ltd., UK
Effect of mass distribution on cornering dynamics of retrofitted EV	Himani Mazumber, Swinburne University of Technology, Australia
Front and Rear Wheel Independent Drive Type Electric Vehicles (FRID EVs) with Outstanding Running Performance Suitable for Next Generation Electric Vehicles	Nobuyoshi Mutch et al, Graduate School, Tokyo Metropolitan University, Japan

1:00 p.m. – 2:30 p.m.
EV Component & Energy Storage Technologies (PT5) -Session 1

Title	Authors
Optimal Charging of Ultracapacitors During Regenerative Braking	Ardalan Vahidi, Yasha Parvini,, Clemson University, USA
Power Calculation and Component Sizing of HEV	Patel Pritesh Mohanbhai, Sagar Patel, MGITER, India
OCV Hysteresis Effect-based SOC Estimation in Extended Kalman Filter Algorithm for LiFePO4/C Cell	Jonghoon Kim, Seoul National University, Korea
Frequency Agile Resonance-Based Wireless Charging System for Electric Vehicles	Sivanand Krishnan et al, Institute for Infocomm Research, Singapore

3:00 p.m. – 4:30 p.m.
EV Component & Energy Storage Technologies (PT5) -Session 2

Title	Authors
Design of a Wheel-hub Motor with Airgap Winding and Simultaneous Utilization of all Magnetic Poles	Roland Kasper et al, Otto-von-Guericke University, Germany
A Methodology to Assess the State of Health of Lithium-Ion Batteries Based on the Battery's Parameters and a Fuzzy Logic System	Ali Zenati et al, Saft Batteries, France
Evaluation of a Reluctance Synchronous Motor for use in a Mine Shuttle Electric Vehicle	Mikail Ansari, University of Witwatersrand, South Africa
Sizing of Ultracapacitors and Batteries for a High Performance Electric Vehicle	Wilmar Martinez et a1569521309, Universidad Nacional de Colombia, Colombia,

1:00 p.m. – 2:30 p.m.
Power Grid Opportunities (PT12) -Session 1

Title	Authors
Random access, electric vehicle charge management	Jeff Frolik, Paul hines, University of Vermont, USA
Probabilistic Modeling of EV Charging and Its Impact on Distribution Transformer Loss of Life	Sachin G. Argade et al, Wichita State University, USA
PEV Charging Control Considering the Residential Distribution Transformer Life	Qiuming Gong et al, Ohio State University, USA
Work in progress: Smart Way in a Robotic Village	Ingacio González Alonso, Infobotica, Spain

3:00 p.m. – 4:30 p.m.
Power Grid Opportunities (PT12) – Session 2

Title	Authors
Balancing Power Supply-Demand by Controlled Charging of Numerous Electric Vehicles	Takashi Ikegami et al, University of Tokyo, Hitoshi Yano, NEC, Japan
Managing Residential-Level EV Charging Using Network-as-Automation Platform (NAP) Technology	Mohammad Abdullah Al Faruque et al, Siemens Corporate Research, USA
Toward Electric Vehicle Trip Prediction for a Charging Service Provider	Olle Sundstroem et al, IBM Research, Switzerland
Locational effects of Electric Vehicles on prices	Vikas Dawar, University of Wisconsin Madison, USA

Tuesday, March 2012

9:30 a.m. – 11:30 a.m.
EV Power Electronics (PT8) – Session 1

Title	Authors
High Efficient Inductive Power Supply and Pickup System for Online Electric Bus	GuHo Jung et al, KAIST, Korea
Using Onboard Electrical Propulsion Systems to Provide Plug-in Charging, V2G, and Mobile Power Generation Capabilities for HEV	Gui-Jia Su, ORNL, USA
A wide Input Voltage Range ZVS Isolated Bidirectional DC-DC Converter for Ultracapacitor Application in Hybrid and Electric Vehicles	Shenghui Chui, Zhuyu Chen, Tsinghua University, China, Dawei He, Thomas G. Habetler, , Georgia Institute of Technology, USA
Design of an Electric Motor Controller with Embedded Dynamic Thermal Control Logic for Motorbike Racing Application	Domenico Cavakuciom et al, University of Naples Federico II, Italy
Using Clonal Selection Algorithm for Optimal Power train Component Sizing and Design of Electric Vehicle	Amir, Khanjanzadeh, Islamic Azad University, Iran

1:00 p.m. – 2:30 p.m.
EV Power Electronics (PT8) – Session 2

Title	Authors
Design and Implementation of a Digital Automatic High Frequency Battery Charger for HEV Application	Venkatesan Chandrasekar et al, Power Electronic Group, India
A novel four quadrant DC series motor control drive for traction applications	Jorge Estrada, Ricardo Fuentes, IDT, Chile
Characteristic Measurements of Switched Reluctance Motor on Prototype Electric Vehicle	Takashi Imakawa, Tokyo University of Science, Japan
Compensation Algorithms for Sliding Mode Observers in Sensorless Control of IPMSMs	Yue Zhao, Wei Qiao, , University of Nebraska-Lincoln, Long Wu, John Deere, USA

3:00 p.m. – 5:30 p.m.
EV Power Electronics (PT8) – Session 3

Title	Authors
Multi-inverter electrical drive for double motor electric vehicles	Ciro Attaianese et al, University of Cassino, Italy
Consideration on Fundamental Characteristic of Hydrogen Generator System fueled by NaBH4 for Fuel Cell Hybrid Electric Vehicle	Shinichiro Murooka et al, Tokyo University of Science, Japan
Design of a High Power Transfer Pickup for On-Line Electric Vehicle (OLEV)	Boyune Song, Jaegue Shin, et al, KAIST, Korea
Rare earth Free, Traction Motor for Electric Vehicle	Masayuki Morimoto, Tokai University, Japan
Experimental Consideration on DC-DC Converter Circuits for Fuel Cell Hybrid Electric Vehicle	Satoshi Hiranuma et al, Tokyo University of Science, Japan
Hybrid Inverter Segmentation Control for Online Electric Vehicle	SeungYong Shin, Jaegue Shin, et al, KAIST, Korea
Sensitivity Analysis on Frequency Characteristics of a Fuel Cell-Electrical Double Layer Capacitor Hybrid Power Source System	Noboru Katayama, Tokyo University of Science, Japan

9:30 a.m. – 11:30 a.m.
EV Systems Modeling, Simulation & Testing (PT9) – Session 1

Title	Authors
Control-Oriented Model of a Reversable Heat Pump for Electric Vehicles	Donovan, Esqueda Merino et al, Renault, France
Series Hybrid Electric Vehicle Supervisory Control Based on Off-line Efficiency Optimization	Wassif Shabbir et al, Imperial College London, UK
A simulated System of Battery-Management System to Test Electric Vehicles Charger	Wei Li, North China Electric Power University, China
Induction machine models for efficiency studies in EV design applications	Facundo Aguielra et al, Grupo de Electronica Aplicada, Argentina
The Concept and Simulation of Eco-friendly Cruise Control	Jun Huang et al, Jiangsu University, CHina

1:00 p.m. – 2:30 p.m.
EV Systems Modeling, Simulation & Testing (PT9) – Session 2

Title	Authors
Accurate Electrical Model with Thermal Dependence for State of Charge and State of Health Estimation of High Power Lithium Cells	Tarun Huria, Massimo Ceraolo, University of Pisa, Italy, Javier Gazzarri, Robyn Jackey, Mathworks, USA
Design and Control of a Narrow Electric Vehicle	Soheil Mohagheghi Fard et al, Iran University of Science and Technology, Amir Khajepour, University of Waterloo
An approach to develop location-based efficiency systems without real test drives	Thomas Ganslmeier et al, TU Muenchen, Germany
Simultaneous Vehicle Routing and Charging Station Sitting for Commercial Electrical Vehicles	Ower Worley, Diego Klabjan, Northwestern University

3:00 p.m. – 5:30 p.m.
EV Systems Modeling, Simulation & Testing (PT9)

Title	Authors
Longitudinal control for an all-electric vehicle	Marcel Stefan Geamanu et al, CNRS, France
Field-Oriented Control of a PMSM Drive System Using the dSPACE Controller	David Vindel et al, Chalmers University of Technology, Sweden
A computationally intelligent maximum torque per ampere control strategy for switched reluctance machines	Furkan Akar et al, Florida State University, USA
Mathematical modeling and control of an autonomous electric vehicle for navigation and guidance	Katsumi Moriwaki, Daito University, Japan
Multiphysics Thermal and NVH Modeling: Integrated Simulation of a Switched Reluctance Motor Drivetrain for an Electric Vehicle	Fabio Marques dos Santos et al, LMS International, Belgium
Intelligent Sensorless ABS for Regenerative Brakes	Amir Dadashnialehi, et al, Swinburne University of Technology, Australia
Hall Sensor-based Controller for Locking Electric Differential System of BLDC Motor-Driven Electric Vehicle	Milad, Gougani, University of British Columbia, Canada

9:30 a.m. – 11:30 a.m.
EV Component & Energy Storage Technologies (PT5) – Session 3

Title	Authors
Optimal use of second life battery for peak load management and improving the life of the battery	Anupama Keeli, Ratnesh Sharma, NEC, USA
Impacts of Interior Permanent Magnet Machine Technology for Electric Vehicles	Aziz Rahman et al, University of New Foundland, Canada
Energy Cell Interface to Extend Battery Life for Electric Vehicles	Athula N. Kulatunga et al, Purdue University
Robust Energy Management of a Battery/Supercapacitor Hybrid Energy Storage System in an Electric Vehicle	Mid-eum Choi, Seung-Woo Seo, Seoul National University, Korea
Fundamental Characteristics of a Claw Pole Motor Using Additional Ferrite Magnets for HEV	Michitoshi Azuma et al, Mitsubishi Corporation, Japan

1:00 p.m. – 2:30 p.m.
Information & Communication Control for EV's (PT10) – Session 1

Title	Authors
An Advanced Smart Management System for Electric Vehicle Recharge	Molka Gharbaoui, Luca Valcarenghi, et al, Scuola Superiore Sant'Anna, Italy
The Software Car: Building ICT Architecture for Future Electric Vehicles	Christian Buckl, Alexander Camek, Gerhard Kainz, fortiss GmbH, Alois Knoll, TU Muenchen, Germany
Towards Electric Mobility Data Mining	Timo Duchrow et al, DFKI, Germany
The Car as an Internet-Enabled Device, or how to make Trusted Networked Cars	Jack, Lacy et al, Intertrust, USA

3:00 p.m. – 5:30 p.m.
Information & Communication Control for EV's (PT10)/EV Global Standards (PT2) EV Mobility (PT6)/EV Systems Modeling, Simulation & Testing (PT9)

Title	Authors
Remaining Driving Range Estimation of Electric Vehicle	Yuhe Zhang et al, Hitachi, Japan
Finding Minimum-Cost Paths for Electric Vehicles	Diego Klabjan, Timothy M. Sweda, Northwestern University, USA
Contactless Power Transfer Systems for On-Line Electric Vehicle (OLEV)	Jaegue Shin et al, KAIST, Korea
Supervisory Control of Plug-in Hybrid Electric Vehicle with Hybrid Dynamical System	Harpreetsingh Banvait et al, Purdue University, USA
Impact on EMC for Electrical Powertrains with Respect to Functional Safety: ISO 26262	Jody Nelson, William Taylor, kVertex, Rob Kado, Chrysler, USA
Dynamic Modeling and Feedback Control of a Two-Mode Electrically Variable Transmission	Ashish Katariya, David Taylor, Georgia Institute of Technology, USA
Modeling a Four-Wheel Independent Driving Electric Vehicle and Development of a Torque Distribution Algorithm	David Marcos, Carlos Bordons, University of Seville, Spain

9:30 a.m. – 11:30 a.m.
Power Grid Opportunities (PT12) – Session

Title	Authors
Plug-In HEV Charging for Maximum Impact of Wind Energy on Reduction of CO2 Emissions in Propulsion	Rakesh Patil et al, University of Michigan, USA
A Fast Battery Charger Topology for Charging of Electric Vehicle	Ahmet Yilmaz, et al University of Akron, USA
Management of Quick Charging of Electric Vehicles Using Power from Grid and Storage Batteries	Topon Paul, Hideyuki Aisu, Toshiba Corporation, Japan
Optimal Design of the Wireless Charging Electric Vehicle	Young J. Jang, KAIST, Korea
Demand Side Management by using Electric Vehicles as Distributed Energy Resources	Chenzong Pang, Mladen Kezunovic, Mark Ehsani, , Texas A&M University

1:00 p.m. – 2:30 p.m.
Power Grid Opportunities (PT12) – Session 4

Title	Authors
Quality of Service in Plug-in Electric Vehicle Charging Infrastructure	Melike Erol-Kantarci et al, University of Ottawa, Canada
An Approach to Electric Vehicle Coordination within the Future Smart Green Grid	Tony Markel et al, NREL, GE Global Research, USA
A Novel Grid-Connected Multi-Input Boost Converter for HEVs: Design and Implementation	Mahmud Amin, Osama Mohammed, Florida International University, USA
Modular Multilevel Converter-Based Architecture for Ultra-Fast Charging of Electric Vehicles: A Global System Overview	Michail Vasiladiotis, Alfred Rufer, EPFL, Switzerland

3:00 p.m. – 5:30 p.m.
Power Grid Opportunities (PT12) – Session 5

Title	Authors
Using Grid Friendly Charging to Mitigate Effects of Renewable Energy Integration	Forrest Chassin, et al Pacific Northwest National Laboratory, USA
SUPRA: Supply Undergorund Power to Running Automobiles	Masahiro Hanazawa et al, Toyota Central R&D Labs, Japan
An Intelligent Solar Ecosystem with Electric Vehicles	Cecil Rivers et al, GE Industrial Solutions, USA
Impact Analysis of EV Battery Charging on the Power System Distribution Transformers	Maryam Kazerooni, Narayan Kar, University of Windsor, Canada

Electrification of Trucks and Buses in an Urban Environment through Continuous Charging	Niel Leemput et al, KULeuven ESAT-ELECTA, Belgium
Intelligent Dispatch of Electric Vehicles Performing Vehicle-to-Grid Regulation	Eric Sortomme, Alstom Grid, USA
SmartParks in Smart Grids	Ganesh Kumar Venayagamoorthy, Missouri University, USA

Wednesday, 7 March 2012

9:15 a.m. – 11:45 a.m.
International View/EV infrastructure (PT1/PT4)

Title	Authors
Electric Vehicle Charging Facility Network Planning	Lili Zhao et al, IBM Research, China
Integration of Plug-in Electric Vehicles and Distributed Energy Resources on Power Distribition Systems	Julio Romero Aguero et al, Quanta Technology, USA
Challenges and Opportunities in Infrastructure Support for Electric Vehicles and Smart Grid in a dense urban environment	Michael Y.W. Chia et al, Institute for Ifocomm Research, Singapore
Optimal Siting and Sizing of Electric Vehicle Charging Stations	Long Jia et al, Tsinghua University, P.R. China
The impacts of extra load from EV's in the Netherlands: A North-West Europe case study	Alicja Lojowska et al, Delft University of Technology, The Netherlands
Speed Control of Brushed DC motor for low cost electric cars	Vikas Gupta, Indian Institute of Science, India
A Power Monitoring and Control System to Minimize Electricity Demand Costs Associated With Electric Vehicle Charging Stations	Nicholas Jewell, University of Louisville, USA

1:00 p.m. – 3:30 p.m.
EV Systems Modeling, Simulation & Testing (PT9) – Session 4

Title	Authors
Dynamic Modeling and Simulation of a Three-Wheeled Electric Car	Goran Vasiljevic et al, University of Zagreb, Croatia
Multi-Domain Modeling of Electric Vehicles Including Lead-Acid Battery Dynamics	Luis Silva et al, Grupo de Electronica Aplicada, Argentina
Methodology to Determine Drivetrain Efficiency based on External Environment	Ravi Shankar et al, Cranfield University, UK
A Novel MEC Based Design Procedure of Electric Machines for EV applications	Ragavan Kanagaraj, Prathamesh Juvatkar, Arava Kishore, Indian Institute of technology Gandhinagar, India
Design of Pi-Core and Dual Pi-Core PM-aided Switched Reluctance Motors	Changsung Sean Kim, Samsung, Korea
Plug-In Hybrid Electric Vehicles as Control Power Resources in the French Power System	Claes Sandels, Royal Institute of Technology, Sweden
Development, Improvement and Validation of a Thermal Model for a Range Extended Electric Vehicle	David Marcos, Carlos Bordon, University of Seville, Spain

9:15 a.m. – 11:45 a.m.
EV Systems Modeling, Simulation & Testing (PT9) – Session 5

Title	Authors
Effective Power and Energy Management for the Dual Source Hybrid Electric Vehicle Based on The Measured Drive Cycle	Pritesh Patel Mohanbhai, Sagar Patel., ADIT, India
Optimal Control Based Power Management in Hybrid Military Vehicle	Boran Lu et al, Kansas State University, USA
Dynamic Programming Technique in Hybrid Electric Vehicle Optimization	Rui Wang, Srdjan Lukic, North Carolina State University, USA
Power Losses Reduction in an Electric Traction Drive at Partial Load Operation	Eva Knischourek, FEAAM GmbH, Klaus Muehlbauer, Dieter Gerling, University of Federal Defense Munich, Germany
Synergetic Control for Induction Motor Based Wheel-Drive System	Igor Kondratiev et al, University of South Carolina, USA
Investigation of Series Hybrid Powertrain for Non-Tactical Vehicles	Gene Liao, Wayne State University, Masuma Khandaker, Chrysler Corporation, USA
HiL Simulation of electric vehicles in different usage scenarios	Sebastian Jeschle et al, University of Duisburg-Essen, Germany

1:00 p.m. – 3:30 p.m.
Information & Communication Control for EV's (PT10) – Session 3

Title	Authors
AiroDiag – A Sophisticated Tool that Diagnoses and Updates Vehicles Software Over Air	Karim Mansour, Wael Farag, Valeo, Egypt
Operating Electric Taxi Fleet: An Efficient Dispatching Strategy with Charging Plans	Jun-Li Lu et al, Academia Sinica, Taiwan
A Back-end System for Autonomous Parking and Charging System for Electric Vehicles	Julian Timpner, Larc C. Wolf, Technische Universitaet Braunschweig, Germany
Driving Pattern Identification for EV Range Estimation	Hai Yu, Ryan McGee, Ford Motor Company, USA
Active energy management of electric vehicles with cartographic data	Andrea Dardanelli et al, Politecnico di Milano. Italy
A range-bounding strategy for electric scooters	Giovanni Alli et al, Politecnico di Milano, Italy
Slipstream Cooperative Adaptive Cruise Control - A Conceptual ITS Application for Electric Vehicles	Bernhard Kloiber et al, German Aerospace Center, Germany

9:15 a.m. – 11:45 a.m.
EV-related educational programs (PT11)

Title	Authors
Development of an Interdisciplinary Educational Curriculum by Using the Electric Vehicle	Katsumi Hirata et al, Oyama National College of Technology, Japan
Plug-In Hybrid Conversion: As a Capstone Project and Research Testbed	Michael McIntyre et al, University of Louisville, USA
Teaching Electric Vehicles As an Application of Embedded Computing	Dan Hammerstrom, Michael Butts, Portland State University, USA
Integrating Advanced Energy Storage Curricula: Supporting Electric-Drive Vehicle Technology	Gene Liao, William Stark, Wayne State University, USA
Development of an Electric Vehicle Control System Curriculum for Kanazawa Technical College	Bolaji Oguntoyinbo et al, Kanazawa Technical College, Japan
Modeling of Electric Vehicle Charging Station for Fast DC Charging	Amaldo Arancibia, Kai Strunz, TU Berlin, Germany
Dynamic Simulation of EV Fast Charging with Integration of Renewables	Yao Chen, ABB, China, Hector Zelaya De La Parra, ABB Corporate Research Sweden

1:00 p.m. – 3:30 p.m.
Power Grid Opportunities (PT12) – Session 6

Title	Authors
Leakage Current Discrimination and Masking From Upstream Ground Fault Protection Devices During Electric Vehicle Charging	Cecil Rivers, Thomas Papallo, GE Industrial Solutions, USA
Investigating the Power Architecture and Circuit Topologies for Megawatt Superfast Electric Vehicle Charging Stations with Enhanced Grid Support Functionality,	Shuo Wang, University of Texas at San Antonio, USA
AIMD-line algorithms for charging electric and plug-in hybrid vehicles	Sonja Stuedli et al, National University of Ireland, USA
Review of Charging Power Levels and Infrastructure for Plug-In Electric and Hybrid Vehicles	Murat Yilmaz, Krein Phlip T., University of Illinois at Urbana-Champaign, USA
Inductive Power Transfer for Electric Vehicles: Potential Benefits for the Distribution Grid	Salman Mohagheni et al, Colorado School of Mines, USA
Simulation of an Electric Vehicle Wireless Power Transfer System as Viewed from the Power Grid	Michael Pickelsimer et al, University of Tennessee, Knoxville, USA
Grid-Friendly Electric Vehicle Charging	Rick Pratt, Donald Hammerstrom, PNNL, USA

Wednesday, 7 March 2012
Poster Sessions

4:00 p.m. – 6:00 p.m.
PT1:

Title	Authors
Trolleybuses in Smart Grids as effective strategy to reduce greenhouse emissions	Andres Diez, Mauricio Restrepo, Universidad Pontificia Bolivariana, Colombia

PT3:

Title	Origin
Photovoltaic Micro Converter Applied on Electric Vehicle	Gab-Su Seo, Bo-Hyung Cho, Seoul National University, Korea
Proposal for Personal Mobility Vehicle Supported by Mobility Support System	Shuro Nakajima, Taro Fujikawa, Chiba Institute of Technology, Japan
Conceptual Design of a Hybrid Electric Off-Road Vehicle	Luis, E. Munoz et al, Universidad de Los Andes, Colombia

PT4:

Title	Origin
Overlooking L1 Charging at work in the rush for Public Charging Speed	Robert Bruninga, US Naval Academy, USA
Electric Vehicle Energy Storage Management for Renewable Energy Sources Exploitation	Alfonso Damiano, University Cagliari, Italy

PT5:

Title	Authors
PHEVs as Dispersed Energy Storage for Smart Grid	Eshwar Pisalkar, University of Pune, India
Electric Vehicle Charge Planning using Economic Model Predictive Control	Rasmus Halvgaard et al, technical University of Denmark
Electric Vehicle Anti-skid Control Using Existing Electric Drive Motors as Sensors	Xiang Liu et al, Shanghai JIan Tong University, P.R. China
Failure Detection for Over-Discharged Li-ion Batteries	Jian Xiong, Purdue University, USA
A Multicell Battery System Design for Electric and Plug-in Hybrid Electric Vehicles	Taesic Kim et al, University of Nebraska-Lincoln, USA
Design and Control of Bi-Direction Buck-Boost Converter for HEV using lab view	Pritesh Patel, MGITER, India
Direct Oil Cooling of Traction Motors in Hybrid Drives	Zhe Huang et al, Lund University, Sweden

PT8:

Title	Authors
Analysis and Design of Digital SEPIC Converter with Dimming Control and Current Sharing for Automobile LED Headlights Application	Li-Ming Xu, Tai-Xiang Huang, Ching Yun University, Taiwan
A Multiple Input DC-DC Converter for Interfacing of Energy Sources in EVs/HEVs/FCVs	Lalit Kumar Sahu, MANIT, Bhopal, India

PT9:

Title	Authors
Plug-In Hybrid Electrical Commercial Vehicle: Modeling and Prototype realization	Ferdinando Mapelli, Politecnico di Milano, Italy
Requirements for a Hydrogen Helicopter	Anubhav Datta, Wayne Johnson, US Army, NASA, USA
Simulation-Based Energy Flow Study of Electric Vehicles	Bin Wang et al, Shanghai Jiao Tong University, China
Vehicle modeling for Electronic Stability Control in a four in-wheel electric vehicle	Muhammad Hasan, Swinburne University of Technology. Australia
Optimal Design of Dual Rotor Single Stator PMSM Drive for Automobiles	Lucian Nicolae Tutelea et al, Politechnica University of Timisoara, Romania
Accelerated Design and Optimization of Battery Management Systems using HIL Simulation and Rapid Control Prototyping	Paul Venhovens et al, Clemson University, USA
A study of the reliability of various types of the electric vehicles	Soodehknoom Negarestani, Abbas Rajabi Ghahnavieh, Sharif University of Technology, Iran
Supervised Bidirectional DC/DC Converter for Intelligent Fuel Cell Vehicles Energy Management	Benioamino Guida, Alberto Cavallo, Second University of Naples, Italy
Regulator for On-Line Electric Vehicle (OLEV)	Yangsu Kim et al, KAIST, Korea

PT10:

Title	Authors
Use of Conductive Composite Sensors for Improved Condition Monitoring of Electric Vehicle Motor Insulation Systems	Kenneth Watkins, Polymer Aging Concepts, Cp Wong, Georgia Tech, USA
Smartphone-based Accurate Range and Optimal Route Selection for Electric Vehicle	Raziq Yaqub, Yu Cao, University of Tennessee at Chattanooga

PT11:

Title	Authors
Effects of Air Pressure and Humidity to the Effectiveness of the Proton Exchange Membrane Fuel Cell (PEMFC) in High Humidity	Zulfahmie Bin Jalauddin, Universiti Teknologi Petronas, Malaysia

PT12:

Title	Authors
A Model of Electric Vehicle Charging Station Compatibles with Vehicle to Grid Scenario	Praveen Kumar, Indian Institute of Technology, India
Implementation of Electric Highways as a Solution to EV Range Limitations	Matthew Earleywine et al, NREL, USA
A Bi-directional DC-DC Converter with Overlapping Input and Output Voltage Ranges and Vehicle to Grid Energy Transfer Capability	Mehnaz Khan, NSU, USA
Economic Analyses of Plug-in Electric Vehicle Battery Providing Ancillary Services	Zhuowei Luo, Tsinghua University, China
Individual decisions & schedule planner in a Vehicle-to-grid context	Yann Hermans et al, University of Versailles, France
Distributed Self Organizing Electric Vehicle Charge Controller System	Ulrich Reinerm Karlsruhe Institute of Technology. KTI, Germany
Novel System for Wireless In-motion EV Charging and Disabled Vehicle Removal	Aaron Gilchrist, Utah State University, USA
W2V2G Algorithms for sustainable EV Energy Management Systems	Nils Masuch et al, TU Berlin, Germany

Paper Session Chairs

Monday, March 5 2012

Track	Session chair
PT3-1	Zoran Filipi
PT3-2	Marc Wiseman
PT5-1	Andrew Burke
PT5-2	Terry Penny
PT12-1	Lance Spross
PT12-2	Mladen Kezunovic

Tuesday, March 6 2012

Track	Session chair
PT8-1	John Miller
PT8-2	Srdjan Lukic
PT8-3	Yilmaz Sozer
PT9-1	Abdellatif Miraoui
PT9-2	Jianhui Wang
PT9-3	Marc Duvall
PT5-3	Ronnie Chowdhury
PT10-1	Yu Yuan
PT10-2/PT2/PT6/PT9	Saifur Rahman
PT12-3	Pedram Mohseni
PT12-4	Victor Huang
PT12-5	Blair Farley

Wednesday, March 7 2012

Track	Session chair
PT1/PT4	ML Chan
PT9-4	Garry Stuebing
PT9-5	Farrokh Rahimi
PT10-3	Hector Zelaya
PT11	Karl Perusich
PT12-6	Mary Reidi

Panel Sessions

Panel Topic	P1: EV Fleet Management
Panel Chair	Dr. Marc Wiseman, Ricardo
Time Slot	March 5, 1:00-2:30 p.m.
Scope	This panel will address the requirements for a larger adoption of EV's in commercial fleets, potential infrastructure solutions as well as aspects of range prediction and driver behavior.

Panel Topic	P2: New Manufacturing Concepts for EV
Panel Chair	Dr. Kilian Funk, BMW
Time Slot	March 5, 3:00 – 4:30 p.m.
Scope	This panel will address aspects of specific needs for the production of EV's and EV key components compared to manufacturing of conventional vehicles

Panel Topic	P3: New Trends in Battery Technologies
Panel Chair	Dr. Andy Burke, UC Davis
Time Slot	March 6, 9:15 – 10:45 a.m.
Scope	This panel will address new technology trends in batteries for EV's including the consideration of environmental aspects.

Panel Topic	P4: EV Infrastructure Solutions
Panel Chair	Mike Rowand, Duke Energy
Time Slot	March 6, 11:00 – 12:30 p.m.
Scope	This panel will address requirements for EV infrastructure solutions to enable a faster and broader adoption of EV's.

Panel Topic	P5: International EV market development
Panel Chair	Dr. Peter Frise, Auto21
Time Slot	March 6, 12:45 – 2:15 p.m.
Scope	This panel will discuss the development of EV's from the view of different key markets including the consideration of different customer perspectives, technology capabilities and infrastructure requirements.

Panel Topic	P6: New Trends in EV Development
Panel Chair	Dr. Zoran Filipi, CUICAR
Time Slot	March 6, 2:30 – 4:00 p.m.
Scope	This panel will provide an overview of new developments both on the power train integration side as well as the infrastructure integration side that are relevant for EV's.

Panel Topic	P7: Information and Communication Technologies for EV's
Panel Chair	Klaus Schaaf, Volkswagen/Wolfsburg AG
Time Slot	March 7, 9:15 – 10:45 a.m.
Scope	This panel will address the needs to develop information and communication technology testbeds to support the larger adoption of EV's as well to consider the use of mobile devices in context with EV's.

Panel Topic	P8: EV Standards
Panel Chair	Dr. Harald Scholz, EU
Time Slot	March 7, 11:30 – 1:00 p.m.
Scope	This panel will address EV standardization initiatives in different parts of the world both from a vehicle as well as an infrastructure perspective.

Panel Topic	P9: EV Safety
Panel Chair	Victor Huang, Better World/ZAP
Time Slot	March 7, 1:30 – 3:00 p.m.
Scope	This panel will discuss different safety aspects that are relevant in context with operating electrical vehicles and related infrastructure.

Panel Topic	P10: EV Policies
Panel Chair	Veronika Rabl
Time Slot	March 8, 9:15 – 10:45 a.m.
Scope	This panel will address the effectiveness of EV policies in order to increase the adoption of EV's.

Panel Topic	P11: P2030.1 Working Group
Panel Chair	ML Chan, ML Consulting Group
Time Slot	March 8, 9:15 – 10:45 a.m.
Scope	This panel will discuss the impacts of integrating EV's into electric grids (IEEE P2030.1 Working Group, Task Force 2)

Panel Topic	P12: Success factors of being an EV start-up
Panel Chair	Greg Hillman, SCRA/SC Launch
Time Slot	March 8, 9:15 – 10:45
Scope	This panel will discuss the specific challenges of EV start-up's to be successful in the market, both from a start-up but also from an investor perspective; the discussion will be based on concrete examples

NOTES