EVS28 Daily Program

(As of April 22, 2015)

EVS 28 e-Motional Technology for Humans

Daily Program

May 4 (Monday), 2015

Opening Ceremony

10:00 – 10:40 **Exhibition Opening Ceremony** **Hall 6C**

10:40 – 11:10 **Symposium Opening Ceremony** **Hall 6C**

Plenary Session 1

11:10 – 12:30 **Hall 6C**

Chairperson: TBD

11:10 **Hyundai-Kia Clean Mobility**
Moon-sik KWON, *Hyundai Motor Group*, KR

11:30 **E-MOTION AT GENERAL MOTORS**
Larry T NITZ, *General Motors Company*, US

11:50 **ELECTROMOBILITY IS ALREADY A REALITY : UPDATE OF THE EV WORLD SITUATION BY RENAULT GROUP, REFERENCE IN EV**
Gilles NORMAND, *Renault*, FR

12:10 **U.S. DOE ELECTRIC DRIVE VEHICLE BATTERY R&D PROGRESS AND PLANS**
Tien DUONG, *US Department of Energy*, US

14:00 – 15:00 Dialogue Session 1 Hall 7

Technical Session 1

15:10 – 16:30 **A1: Batteries & Energy Storage** **301**

Chairpersons: Paul CODANI, PSA Peugeot Citroën, FR
Jonghoon KIM, Chosun University, KR

15:10 **INVESTIGATIONS ON THE CYCLIC AGING BEHAVIOR OF LI-ION CELLS: REASONS FOR AN ABRUPT DROP OF CAPACITY**
Simon F. SCHUSTER, *Technische Universität München,* DE

15:30 **A LUMPED ELECTRO-THERMAL MODEL FOR LI-ION CELLS IN ELECTRIC VEHICLE APPLICATION**
Kamyar MAKINEJAD, *TUM CREATE,* SG

15:50 **ON-BOARD AGING ESTIMATION USING HALF-CELL VOLTAGE CURVES FOR LIFEPO4 CATHODE-BASED LITHIUM-ION BATTERY FOR ELECTRIC VEHICLE APPLICATION**
Andrea MARONGIU, *RWTH Aachen University,* DE

16:10 **DEGRADATION PREDICTIONS OF LITHIUM IRON PHOSPHATE BATTERY**
Yuya HATO, *Waseda University,* JP

15:10 – 16:30 **B1: Electric Motors & Generators** **302**

Chairpersons: Zaimin ZHONG, Tongji University, CN
Kwang Hee NAM, Tongji POSTECH, KR

15:10 **MOTOR PERFORMANCE IMPROVEMENT VIA ARCELORMITTAL'S ICARETM ELECTRICAL STEEL RANGE FOR AUTOMOTIVE APPLICATIONS**
Sigrid JACOBS, *ArcelorMittal,* BE

15:30 **MULTI-DOMAIN SIMULATION METHODOLOGY TO DESIGN THE AIR COOLED IN-WHEEL MOTOR FOR EV/HEV**
Martin Dendaluce JAHNKE, *Tecnalia Research & Innovation,* ES

15:10 – 16:30 C1: Urban Electric Mobility 303

Chairperson: David BEETON, Urban Foresight Ltd., UK

15:10 **INNOVATIVE PRACTICE OF EV-CARSHARING IN CHINA URBAN E-MOBILITY**
Xiaoyuan WU, *Tongji University,* CN

15:25 **LARGE SCALE EVS' CHARGING SCHEDULING ENSURING SECURE AND EFFICIENT OPERATION OF TRAFFIC AND DISTRIBUTION**
Shuang WAN, *Tsinghua University,* CN

15:40 **DEVELOPMENT OF A NEW CONCEPT ELECTRIC VEHICLE FOR LAST MILE TRANSPORTATIONS**
Salvatore MICARI, *National Council of Research - Institute of Advance Technologies for Energy,* IT

15:55 **ELECTRIC FREIGHT VEHICLES IN CITY LOGISTICS: CHALLENGES, BARRIERS AND SUCCESS FACTORS.**
Tariq Van ROOIJEN, *TNO,* NL

16:10 **DEVELOPMENT OF SMART STRATEGIES TO EVALUATE THE RANGE ESTIMATOR IN ELECTRIC VEHICLES**
Christophe MOURE, *Applus IDIADA,* ES

15:10 – 16:30 D1: Propulsion Systems & Subsystems 304

Chairperson: Zhichao HOU, Tsinghua University, CN

15:10 **ENERGY EFFICIENCY SIMULATION FOR IN-WHEEL ELECTRIC VEHICLE BETWEEN CPSPMSM AND PMSM**
Jongmoo KIM, *KERI(Korea Electro-technology Research Institute),* KR

15:30 **ADVANCED SHIFTING CONTROL OF A TWO SPEED GEARBOX FOR AN ELECTRIC VEHICLE**
Pablo PRIETO, *Tecnalia Research & Innovation,* ES

15:50 **A HIGHLY EFFICIENT TWO SPEED TRANSMISSION FOR ELECTRIC VEHICLES**
Saphir FAID, *Punch Powertrain,* US

15:10 – 16:30 E1: Embedded Control Systems 305

Chairperson: TBD

15:10 **N-BMS, A NOVEL ISO26262 COMPLIANT BATTERY MANAGEMENT SYSTEM**
Karl VESTIN, *Lithium Balance A/S,* SE

15:30 **SYSTEM-ON-CHIP-BASED HIGHLY INTEGRATED POWERTRAIN CONTROL UNIT FOR NEXT-GENERATION ELECTRIC VEHICLES: HARNESSING THE POTENTIAL OF HYBRID EMBEDDED PLATFORMS FOR ADVANCED MODEL-BASED CONTROL ALGORITHMS.**
Martin Dendaluce JAHNKE, *Tecnalia Research & Innovation,* ES

Technical Session 2

16:40 – 18:00 A2: Batteries & Energy Storage 301

Chairperson: Shiho KIM, Yonsei University, KR

16:40 **WHAT ARE THE OPTIONS FOR LI-ION BATTERIES AFTER AUTOMOTIVE USE**
Hakim IDJIS, *Ecole Centrale Pari,* FR

17:00 **AN OVERVIEW OF CURRENT U.S. DOE HYBRID ELECTRIC SYSTEMS R&D ACTIVITIES**
David HOWELL, *U.S. Department of Energy,* US

17:20 **COST REDUCTION THROUGH CELL DESIGN OPTIMIZATION FOR VEHICLE REQUIREMENTS - FROM ACTIVE MATERIAL TO VEHICLE PRODUCT PORTFOLIO**
Matthias TSCHECH, *TU Braunschweig,* DE

16:40 – 18:00 B2: Electric Motors & Generators 302

Chairperson: Juhani LAURIKKO, VTT, FI

16:40 **NOISE EMISSIONS ON SWITCHED RELUCTANCE MOTORS: EVALUATION OF DIFFERENT STRUCTURAL MODELS**
Cassio FARIA, *Siemens Industry software NV,* BE

17:00 **ASSESSMENT OF AXIAL FLUX MOTOR TECHNOLOGY FOR HYBRID POWERTRAIN INTEGRATION**
Michael LAMPERTH, *GKN EVO eDrive Systems Ltd,* CH

17:20 **ABNORMAL ELECTROMAGNETIC NOISE OF MOTORS DEPENDING ON FIXING METHODS OF PERMANENT MAGNETS**
Myunggyu KIM, *Hyundai Motor Group,* KR

16:40 – 18:00 C2: Urban Electric Mobility 303

Chairperson: Xiaoyuan WU, Tongji University, CN

16:40 **THE FUTURE OF ELECTRIC MOBILITY: 50 BIG IDEAS FROM AROUND THE WORLD**
David BEETON, *Urban Foresight Ltd.,* UK

17:00 **EVS AND CHARGING INFRASTRUCTURE : RETURN OF EXPERIENCE**
Franck VITTE, *Blue Solutions, Bollore Group,* SG

17:20 **A COMPARATIVE STUDY OF DIFFERENT ELECTRIC DRIVE SYSTEMS AND THEIR EFFECTS ON DRIVE CYCLE PERFORMANCE OF AN ELECTRIC CITY BUS**
Ahu Ece Hartavi KARCI, *Istanbul Medeniyet University,* TR

17:40 **PRELIMINARY MODULAR DESIGN FOR ELECTRIC PERSONAL MOBILITY WITH EMBODIMENT OF DESIGN-ENGINEERING COLLABORATION**
Hyunjune (Hj) YIM, *Hongik University,* KR

16:40 – 18:00 D2: Heating & Cooling Systems 304

Chairperson: Nam Il KIM, Korea Automotive Technology Institute, KR

16:40 **OPTIMIZATION OF THERMAL MANAGEMENT IN PHEV CELL MODULE USING HEAT PIPES**
Hyunkyu CHOI, *Hyundai Mobis,* KR

17:00 **ECONOMIC ASSESSMENT OF DIFFERENT AIR-CONDITIONING AND HEATING SYSTEMS FOR ELECTRIC CITY BUSES BASED ON COMPREHENSIVE ENERGETIC SIMULATIONS**

Dietmar GOEHLICH, *Technical University of Berlin,* DE

17:20 **A HEATING SYSTEM OF ELECTRIC VEHICLES USING WASTE HEAT OF BATTERIES**
Hyunbin PARK, *Yonsei University,* KR

17:40 **AIR CONDITIONING SYSTEM SIZING FOR PURE ELECTRIC VEHICLE**
Bongha SONG, *GM Korea,* KR

16:40 – 18:00 E2: Public Policy & Promotion 305

Chairpersons: Chil-Hoon DOH, Korea Electrotechnology Research Institute, KR
Jeff ALLEN, Drive Oregon, US

16:40 **COMPARATIVE STUDY ON ELECTRIC VEHICLE POLICIES BETWEEN KOREA AND EU COUNTRIES**
Sang Kyu HWANG, *KOTI (Korea Transport Institute),* KR

17:00 **PROMOTION STRATEGY OF LOW-SPEED ELECTRIC TRUCKS FOR WHOLESALE MARKETS IN TAIWAN**
Kao-Hone CHU, *Industrial Technology Research Institute,* TW

17:20 **ESTONIA AS THE ELECTROMOBILITY LIVING LAB**
Liina JOLLER, *University of Tartu,* EE

16:40 – 18:00 F2: IEA_HEV 306

Chairperson: TBD

ENVIRONMENTAL BENEFITS OF THE WORLDWIDE ELECTRIC VEHICLE FLEET IN 2014 – A LIFE CYCLE ASSESSMENT IN TASK 19 OF THE INTERNATIONAL ENERGY AGENCY (IEA) ON HYBRID AND ELECTRIC VEHICLES (HEV)
Gerfried JUNGMEIER, *Joanneum Research,* AT

RD&D COOPERATION FOR THE SYSTEM OPTIMIZATION AND VEHICLE INTEGRATION OF HYBRID AND ELECTRIC VEHICLES WITHIN THE INTERNATIONAL ENERGY AGENCY
Michael NIKOWITZ, *A3PS - Austrian Agency for Alternative Propulsion Systems,* AT

STRATEGY AND INSTRUMENTS FOR A SUCCESSFUL IMPLEMENTATION OF ELECTROMOBILITY IN AUSTRIA
Andreas DORDA, *A3PS - Austrian Agency for Alternative Propulsion Systems,* AT

FLEMISH LIVING LAB ELECTRIC VEHICLES: 3 YEARS OF REAL-LIFE EXPERIENCES!
Carlo MOL, *VITO,* BE

ELECTRIFICATION OF TRANSPORT LOGISTIC VEHICLES: A TECHNO-ECONOMIC ASSESSMENT OF BATTERY AND FUEL CELL ELECTRIC TRANSPORTER
Enver Doruk ÖZDEMIR, *German Aerospace Center - Institute of Vehicle Concepts*, DE

TASK ON QUICK CHARGING TECHNOLOGY OF ELECTRIC VEHICLES IN IEA IA-HEV (HYBRID AND ELECTRIC VEHICLES)
Ignacio Martin JIMENEZ, *CIRCE,* ES

COMPARISON OF ENERGY CONSUMPTION AND COSTS OF DIFFERENT PLUG-IN ELECTRIC VEHICLES IN EUROPEAN AND AMERICAN CONTEXT
Aymeric Rousseau, *Argonne National Laboratory,* US

Technical Session 3

09:00 – 10:20 A3: Batteries & Energy Storage 301

Chairperson: Jelle SMEKENS, VUB, BE

09:00 **AGING OF LI-ION BATTERIES IN ELECTRIC VEHICLES: IMPACT OF REGENERATIVE BRAKING**
Peter KEIL, *Technische Universität München,* DE

09:20 **HEAT PIPE APPLIED INDIRECT COOLING SYSTEM FOR HIGH VOLTAGE BATTERY PACKS IN PHEVS**
Tae Kwon KIM, *Hyundai Mobis,* KR

09:40 **EFFECTS OF VIBRATIONS AND SHOCKS IN ELECTRIC VEHICLES ON LI-ION BATTERIES**
Martin BRAND, *Research assistant,* DE

10:00 **ASSESSMENT OF ECONOMIC POTENTIAL OF VEHICLE-TO-HOME(V2H) IN JAPAN WITH CUSTOMER DRIVING HABITS TAKEN INTO ACCOUNT**
Tomoya NAKADA, *Nissan Motor Co., Ltd.,* JP

09:00 – 10:20 B3: Electric Motors & Generators / Charging & Infrastructure 302

Chairperson: Arrate Alonso GOMEZ, VUB, BE

09:00 **VIBRATION REDUCTION DESIGN OF PERMANENT MAGNET MOTOR USING LEVEL SET BASED SHAPE OPTIMIZATION METHOD**
Sunghoon LIM, *Hanyang University,* KR

09:20 **ANALYSIS OF DIFFERENT TYPES OF STARTER AND GENERATOR FOR 48V MILD HEV SYSTEM**
Jeongki KWON, *Hyundai Mobis,* KR

09:40 **DC QUICK CHARGING OPERATION ASSISTANT DEVELOPMENT AND EXPERIMENT IN TAIWAN**
Hung Hsi LIN, *Ship and Ocean Industries R&D Center,* TW

10:00 **WORKPLACE CHARGING: GOOD FOR YOUR BUSINESS / GOOD FOR YOUR EMPLOYEES**
Zach HENKIN, *Drive Oregon,* US

09:00 – 10:20 C3: Electric Vehicles 303

Chairpersons: Jakub BERNATT, Institute of Electrical Drives & Machines KOMEL, PL
Chunhua ZHENG, Shenzhen Institutes of Advanced Technology, CN

09:00 **URBAN ELECTRIC-MOBILITY : THE BENEFITS OF MICRO-MOBILITY**
Nathalie CARUCCI, *Renault S.A.S,* FR

09:15 **CHARGING INFRASTRUCTURE OVERVIEW ROLES AND PLAYERS IN EUROPE**
Sébastien Albertus, *Renault S.A.S,* FR

09:30 **TESTING METHODOLOGY OF VEHICLE PEDESTRIAN NOTIFICATION SYSTEMS**
Ian WHITTAL, *Government of Canada,* CA

09:45 **ROBUST CONTROL METHOD OF INDUCTION MACHINE AGAINST TEMPERATURE VARIATION**
Sang Min KIM, *Hyundai Mobis,* KR

10:00 **DEVELOPMENT AND PERFORMANCE EVALUATION OF ADVANCED ELECTRIC BUS TRANSPORTATION SYSTEM**

Kenichiro EDA, *Waseda University,* JP

09:00 – 10:20 D3: Hybrid Electric Vehicles 304

Chairpersons: Joerg Dieter WEIGL, National University of Singapore , SG
Hyunsu KIM, Hyundai Motor Company, KR

09:00 **POWER SEMICONDUCTOR AND PACKAGING TRENDS IN VEHICLE ELECTRIFICATION**
Achim STRASS, *Infineon Technologies Korea Co Ltd,* KR

09:20 **THERMAL MODEL DEVELOPMENTS FOR ELECTRIFIED VEHICLES**
Namwook KIM, *Argonne National Laboratory,* US

09:40 **USING MULTIOBJECTIVE OPTIMIZATION FOR AUTOMOTIVE COMPONENT SIZING**
Aymeric Rousseau, *Argonne National Laboratory,* US

10:00 **DEVELOPMENT OF PERFORMANCE SIMULATOR FOR A HEV WITH CVT AND VALIDATION WITH DYNAMOMETER TEST DATA**
Hanho SON, *Sungkyunkwan University ,* KR

09:00 – 10:20 E3: Public Policy & Promotion 305

Chairpersons: Stefan PETTERSSON, Viktoria Swedish ICT, SE
Seung-Ho HAN, Korea Electric Power Research Institute, KR

09:00 **DRIVING THE FUTURE TODAY: DELIVERING A STRATEGY FOR ULTRA LOW EMISSION VEHICLES IN THE UK**
Richard BRUCE, *UK Department for Transport,* UK

09:20 **GAMIFYING THE EV DRIVING EXPERIENCE: A VIRTUAL ELECTRIC VEHICLE TO CHANGE PUBLIC ATTITUDES**
Mark APPERLEY, *University of Waikato,* NZ

09:40 **LOCAL MEASURES TO ENCOURAGE THE WIDESPREAD UPTAKE OF LOW EMISSION VEHICLES: LEARNING FROM THE UK AND GLOBAL GOOD PRACTICE**
David BEETON, *Urban Foresight Ltd.,* UK

10:00 **REDUCING CO2 EMISSIONS IN THE CITY OF KAMPALA USING BATTERY ELECTRIC BUSES**
Fred MATOVU, *Engineering,* UG

Technical Session 4

10:40 – 12:00 A4: Batteries & Energy Storage 301

Chairperson: Chengliang YIN, Shanghai Jiao Tong University, CN

10:40 **COUPLING LOCAL RENEWABLE ENERGY PRODUCTION WITH ELECTRIC VEHICLE CHARGING: A SURVEY OF THE FRENCH CASE**
Paul CODANI, *PSA Peugeot Citroën,* FR

11:00 **DEVELOPMENT OF IN SITU GAS MEASUREMENTS FOR LITHIUM ION BATTERY R&D**
Dee STRAND, *Wildcat Discovery Technologies,* US

11:20 **SOC ESTIMATION OF LIFEPO4 LI-ION BATTERY USING BP NEURAL NETWORK**
Lihong QIU, *Hefei University of Technology,* CN

11:40 **48V RECUPERATION STORAGE BASED ON SUPERCAPS FOR AUTOMITIVE APPLICAITONS**
Andreas BAUMGARDT, *University of Federal Defense Munich,* DE

10:40 – 12:00 B4: Charging & Infrastructure 302

Chairpersons: Don MACKENZIE, University of Washington, US
In-Soo SUH, KAIST, KR

10:40 **EARLY HYDROGEN STATION ECONOMICS ANALYSIS**
Changzheng LIU, *Oak Ridge National Laboratory,* US

11:00 **EV INTEGRATION IN SMART GRIDS THROUGH INTEROPERABLE SYSTEMS**
Raul RODRIGUEZ, *Fundacion Tecnalia,* ES

11:20 **IMPACT OF PENETRATION OF ELECTRIC VEHICLES ON INDIAN POWER GRID**
Makarand LOKHANDE, *Sardar Vallabhai National Institute of Technolgy,* IN

10:40 – 12:00 C4: Electric Vehicles 303

Chairperson: Jiuyu DU, Tsinghua University, CN

10:40 **IMPACT OF SMART CHARGING ON THE EV BATTERY AGEING - DISCUSSION FROM A 3 YEARS REAL LIFE EXPERIENCE**
Laurent De VROEY, *GDF SUEZ,* BE

11:00 **ELECTRIC VEHICLE USE AND ENERGY CONSUMPTION BASED ON REAL WORLD ELECTRIC VEHICLE FLEET TRIP AND CHARGE DATA AND ITS IMPACT ON EXISTING EV RESEARCH MODELS**
Cedric De CAUWER, *Vrije Universiteit Brussel,* BE

11:20 **FEASIBILITY OF ELECTRIC BUSSES IN PUBLIC TRANSPORT**
Joni MARKKULA, *Tampere University of Technology,* FI

11:40 **ELECTRIC VEHICLE ENERGY CONSUMPTION MODELLING AND PREDICTION BASED ON ROAD INFORMATION**
I.J.M. (Igo) BESSELINK, *Eindhoven University of Technology,* NL

10:40 – 12:00 D4: Hybrid Electric Vehicles 304

Chairpersons: Thomas FRANKE, Technische Universitaet Chemnitz, DE
Achim STRASS, Infineon Technologies Korea Co Ltd, KR

10:40 **INVESTIGATION OF CO2 EMISSIONS IN PRODUCTION AND USAGE PHASES FOR A HYBRID VEHICLE SYSTEM COMPONENT**

Tetsuya NIIKUNI, *National Traffic Safety and Environment Laboratory,* JP

11:00 **48V HYBRID SYSTEMS FROM SEMICONDUCTOR PERSPECTIVE**
Achim STRASS, *Infineon Technologies Korea Co Ltd,* KR

11:20 **STUDY OF REGENERATIVE BREAKING CONTROL FOR HEV WITH MULTISPEED TRANSMISSION**
Jeewook HUH, *Hyundai Motor Group,* KR

11:40 **"MEASUREMENT AND ANALYSIS OF INDIAN ROAD DRIVE CYCLES FOR EFFICIENT AND ECONOMIC DESIGN OF HEV COMPONENT"**
Vishal PAREKH, *Aspero Research,* IN

10:40 – 12:00 E4: Public Policy & Promotion 305

Chairpersons: Mark APPERLEY, University of Waikato, NZ
Dongseok CHOI, KATRI, KR

10:40 **POLICY STRATEGIES FOR AN EMERGENT TECHNOLOGY; LESSONS FROM THE ANALYSIS OF EV-POLICY IN 8 NORTH-EUROPEAN COUNTRIES**
Martijn Van Der STEEN, *Netherlands School of Governance,* NL

11:00 **THE NORWEGIAN EV-SUCCESS, AND WHAT HAPPENS WHEN SALES GET HIGH**
Christina BU, *The Norwegian EV Association,* NO

11:20 **BENEFITS TO PLUG-IN ELECTRIC VEHICLES (PEVS) AND UTILITIES FROM CALIFORNIA'S EVOLVING LOW CARBON FUEL STANDARD (LCFS) REGULATION**
Dean TAYLOR, *Southern California Edison,* US

11:40 **UK GOVERNMENT SUPPORT FOR ULEV TECHNOLOGY R&D**
Bob MORAN, *Office for Low Emission Vehicles,* UK

13:00 – 14:00 Dialogue Session 2 **Hall 7**

Plenary Session 2

14:00 – 15:00 **Hall 6C**

Chairperson: TBD

14:00 **LONG RANGE EV BATTERY PACK**
Woongpil YANG, *LGE Vehicle Components Company*, KR

14:20 **EVOLVING ELECTRIC VEHICLE**
Kazuo YAJIMA, ***Nissan Motor, Co. Ltd,*** JP

14:40 **MERCEDES-BENZ CARS HYBRID STRATEGY**
Oliver BRITZ, *Mercedes-Benz Korea Ltd.*, DE

Technical Session 5

15:10 – 16:30 A5: Batteries & Energy Storage 301

Chairpersons: James MILLER, Argonne National Laboratory, US
Jin-Dong MOON, Mando Corporation, KR

15:10 **MODULE AGEING OF LI-ION CELLS WITH ACTIVE BALANCING COMPAREDTO THE AGEING BEHAVIOURON CELL LEVEL**
Christian CAMPESTRINI, *Research associate,* DE

15:25 **OPTIMIZATIONI OF LI-ION BATTERIES THROUGH MODELLING TECHNIQUES**
Jelle SMEKENS, *Vrije Universiteit Brussel,* BE

15:40 **BATTERY DEVELOPMENT PROCESS WITH SAFETY**
Andrew KWON, *GM Korea,* KR

15:55 **VOLTEC BATTERY DESIGN AND MANUFACTURING**
Milind GANDHI, *GM Korea,* KR

16:10 **EXPLORING THE OPTIONS TO REDUCE THE COST OF XEV BATTERIES VIA CHEMISTRY STANDARDIZATION.**
Tom Van BELLINGHEN, Umicore, BE

15:10 – 16:30 B5: Charging & Infrastructure 302

Chairperson*: *Yoshinori KONDO, National Institute for Environmental Studies, JP

15:10 **DC-ELECTRIC VEHICLE SUPPLY EQUIPMENT OPERATION STRATEGIES FOR ENHANCED UTILITY GRID VOLTAGE STABILITY**
Peter KRASSELT, *Karlsruhe Institute of Technology,* DE

15:30 **PROPOSED DYNAMIC CONTACTLESS POWER TRANSFER SYSTEM**
Toshiyuki FUJITA, *Technova Inc.,* JP

15:50 **THE PROVISION OF PUBLIC RECHARGING INFRASTRUCTURE FOR ELECTRIC VEHICLES IN THE UK – IS THERE A BUSINESS CASE?**
Josey WARDLE, *Newcastle University,* UK

16:10 **NORWEGIAN ELECTRIC CAR USER EXPERIENCES 2014**
Espen HAUGE, *Norwegian Electric Vehicle Association,* NO

15:10 – 16:30 C5: Electric Vehicles 303

Chairpersons: Laurent De VROEY, GDF SUEZ, BE
Cassio FARIA, Siemens Industry software NV, BE

15:10 **SIZING TOOL FOR RAPID OPTIMISATION OF PACK CONFIGURATION AT EARLY-STAGE AUTOMOTIVE PRODUCT DEVELOPMENT**
Kotub UDDIN, *University of Warwick,* UK

15:30 **INCREASING THE ENVIRONMENTAL POTENTIAL OF ELECTRICAL VEHICLES AND RENEWABLE ENERGIES WITH GRID ATTACHED ENERGY STORAGE**
Surendraprabu RANGARAJU, *Vrije Universiteit Brussel,* BE

15:50 **EV MOTOR CONTROLLER TARGET COOLING BY USING MICRO THERMOELECTRIC COOLER**
Po-Hua CHANG, *Industrial Technology Research Institute,* TW

16:10 **INVESTIGATING FACTORS AFFECTING ELECTRIC VEHICLES ADOPTION: AN AGGREGATED PANEL DATA ANALYSIS OVER U.S. STATES**
Donghyung YOOK, *Korea research institute for human settlements,* KR

15:10 – 16:30 D5: Hybrid Electric Vehicles / Auxiliary Components 304

Chairpersons: Namwook KIM, Argonne National Laboratory, US
SungHo HWANG, Sungkyunkwan University, KR

15:10 **ANALYSIS OF REGENERATIVE BRAKING EFFECT TO IMPROVE FUEL ECONOMY FOR E-REV BUS BASED ON SIMULATION**
Jongdai CHOI, *Seoul National University,* KR

15:30 **COOPERATIVE CONTROL ALGORITHM FOR FRICTION AND REGENERATIVE BRAKING SYSTEMS CONSIDERING TEMPERATURE CHARACTERISTICS**
Minho KWON, *Sungkyunkwan University,* KR

15:50 **MODELING AND SIMULATION STUDY ON A SERIES-PARALLEL HYBRID ELECTRIC VEHICLE**
Yaohua LI, *Chang'an University,* CN

16:10 **FAULT-TOLERANT CONTROL SYSTEM FOR EMB EQUIPPED IN-WHEEL MOTOR VEHICLE**
Seungki KIM, *Hanyang University,* KR

15:10 – 16:30 E5: Introduction, Demonstration & Marketing 305

Chairpersons: Philippe LEBEAU, Vrije Universiteit Brussel, BE
Woongchul CHOI, Kookmin University, KR

15:10 **DERIVING VEHICLE-TO-GRID BUSINESS MODELS FROM CONSUMER PREFERENCES**
Rene BOHNSACK, *Amsterdam University of Applied Sciences,* NL

15:30 **EARLY ADOPTERS OF ELECTRIC VEHICLES IN GERMANY UNVEILED**
Stefan TROMMER, *German Aerospace Center (DLR),* DE

15:10 – 16:30 F5: Germany Trade & Invest 306

Chairperson: Stefan Di BITONTO, Germany Trade & Invest, DE

ALTERNATIVE DRIVES IN GERMANY: HANDS-ON E-MOBILITY! THE FOUR NATIONAL SHOWCASE REGIONS FOR ELECTRIC MOBILITY
Stefan DI BITONTO, *Germany Trade and Invest,* DE

E-MOBILITY IN PRACTICE: THE NATIONAL SHOWCASE REGIONS FOR ELECTROMOBILITY (PART I)
Cathleen KLÖTZING, *Energy Agency of Saxony,* DE
Gernot LOBENBERG, *Berlin Agency for Electromobility,* DE

E-MOBILITY IN GERMANY - EXPERIENCES OF GERMAN OEM AND THE COMBINED CHARGING SYSTEM
Albrecht PFEIFFER, *BMW China,* DE
Cornel PAMPU, *Carmeq GmbH,* DE

E-MOBILITY IN PRACTICE: THE NATIONAL SHOWCASE REGIONS FOR ELECTROMOBILITY (PART II)
Wolfgang FISCHER, *State Agency for Electromobility Baden-Wuerttemberg,* DE
Juliane BIELINSKI, *Metropolregion Hannover,* DE

Technical Session 6

16:40 – 18:00 A6: Batteries & Energy Storage 301

Chairpersons: Wootaik LEE, Changwon National University, KR
Ahmed PESARAN, National Renewable Energy Laboratory (NREL), US

16:40 **OPTIMAL CHARGING STRATEGY DEVELOPMENT BASED ON SOLID ELECTROLYTE INTERFACE (SEI) FILM GROWTH MODEL AND DYNAMIC PROGRAMMING**
Chengliang YIN, *Shanghai Jiao Tong University,* CN

17:00 **EXPERIMENTAL BEHAVIOUR OF LI-ION AND SUPERCAPACITORS CELLS FOR HEVS UNDER STANDARDIZED AND TAILORED-LIFE CYCLE TESTING**
Mario CONTE, *Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA),* IT

17:20 **ADVANCED LITHIUM-ION BATTERY MANUFACTURING R&D**
James MILLER, *Argonne National Laboratory,* US

17:40 **COUPLED MECHANICAL-ELECTROCHEMICAL-THERMAL MODELING FOR ACCELERATED DESIGN OF EV BATTERIES**
Ahmad PESARAN, *National Renewable Energy Laboratory,* US

16:40 – 18:00 B6: Charging & Infrastructure 302

Chairperson: Chantal GUIMONT, EMC, CA

16:40 **DYNAMIC WIRELESS POWER TRANSFER SYSTEM FOR ELECTRIC VEHICLE TO SIMPLIFY GROUND FACILITIES - POWER CONTROL BASED ON VEHICLE-SIDE INFORMATION -**
Katsuhiro HATA, *The University of Tokyo,* JP

17:00 **MODELING CHARGING CHOICES OF BEV OWNERS USING STATED PREFERENCE DATA**
Don MACKENZIE, *University of Washington,* US

17:20 **ECONOMIC ASSESSMENT OF STRATEGIES TO DEPLOY PUBLICLY ACCESIBLE CHARGING INFRASTRUCTURE**
Raul RODRIGUEZ, *Tecnalia,* ES

17:40 **COMBINED CHARGING SYSTEM - ONE SYSTEM FOR ALL**
Cornel PAMPU, *Carmeq,* DE
Albrecht PFEIFFER, *BMW China Services Ltd.,* DE

16:40 – 18:00 C6: Electric Vehicles 303

Chairperson: Sang Won YOON, Hanyang University, KR
Kirill KARPUKHIN, Federal State Unitary Enterprise NAMI, RU

16:40 **DESIGN AND REALIZATION OF A ONE-PEDAL-DRIVING ALGORITHM FOR THE TU/E LUPO EL.**
I.J.M. (Igo) BESSELINK, *Eindhoven University of Technology,* NL

17:00 **AN ACCESSIBLE PRE-DESIGN CALCULATION TOOL TO SUPPORT THE DEFINITION OF EV COMPONENTS**
Christophe MOURE, *Applus IDIADA, ES*

17:20 **MODEL BASED ADAPTIVE CONTROLLER DESIGN AND OPTIMIZATION FOR (L7) ELECTRIC VEHICLE**
Kuang-Shine YANG, *Metal Industries Research & Development Center,* TW

17:40 **LATERAL HANDLING IMPROVEMENT WITH DYNAMIC CURVATURE CONTROL FOR AND INDEPENDENT REAR WHEEL DRIVE EV**
In-Soo SUH, *KAIST,* KR

16:40 – 18:00 D6: Plug-In Hybrid Electric Vehicles 304

Chairpersons: Rene BOHNSACK, Amsterdam University of Applied Sciences, NE
Kyungseok CHO, Halla Visteon Climate Control Corp., KR

16:40 **CHEVROLET VOLT ON-ROAD TEST PROGRAMS IN CANADA. PART 1: EFFECTS OF DRIVE CYCLE, AMBIENT TEMPERATURE AND ACCESSORY USAGE ON ENERGY CONSUMPTION AND ELECTRIC RANGE**
Hajo RIBBERINK, *Natural Resources Canada,* CA

17:00 **CHEVROLET VOLT ON-ROAD TEST PROGRAMS IN CANADA. PART 2: EVALUATION OF GASOLINE DISPLACEMENT AND EXTREME WEATHER PERFORMANCE IN COMPARISON WITH OTHER VEHICLES TYPES**
Hajo RIBBERINK, *Natural Resources Canada,* CA

17:20 **DEVELOPMENT OF A PLUG-IN HEV BASED ON THE NOVEL COMPOUND POWER-SPLIT TRANSMISSION**
Chen WANG, *Corun CHS Technology Co., Ltd,* CN

17:40 **CROSS-DOMAIN SYSTEMS ENGINEERING AND VEHICLE SIMULATION FOR ELECTRIFICATION**
Christian LINGENFELSER, *Bosch Engineering GmbH,* DE

16:40 – 18:00 E6: Introduction, Demonstration & Marketing 305

Chairpersons*: *Shigeyuki MINAMI, Osaka City University, JP
In-Soung JUNG, Korea Electronics Technology Institute, KR

16:40 **LIGHTWEIGHT INFRASTRUCTURE FOR ELECTRIC VEHICLE CHARGING**
Stefan PETTERSSON, *Viktoria Swedish ICT,* SE

17:00 **BUSTING MYTHS AND DRIVING EV UPTAKE: GO ULTRA LOW**
Jonathan MITCHELL, *Office for Low Emission Vehicles,* UK

17:20 **GLOBAL OPPORTUNITIES FOR SMALL/MEDIUM ENTERPRISES IN E-MOBILITY (GO4SEM)**
Arrate Alonso GOMEZ, *Vrije Universiteit Brussel,* BE

17:40 **HOW ACTIVISM MATTERS FOR CREATING THE ELECTROMOBILITY 2.0 INDUSTRY?**
Carole DONADA, *Essec Business School,* FR

Technical Session 7

09:00 – 10:20 A7: Batteries & Energy Storage 301

Chairpersons: Kotub UDDIN, University of Warwick, UK
Kunsoo HUH, Hanyang University, KR

09:00 **BATTERIES 2020 – A JOINT EUROPEAN EFFORT TOWARDS EUROPEAN COMPETITIVE AUTOMOTIVE BATTERIES**
Jean-Marc TIMMERMANS, *Vrije Universiteit Brussel,* BE

09:20 **DESIGN OPTIMIZATION OF LITHIUM-ION BATTERY USING HYBRID ELECTRIC VEHICLES SIMULATION MODEL.**
Jihoon KIM, *Hanyang University,* KR

09:40 **A STATE-OF-CHARGE AND CAPACITY ESTIMATION ALGORITHM FOR LITHIUM-ION BATTERY PACK UTILIZING FILTERED TERMINAL VOLTAGE**
Chang Yoon CHUN, *Seoul National University,* KR

09:00 – 10:20 B7: Charging & Infrastructure / Power Electronic Systems 302

Chairperson: TBD

09:00 **ON THE ENERGY EFFICIENCY OF QUICK DC VEHICLE BATTERY CHARGING**
Carlo VILLANTE, *University of L'Aquila,* IT

09:20 **IMPACT OF ENERGY MANAGEMENT OF ELECTRIC VEHICLES ON TRANSIENT VOLTAGE STABILITY OF MICROGRID**
Muhammad Shoaib KHALID, *Huazhong University of Science and Technology,* CN

09:40 **UNRAVELING USER TYPE CHARACTERISTICS: TOWARDS A TAXONOMY FOR CHARGE INFRASTRUCTURE**
Jurjen HELMUS, *University of Applied Sciences Amsterdam,* NL

10:00 **48V INTEGRATED MOTOR-INVERTER DESIGN FOR MILD HEV**
Jinseok HONG, *Hyundai Mobis,* KR

09:00 – 10:20 C7: Electric Vehicles 303

Chairpersons: I.J.M. (Igo) BESSELINK, Eindhoven University of Technology, NE
Kwangki JEON, Korea Automotive Technology Institute, KR

09:00 **ELECTRIFICATION OF A TRUCK FOR CITY DELIVERY SERVICES**
Geunhie RIM, *KERI(Korea Electro-technology Research Institute),* KR

09:20 **IMPROVEMENT ON DRIVING COMFORT AND ENERGY CONSUMPTION OF ELECTRIC VEHICLE THROUGH THROTTLE SIGNAL CONTROL**
Joerg Dieter WEIGL, *National University of Singapore,* DE

09:40 **ELECTRIC VEHICLES 2015-2025**
Peter HARROP, *IDTechEx,* UK

10:00 **THE INFLUENCE OF ELECTRICITY ALLOCATION RULES IN ENVIRONMENTAL ASSESSMENTS OF ELECTRIC VEHICLES.**
Maarten MESSAGIE, *Vrije Universiteit Brussel,* BE

09:00 – 10:20 D7: Plug-In Hybrid Electric Vehicles 304

Chairperson: Carole DONADA, Essec Business School, FR

09:00 **PLUG-IN HYBRID VEHICLE IMPROVEMENTS ACHIEVED BY ADDING AN ELECTROCHEMICAL CAPACITOR**
Toshihiko FURUKAWA, *United Chemi-Con,Inc,* JP

09:20 **DRIVING CONTROL ALGORITHM BASED ON ROUTE INFORMATION FOR A RANGE EXTENDED ELECTRIC VEHICLE**
Jaemyoung PI, *Sungkyunkwan University,* KR

09:40 **A STOCHASTIC MODEL PREDICTIVE CONTROL STRATEGY FOR ENERGY MANAGEMENT OF SERIES PHEV**
Haiming XIE, *Tsinghua University,* CN

09:00 – 10:20 E7: Fuel Cell Vehicles 305

Chairpersons: Gerfried JUNGMEIER, JOANNEUM RESEARCH, AU
Sungho LEE, Hyundai Motor Company, KR

09:00 **ANALYSIS OF FIELD-STRESSED MODULES FROM A FUEL-CELL VEHICLE'S MAIN INVERTER**
Hye Seong HEO, *InfineonTechnologies Korea Co Ltd,* KR

09:20 **AN INNOVATIVE BUSINESS MODEL FOR FUEL CELL PLUG-IN ELECTRIC VEHICLES**
Zhenhong LIN, *Oak Ridge National Laboratory,* US

09:40 **SENSITIVITY ANALYSIS FOR ASSESSING ROBUSTNESS OF POSITION-BASED PREDICTIVE ENERGY MANAGEMENT STRATEGY FOR FUEL CELL HYBRID ELECTRIC VEHICLE**
Jihun HAN, *KAIST,* KR

Technical Session 8

10:30 – 11:50 A8: Batteries & Energy Storage / Fuel Cells & Fuel Cell Systems 301

Chairperson: Jean-Marc TIMMERMANS, Vrije Universiteit Brussel, BE

10:30 **CHARACTERISING LI-ION BATTERY DEGRADATION THROUGH THE IDENTIFICATION OF PERTURBATIONS IN ELECTROCHEMICAL BATTERY MODELS**
Kotub UDDIN, *University of Warwick,* UK

10:50 **EFFECTS OF IMBALANCE IN LARGE FORMAT LITHIUM ION CELLS ON CYCLE LIFE**
Hong-Keun KIM, *Seoul National University,* KR

11:10 **COLD START STUDIES IN A PEMFC STACK FOR AUTOMOTIVE FUEL CELLS**
Sungho LEE, *Hyundai Motor Group,* KR

11:30 **TOYOTA FUEL CELL SYSTEM (TFCS)**
Hiroyuki YUMIYA, *Toyota Motor Corporation,* JP

10:30 – 11:50 B8: Power Electronic Systems 302

Chairpersons: Michael LAMPERTH, GKN EVO eDrive Systems Ltd, CH
Geunhie RIM, Korea Electrotechnology Research Institute, KR

10:30 **A NOVEL RECTIFICATION METHOD FOR A HIGH LEVEL AC VOLTAGE CONVERTING TO A LOW LEVEL DC VOLTAGE: EXAMPLE OF SCOOTERS IDLING STOP SYSTEM**
Pin Yung CHEN, *Industrial Technology Research Institute,* TW

10:50 **DESIGN OF A NOVEL SIC MOSFET STRUCTURE FOR EV INVERTER EFFICIENCY IMPROVEMENT**
Young Kyun JUNG, *Hyundai Motor Group,* KR

11:10 **CONTROL STRATEGIES AND FUNCTIONAL SAFETY FOR THE INTELLIGENT STATOR CAGE DRIVE (ISCAD)**
Florian BACHHEIBL, *Universitat der Bundeswehr Munchen,* DE

11:30 **THERMAL SIMULATION OF A POWER ELECTRONICS COLD PLATE WITH A PARAMETRIC DESIGN STUDY**
Boris MAROVIC, *Mentor Graphics,* DE

10:30 – 11:50 C8: Electric Vehicles 303

Chairpersons: Maarten Messagie, Vrije Universiteit Brussel, BE
Bongsob SONG, Ajou University, KR

10:30 **RETROSPECTIVE OF EV TESTING BY CONSUMER REPORTS**
Gabriel SHENHAR, *Consumer Reports,* US

10:50 **UQM TECHNOLOGIES - INNOVATIVE SOLUTIONS FOR ELECTRIFYING VEHICLES**
Josh LEY, *UQM Technologies,* US

11:10 **POWERPLAZA EV TECHNOLOGY & EV PRODUCTS**
Lauren KWON, *Powerplaza.Co., Ltd.,* KR

10:30 – 11:50 D8: Plug-In Hybrid Electric Vehicles 304

Chairperson: Haiming XiE, Tsinghua University, CN

10:30 **DESIGN, MODELING, SIMULATION AND ANALYSIS FOR CONVERSION OF CONVENTIONAL TATA INDICA CAR INTO PLUG IN HYBRID ELECTRIC VEHICLE**

Varsha SHAH, *Sardar Vallabhai National Institute of Technolgy,* IN

10:50 **ENERGY EFFICIENCY EVALUATION OF A PLUG-IN HYBRID VEHICLE UNDER EUROPEAN PROCEDURE, WORLDWIDE HARMONIZED PROCEDURE AND ACTUAL USE**
Francois BADIN, *IFPEN,* FR

11:10 **ROUTE-BASED ENERGY MANAGEMENT FOR PHEVS: A SIMULATION FRAMEWORK FOR LARGE-SCALE EVALUATION**
Namdoo KIM, *Argonne National Laboratory,* US

10:30 – 11:50 E8: Standardization & Regulation / Public Policy & Promotion 305

Chairperson: Sang Kyu HWANG, KOTI (Korea Transport Institute), KR

10:30 **GUIDING INFRASTRUCTURE DEPLOYMENT: THE INVOLVEMENT OF INTERNATIONAL STANDARDIZATION**
Peter Van Den BOSSCHE, *Vrije Universiteit Brussel,* BE

10:50 **NOVEL LARGE SCALE SIMULATION PROCESS TO SUPPORT DOT'S CAFE MODELING SYSTEM**
Aymeric ROUSSEAU, *Argonne National Laboratory,* US

11:10 **LABORATORY ALIGNMENT PROCEDURE FOR IMPROVING REPRODUCIBILITY OF TYRE WET GRIP MEASUREMENT**
Kwangki JEON, *Korea Automotive Technology Institute,* KR

10:30 – 11:50 F8: Special Session of Local Government 306

Chairperson: TBD

10:30 **SEOUL CITY'S EV POLICY**
Hee-Eun KANG, *Air Quality Management Division, Seoul City,* KR

10:50 **GLOBAL MECCA FOR EV POWERED BY WIND, JEJU SPECIAL SELF-GOVERNING PROVINCIAL GOVERNMENT EV POLICY**
Jung Ho JANG, *Energy Industry Division, Jeju Special Self-Governing Province,* KR

Plenary Session 3

12:10 – 12:50 **Hall 6C**

Chairperson: TBD

12:10 **THE FUTURE OF URBAN MOBILITY IS ELECTRIC AND WIRELESS**
Anthony THOMSON, *Qualcomm Europe Inc.*, UK

12:30 **POWER SEMICONDUCTOR TECHNOLOGIES FOR THE ELECTRIFIED POWERTRAIN OF THE FUTURE**
Mark MUENZER, *Infineon Technologies AG*, DE

Closing Ceremony

12:50 – 13:40 **Hall 6C**

Dialogue Session 1

May 4 (Monday), 2015

Batteries & Energy Storage

DS1-01 **NECESSITY AND METHODS TO IMPROVE BATTERY LIFETIME ON SYSTEM LEVEL**
Susanne ROTHGANG, *RWTH Aachen University*, DE

DS1-02 **AN ANALYTICAL OPTIMAL SIZING METHOD FOR BATTERY–SUPERCAPACITOR POWERTRAIN INTERFACED WITH A BUCK-BOOST CONVERTER**
Li SUN, *University of Technology, Sydney*, AU

DS1-03 **THE EFFECT OF AN ADDITION OF CATALYST ON THE ELECTROCHEMICAL PERFORMANCE OF CATHODE MATERIALS FOR LITHIUM SECONDARY BATTERIES**
Jungbae LEE, *Hyundai Mobis*, KR

DS1-04 **BATTERY LIFE IMPACT OF VEHICLE-TO-GRID APPLICATION OF ELECTRIC VEHICLES**
Hajo RIBBERINK, *Natural Resources Canada*, CA

DS1-05 **DEVELOPMENT OF HYDROGEN STORAGE TANK USED FOR FUEL CELL ELECTRIC VECHICLE(FCEV) BY NUMERICAL ANALYSIS**
Dongsun LEE, *Hyundai Motor Group*, KR

DS1-06 **A COMPARATIVE STUDY OF DIFFERENT FAST CHARGING METHODOLOGIES FOR LITHIUM-ION BATTERIES BASED ON AGING PROCESS**
Mohamed Abdel MONEM, *Vrije Universiteit Brussel*, BE

DS1-07 **A STUDY ON THE STATE OF CHARGE ESTIMATION BASED ON INTERNAL RESISTANCE AND POWER COUNTING FOR LITHIUM ION BATTERY**
Ho Young PARK, *Hyundai Mobis*, KR

DS1-08 **COMPARING THE PERFORMANCES OF DIFFERENT ENERGY STORAGE CELLS FOR HYBRID ELECTRIC VEHICLE**
Dongxiang YAN, *China Agriculture University*, CN

DS1-09 **A MERGED METHOD BETWEEN THE DATA MINING AND THE WT FOR CHARACTERISTIC ANALYSIS OF LITHIUM IRON PHOSPHATE BATTERY**
Jonghoon KIM, *Chosun University*, KR

DS1-10 **EXPERIMENT-BASED ANALYSIS BETWEEN THE WAVELET TRANSFORM AND THE DISCRETE WAVELET PACKET TRANSFORM**
Jonghoon KIM, *Chosun University*, KR

DS1-11 **SOC ESTIMATION PERFORMANCE COMPARISON BASED ON THE EQUIVALENT CIRCUIT MODEL USING AN EKF IN COMMERCIAL LICOO2 AND LIFEPO4 CELLS**
Hyunjun LEE, *Soongsil University*, KR

DS1-13 **PEO/NASICON BASED HYBRID SOLID ELECTROLYTE FOR ALL SOLID-STATE LITHIUM BATTERY**
Yun-Chae JUNG, *Hanyang University*, KR

DS1-14 **ELECTROCHEMICAL PERFORMANCES OF GRAPHITE AND LINI0.6CO0.2MN0.2O2 CELLS AT LOW TEMPERATURE**
Chil-Hoon DOH, *KERI(Korea Electro-technology Research Institute)*, KR

DS1-15 **A STUDY ON THE AMOUNT OF AVAILABLE ENERGY ACCORDING TO THE STATE OF INTERNAL IMPEDANCE OF A BATTERY FOR VEHICLES**
Byoung-Hoon KIM, *Korea Automotive Technology Institute*, KR

DS1-16 **SOC ESTIMATION ALGORITHM FOR THE MULTIPLE LITHIUM-ION BATTERIES**
Kim Hung NGUYEN, *Soongsil University*, KR

DS1-17 **HYBRID ELECTRIC VEHICLE CONTROL STRATEGY OPTIMIZATION BY INCORPORATING REDUCED ORDER BATTERY ELECTROCHEMICAL MODEL**

Chengliang YIN, *Shanghai Jiao Tong University*, CN

DS1-18 **TEMPERATURE MEASUREMENT OF LARGE FORMAT POUCH CELLS WITH IMPEDANCE SPECTROSCOPY**
Reinhold KOCH, *TUM CREATE*, SG

DS1-19 **BATTERY DIAGNOSTIC SYSTEM AND COMPLEX IMPEDANCE MEASUREMENT ALGORITHM**
Andre THUNOT, *Cambridge University*, UK

DS1-21 **DEVELOPEMENT OF ACCELERATED CYCLE LIFE TEST METHOD FOR (HYBRID) ELECTRIC VEHICLE BATTERY MODULE**
Jungeun HYUN, *Korea Automotive Technology Institute*, KR

DS1-22 **PREDICTION OF ELECTROCHEMICAL PROCESS INSIDE LITHIUM-ION BATTERY BASED ON SIMILARITY THEORY**
Cheng HONGZHENG, *Tongji University*, CN

DS1-23 **INCOBAT INNOVATIVE AND COST EFFICIENT MANAGEMENT SYSTEM FOR NEXT GENERATION HIGH VOLTAGE BATTERIES FOR AUTOMOTIVE APPLICATIONS**
Bartek KRAS, *Impact Clean Power Technology SA*, PL

DS1-24 **PERFORMANCE CHARACTERISTICS OF A HEAT PUMP FOR DEHUMIDIFYING OF A CABIN IN ELECTRIC VEHICLES**
Jae Hwan AHN , *Korea University*, KR

DS1-25 **EFFICIENT FAST-CHARGING STRATEGIES FOR LI-ION BATTERIES**
José Luis Antuña ALBUERNE, *University of Oviedo*, ES

DS1-92 **DESIGN AND SIMULATION OF LIQUID-COOLING PLATES FOR THERMAL MANAGEMENT OF EV BATTERIES**
Zechang SUN, *Clean Automotive Engineering Center, Tongji University*, CN

Charging & Infrastructure

DS1-26 **EV CHARGER MODELING BASED ON IEC 61850 STANDARDS**
Seongjoon LEE, *KERI(Korea Electro-technology Research Institute)*, KR

DS1-27 **TRANSITION TO SOFT INFRASTRUCTURE**
Sunggyoo GEO, *Geo-Line Co., Ltd.*, KR

DS1-28 **E-MOBILITY IN CAR PARKS – GUIDELINES FOR CHARGING INFRASTRUCTURE EXPANSION PLANNING AND OPERATION BASED ON STOCHASTIC SIMULATIONS**
Martin UHRIG, *Karlsruhe Institute of Technology*, DE

DS1-29 **HIGH POWER COMPACT CONTACTLESS CHARGING SYSTEM.**
Hiroyuki KISHI, *Technova Inc.,* JP

DS1-30 **CONTACTLESS ELECTRIC VEHICLE CHARGING – A COMPARATIVE COIL DESIGN ANALYSIS**
Benjamin KLAUS, *Karlsruhe Institute of Technology*, DE

DS1-31 **FAST CHARGING OF ELECTRIC VEHICLE, NEW SOLUTIONS AND CONCEPTS**
Karl VESTIN, *Lithium Balance A/S*, SE

DS1-32 **A STUDY OF 6.6KW ON BOARD CHARGER FOR ELECTRIC VEHICLE**
Youngsoo DOW, *Hyundai Mobis*, KR

DS1-33 **CONSIDERATION OF BATTERY DEGRADATION AND CHARGING INFRASTRUCTURE THROUGH LONG-TERM USE EXPERIENCE OF AN ELECTRIC VEHICLE**
Yoshinori KONDO, *National Institute for Environmental Studies, Ministry of the Environment of Japan*, JP

DS1-34 **ELECTRIC CITY BUS AND INFRASTRUCTURE DEMONSTRATION ENVIRONMENT IN ESPOO, FINLAND**
Juhani LAURIKKO, *VTT Technical Research Centre of Finland*, FI

DS1-35 **FAST IN CHARGE PROJECT: INNOVATIVE FAST INDUCTIVE CHARGING SOLUTION FOR ELECTRIC VEHICLES. MECHANICAL, ELECTRICAL AND CONTROL INTEGRATION**
José Luis CALVO, *Tecnalia*, ES

DS1-36 **CHARGING CHOICES OF SMALL-BATTERY PHEV DRIVERS USING INSTRUMENTED VEHICLE DATA**
Don MACKENZIE, *University of Washington*, US

DS1-37 **IMPACT OF FAST CHARGING ON LIFE OF EV BATTERIES**
Ahmad PESARAN, *National Renewable Energy Laboratory*, US

DS1-38 **A LINK CAPACITOR DESIGN FOR ON-BOARD CHARGER IN ELECTRIC VEHICLES**
Dongyoon NOH, *Mando Corporation*, KR

DS1-39 **TEST CASES FOR AC PORTABLE HOME CHARGER OF ELECTRICAL VEHICLE**
SungKi HWANG, *Kyungshin Corp.*, KR

DS1-40 **COEXISTENCE TEST BETWEEN HS-PLC AND HPGP IN KOREA AMI-EVSE**
Chagneun PARK, *KERI(Korea Electro-technology Research Institute)*, KR

DS1-41 **COMMUNICATION PROTOCOL BETWEEN EV CHARGER AND SMART CHARGER OPERATION SYSTEM**
Seung-Ho HAN, *KEPCO Research Institute*, KR

DS1-42 **FOREIGN METAL DETECTION BY COIL IMPEDANCE FOR EV WIRELESS CHARGING SYSTEM**
Ting-En LEE, *Automotive Research & Testing Center*, TW

DS1-43 **INRUSH CURRENT REDUCTION METHOD ANALYSIS IN ELECTRIC VEHICLE CHARGING**
Kyoungjin KIM, *RenaultSamsung Motors*, KR

Electric Motors & Generators

DS1-44 **COMPARISON OF THERMAL PERFORMANCE BETWEEN DIRECT COIL COOLING AND WATER JACKET COOLING FOR ELECTRIC TRACTION MOTOR BASED ON LUMPED PARAMETER THERMAL NETWORK AND EXPERIMENTATION**
Zhengyu LIU, *Robert Bosch GmbH*, DE

DS1-45 **IDENTIFYING DYNAMIC CHARACTERISTICS OF THE TRACTION MOTOR HOUSING FOR THE NOISE REDUCTION OF THE ELECTRIC VEHICLE**
Jongchan PARK, *Hyundai Mobis*, KR

DS1-46 **PATENT LANDSCAPE OF ELECTRIC MACHINE TECHNOLOGIES FOR ELECTRIC MOBILITY**
Enver Doruk ÖZDEMIR, *German Aerospace Center - Institute of Vehicle Concepts*, DE

DS1-47 **THE DESIGN METHOD OF TRACTION MOTOR INSULATION SYSTEM FOR ECO-FRIENDLY VEHICLES**
Yongho KIM, *Hyundai Mobis*, KR

DS1-48 **ANALYSIS ON THE HIGH-SPEED PERMANENT MAGNET SYNCHRONOUS MOTOR FOR FCEV AIR COMPRESSOR**
Ji-Hwan CHOI, *Hyundai Mobis*, KR

DS1-49 **DESIGN OF THE END-COIL STRUCTURE WITH SQUARE CONDUCTOR FOR THE AUTOMOBILE ISG**
Se Hyun RHYU, *Korea Electronics Technology Institute*, KR

DS1-50 **ELECTROMAGNETIC EQUIVALENT CIRCLE MODELING OF INTERIOR PERMANENT MAGNET SYNCHRONOUS MACHINE USING MODELICA**
Xueping CHEN, *Tongji University*, CN

DS1-51 **MAGNETIC EQUIVALENT CIRCUIT MODEL OF INTERIOR PERMANENT-MAGNET SYNCHRONOUS MACHINE CONSIDERING MAGNETIC SATURATION**
Zaimin ZHONG, *Tongji University*, CN

DS1-52 **STUDY ON PERMANENT MAGNET TEMPERATURE ESTIMATION OF PMSM FOR EV TRACTION**

Suyeon CHO, *Korea Automotive Technology Institute*, KR

DS1-53 **MAGNETIC SATURATION AND IRON LOSS INFLUENCE ON MAX TORQUE PER AMPERE CURRENT VECTOR VARIATION OF SYNCHRONOUS RELUCTANCE MACHINE**
Taechul JEONG, *Hanyang University*, KR

DS1-54 **TORQUE RIPPLE OPTIMIZATION OF IPM**
Seil YANG, *GM Korea*, KR

DS1-55 **IMPROVEMENT OF BACK-EMF WAVEFORM BY ADJUSTING POLE ANGLE IN SURFACE-MOUNTED PERMANENT MAGNET SYNCHRONOUS MACHINE TYPE GENERATOR FOR FLY-WHEEL**
Young-Jin SHIN, *Hanyang University*, KR

DS1-56 **A STUDY TO DETERMINE DESIGN PARAMETERS WITH STATISTICAL METHODS CONSIDERING COGGING TORQUE OF EPS MOTORS**
Soohwan PARK, *Hanyang University*, KR

DS1-57 **COGGING TORQUE REDUCTION IN SURFACE-MOUNTED PERMANENT MAGNET SYNCHRONOUS MOTOR BY AXIAL POLE PAIRING**
Jung Pyo HONG, *Hanyang University*, KR

DS1-58 **AN INTEGRATED PM MAGNETIC-GEARED MACHINE FOR HYBRID ELECTRIC VEHICLES**
K. T. CHAU, *The University of Hong Kong*, HK

DS1-59 **FABRICATION STUDY OF LAMINATED STATOR FOR AN E-BIKE AXIAL FLUX ELECTRIC MACHINE**
Chau-shin JANG, *Industrial Technology Research Institute*, TW

DS1-60 **DEVELOPMENT AND PERFORMANCE INVESTIGATION OF 60KW INDUCTION MOTOR WITH COPPER DIE-CASTING ROTOR FOR ELECTRIC VEHICLE PROPULSION APPLICATIONS**
Yondo CHUN, *KERI(Korea Electro-technology Research Institute),* KR

DS1-61 **INTELLIGENT STATOR CAGE WINDING FOR AUTOMOTIVE TRACTION ELECTRIC MACHINES**
Dieter GERLING, *Universitat der Bundeswehr Munchen*, DE

DS1-62 **ROTATING TRANSFORMER FOR A WOUND ROTOR SYNCHRONOUS MOTOR**
Jiyoung LEE, *KERI(Korea Electro-technology Research Institute),* KR

DS1-63 **MAGNETIC CORE STRUCTURE DESIGN CONSIDERING CONDUCTOR-OCCUPYING RATIO**
Eui Chun LEE, *Korea Institute of Industrial Technology*, KR

DS1-64 **CURRENT CONTROL STRATEGY OF WOUND ROTOR SYNCHRONOUS MACHINE WITH LOSSES CONSIDERATION**
Qi WANG, *Kookmin University*, KR

DS1-65 **COMPARISON OF IPM AND SPM MOTORS USING FERRITE MAGNETS FOR LOW-VOLTAGE TRACTION SYSTEMS**
Yonghoon KIM, *Korea Institute of Industrial Technology*, KR

DS1-66 **DESIGN AND THERMAL ANALYSIS OF WHEEL HUB MOTORS OF ELECTRIC VEHICLES USING ANALYTICAL AND CFD METHODS**
Jun Ho LEE, *Korea Automotive Technology Institute*, KR

Power Electronic Systems

DS1-67 **EXPERIMENTAL RESEARCH ON PERFORMANCE OF TRACTION MOTOR FOR ELECTRIC VEHICLE**
Jin-Hong KIM, *Korea Electronics Technology Institute*, KR

DS1-68 **SHIELDING PERFORMANCE AND MEASUREMENT METHOD OF HIGH-VOLTAGE WIRING HARNESSES**
Yoshio MIZUTANI, A*utoNetworks Technologies, Ltd. (SUMITOMO ELECTRIC Group)*, JP

DS1-69 **A DEVELOPMENT OF FORWARD DC-DC CONVERTER WITH ACTIVE-CLAMP FOR SMALL**

HYBRID ELECTRIC VEHICLE
Hyojin BANG, *Hyundai Mobis*, KR

DS1-70 **EVALUATION OF A 600V 450A HYBRID SIC POWER MODULE**
Xuhui WEN, *Institute of Electric Engineering, CAS*, CN

DS1-71 **NOVEL SIC JUNCTION BARRIER SCHOTTKY DIODE STRUCTURE FOR EFFICIENCY IMPROVEMENT OF EV INVERTER**
Dae Hwan CHUN, *Hyundai Motor Group*, KR

DS1-72 **EXPERIMENTAL MODELING AND DIRECT DIGITAL CONTROL OF PMSM**
Kiyong LEE, *Chungbuk National University*, KR

DS1-73 **DESIGN OPTIMIZATION OF BULK CAPACITOR**
Hyoungmin KIM, *GM Korea*, KR

DS1-74 **POWER FACTOR CORRECTION IN ON-BOARD CHARGER**
Suhan WOO, *GM Korea*, KR

DS1-75 **DEVELOPMENT OF HIGH EFFICIENCY BI-DIRECTIONAL DC/DC CONVERTER FOR 48V-12V DUAL VOLTAGE SYSTEM IN VEHICLE**
Hoonsung SUNG, *Kyungshin Corp.*, KR

DS1-76 **TECHNOLOGY OF LOAD MANAGEMENT FOR ENHANCEMENT OF POWER SAFETY IN VEHICLES**
Jong-Min PARK, *Taesung Electro-Circuit Systems*, KR

DS1-77 **ANALYSIS OF POWER MODULE RELIABILITY EXPOSED TO REAL OPERATION CONDITIONS OBSERVED IN ELECTRIFIED VEHICLES**
Minki KIM, *Hanyang University*, KR

Embedded Control Systems

DS1-78 **INTEGRATED CIRCUIT FOR BATTERY MANAGEMENT SYSTEMS IN ISO26262 COMPLIANT VEHICLES**
Karl VESTIN, *Lithium Balance A/S*, SE

DS1-79 **EARLY-STAGE RESOURCE EVALUATION METHOD FOR ECU INTEGRATION OF HYBRID ELECTRIC VEHICLES**
Jaesung CHUNG, *Hanyang University*, KR

DS1-80 **A STUDY ON CLAMPING FORCE ESTIMATION OF EMB FOR FUEL-CELL VEHICLE USING SLIDING MODE OBSERVER**
Kangseok LEE, *Changwon National Univ.*, KR

Propulsion Systems & Subsystems

DS1-81 **PRACTICAL AC MOTOR CONTROLLER DESIGN SOLUTIONS OF HIGH CURRENT CONTROL FOR 5~15KW PARTICULAR ELECTRIC VEHICLES**
Shin-Hung CHANG, *Industrial Technology Research Institute*, TW

DS1-82 **INVESTIGATION ON IGBT FAILURE EFFECTS OF EV/HEV INVERTER USING FAULT INSERTION HIL TESTING**
Ping-Lun LI, *Industrial Technology Research Institute*, TW

DS1-83 **A NOVEL DTC METHOD FOR SURFACE PMSM USED IN ELECTRIC VEHICLE**
Yaohua LI, *Chang'an University*, CN

DS1-84 **DYNAMIC ANALYSIS ON A BELT DRIVING STARTER AND GENERATOR SYSTEM**
Zhichao HOU, *Tsinghua University*, CN

DS1-85 **OPTIMAL TORQUE DISTRIBUTION STRATEGY FOR A FOUR MOTORIZED WHEELS ELECTRIC VEHICLE**
Xudong ZHANG, *Technical University of Berlin*, DE

DS1-86 **INTEGRATED ELECTRIC VEHICLE MONITORING SYSTEM**
Seongjoon LEE, *KERI(Korea Electro-technology Research Institute),* KR

Heating & Cooling Systems

DS1-87 **AN ENERGY-SAVING THERMOSTAT CONTROLLER FOR ELECTRIC VEHICLE AIR-CONDITIONING SYSTEM**
Po-Hsu LIN, *Automotive Research & Testing Center*, TW

DS1-88 **THERMAL MANAGEMENT OF DENSELY-PACKED EV BATTERY SET**
Jin LIWEN, *Xi'an Jiaotong University*, CN

DS1-89 **STUDY OF HEATING SYSTEM ON THE BATTERY MODULE FOR PHEV**
Nam Il KIM, *Korea Automotive Technology Institute*, KR

DS1-90 **EXPERIMENTAL STUDY ON HEATING PERFORMANCE CHARACTERISTICS FOR AIR-SOURCED HEAT PUMP**
Hoseong LEE, *Korea Automotive Technology Institute*, KR

Auxiliary Components

DS1-91 **DEVELOPMENT OF EV MODEL MOUNTED HILS FOR THE EVALUATION OF THE DYNAMIC CHARACTERISTIC OF ELECTRIFIED COMPONENT MOTOR IN EV/HEVS**
Yongtae KIM, *Korea Automotive Technology Institute*, KR

Dialogue Session 2

May 5 (Tuesday), 2015

Fuel Cells & Fuel Cell Systems

DS2-1 **A STUDY ON THE PREDICTION TECHNIQUE OF THE THERMAL MANAGEMENT SYSTEM PERFORMANCE AT VARIOUS STACK OPERATING CONDITIONS IN A FUEL CELL VEHICLE**
Youngbok LIM, *Hyundai Mobis*, KR

Fuel Cell Vehicles

DS2-2 **CENTRIFUGAL AIR COMPRESSOR FOR FUEL CELL ELECTRIC VEHICLE**
Kyungseok CHO, *Halla Visteon Climate Control Corp*., KR

DS2-3 **A STUDY OF METHOD TO SOLVE COLD-START PROBLEM IN FUEL CELL ELECTRIC VEHICLE**
Yongshik CHONG, *Hyundai Mobis*, KR

Electric Vehicles

DS2-4 **EV (ELECTRIC VEHICLE) SHARING DEMAND ESTIMATION -A CASE STUDY OF BEIJING, CHINA-**
Taekwan YOON, *LG CNS*, KR

DS2-5 **EV (ELECTRIC VEHICLE) FLEET SIZE AND COMPOSITION OPTIMIZATION BASED ON DEMAND SATISFACTION AND TOTAL COSTS MINIMIZATION**
Taekwan YOON, *LG CNS*, KR

DS2-6 **ENERGY EFFICIENCY AND FUEL ECONOMY ANALYSIS OF A PARALLEL HYBRID ELECTRIC BUS IN DIFFERENT CHINESE URBAN DRIVING CYCLES**
Jiuyu DU, *State Key Laboratory of Automotive Safety and Energy, Tsinghua University*, CN

DS2-7 **NEW TEST BENCH FOR VEHICLE POWER NETWORK WITH OUTSTANDING ACCURACY, RESOLUTION AND DATA RATE**
Dmytro BILYI, *University of Federal Defense Munich*, DE

DS2-8 **A METHODOLOGY TO DERIVE MTPA CONTROL TRAJECTORY FOR XEV TRACTION IPMS=SM**
Weizhe QIAN, *Infineon Integrated Circuit (Beijing) Co Ltd*, CN

DS2-9 **WILL SUB-100 CONTINUE TO DOMINATE THE U.S. BATTERY ELECTRIC VEHICLES MARKET?**
Zhenhong LIN, *Oak Ridge National Laboratory,* US

DS2-10 **SOLVING THE RANGE CHALLENGE? RANGE NEEDS VERSUS RANGE PREFERENCES FOR BATTERY ELECTRIC VEHICLES WITH RANGE EXTENDER**
Thomas FRANKE, *Technische Universitaet Chemnitz*, DE

DS2-11 **AN ENERGY MANAGEMENT STRATEGY OF HYBRID ENERGY STORAGE SYSTEMS FOR ELECTRIC VEHICLES**
Chunhua ZHENG, *Shenzhen Institutes of Advanced Technology*, CN

DS2-12 **LIFE-CYCLE ENERGY AND CARBON FOOTPRINTS OF ELECTRIC CARS UNDER BEIJING REAL-WORLD DRIVING PATTERNS**
Hewu WANG, *Tsinghua University*, CN

DS2-13 **COMPARISON OF MCT AND SCT MODE BASED ON THE VEHICLE PARAMETERS IN INFLUENCING THE BEV DRIVING RANGE.**
Changkyu CHOI, *GM Korea,* KR

DS2-15 **ELECTRIC VEHICLES, ENVIRONMENT AND ELECTRIC ENERGY IN KOREA**
Geunhie RIM, *KERI(Korea Electro-technology Research Institute),* KR

DS2-16 **A FULL ELECTRIC VEHICLE 4WD TYPE**
Danut Gabriel MARINESCU, *University of Pitesti*, RO

DS2-17 **DESIRED SLIP RATIO ESTIMATION AND TRACKING USING FUZZY OBSERVER FOR IN-WHEEL**

EV
Jongmoo KIM, *KERI(Korea Electro-technology Research Institute)*, KR

DS2-18 **COMPARISON OF ENERGY CONSUMPTION IN ELECTRIC VEHICLE EQUIPPED WITH SINGLE- OR MULTI-SPEED SYSTEM OF POWER TRANSMISSION**
Jakub BERNATT*, Institute of Electrical Drives & Machines KOMEL*, PL

DS2-19 **IMPLICATIONS OF CHANGES IN THE ELECTRICITY MIX FOR THE ENVIRONMENTAL PERFORMANCE OF BATTERY ELECTRIC VEHICLES IN BELGIUM**
Surendraprabu RANGARAJU, *Vrije Universiteit Brussel*, BE

DS2-20 **NOISE SOURCE ANALYSIS AND REDUCTION OF INDUCTION MOTOR FOR ELECTRIC VEHICLE**
Jung Pyo HONG, *Hanyang University*, KR

DS2-21 **TIRE-ROAD FRICTION ESTIMATION BASED ON FREQUENCY CHARACTERISTICS OF IN-WHEEL DRIVE SYSTEM**
Yu-Gong LUO, *Tsinghua University*, CN

DS2-22 **A STUDY OF ALLOWABLE BRAKING TORQUE OFFSET IN THE CASE OF SINGLE EMB ACTUATOR FAILURE**
Ji In PARK, *Korea Automotive Technology Institute*, KR

DS2-23 **COMPARISON OF HYBRID-EXCITATION FAULT-TOLERANT IN-WHEEL MOTOR DRIVES FOR ELECTRIC VEHICLES**
T. W CHING, *University of Macau* , MO

DS2-24 **INFLUENCE OF THE EXTRA WHEEL MASS OF ELECTRIC BIKES**
Zhichao HOU, *Tsinghua University*, CN

DS2-25 **REAL-TIME OPTIMAL ENERGY MANAGEMENT STRATEGY FOR RANGE-EXTENDED ELECTRIC BUS IN HARBIN URBAN BUS DRIVING CYCLE**
Jingfu CHEN, *Tsinghua University*, CN

DS2-26 **STATISTICAL CHARACTERIZATION OF MEDIUM-DUTY ELECTRIC VEHICLE DRIVE CYCLES**
Robert PROHASKA, *National Renewable Energy Laboratory*, US

DS2-27 **FEATURES OF OPERATION OF ELECTROMOBILE TRANSPORT IN THE CONDITIONS OF RUSSIA**
Kirill KARPUKHIN, *Federal State Unitary Enterprise NAMI*, RU

DS2-28 **CALCULATION OF INSTALLATION UNITS OF PUBLIC FAST CHARGING INFRA IN FUTURE AND ANALYSIS OF IMPACT ON THE POWER CONSUMPTION AMOUNT ACCORDING TO CHARGING BEHAVIOR OF ELECTRIC VEHICLES DURING THE INITIAL STAGE IN KOREA**
Hyungmok YOO, *KOTI (Korea Transport Institute),* KR

DS2-29 **INDEPENDENT AND INTEGRATED TORQUE CONTROL OF 4-WHEEL DRIVE ELECTRIC VEHICLE FOR AUTOMATED DRIVING**
In-Soo SUH, *KAIST*, KR

DS2-30 **CONVERTING MOTORISED SAILING YACHTS TO CARBON-NEUTRAL VESSELS**
Evan Lowell / Eric Kin-Ming Yee, *National University of Singapore*, SG

DS2-31 **MULTIFUNCTIONAL SOLAR CHARGING STATION FOR ELECTRIC VEHICLES**
Joerg Dieter WEIGL, *National University of Singapore*, DE

DS2-32 **GENETIC ALGORITHMS BASED OPTIMAL ENERGY MANAGEMENT STRATEGY FOR FOUR-WHEEL INDEPENDENT DRIVE ELECTRIC VEHICLES**
Xiaoshuai XIN, *University of Electronic Science and Technology of China*, CN

DS2-33 **ANALYSIS OF ELECTRIC CITY BUS PERFORMANCE BASED ON TRANSIENT TEST OF ELECTRIC DRIVE SYSTEM CONSIDERING REAL-WORLD DRIVIING CYCLES**
Hochang JUNG, *KATECH, Korea Automotive Technology Institute*, KR

DS2-34 **ANALYSIS OF ENERGY CONSUMPTION PERFORMANCE FOR ELECTRIC VEHICLE CONSIDERING TRANSMISSION SHIFTING PATTERN**

Hochang JUNG, *KATECH, Korea Automotive Technology Institute*, KR

DS2-80 **REMAINING DRIVING RANGE ESTIMATION FOR ELECTRIC VEHICLES BASED ON AN ADVANCED BATTERY RESIDUAL ENERGY MODEL**
Guangming LIU, *Tsinghua University*, CN

Hybrid Electric Vehicles

DS2-36 **STUDY ON MULTI-OBJECTIVE COOPERATIVE AND OPTIMIZATION CONTROL METHOD FOR HYBRID BUS WITH DUAL-PLANETARY STRUCTURE**
Zhiguo KONG, *China Automotive Technology and Research Center*, CN

DS2-37 **NEW EXPERIMENTAL METHOD FOR SWITCHIING NOISE OF MOTORS**
Hyunsu KIM, *Hyundai Motor Group*, KR

DS2-38 **LOSS ANALYSIS AND THERMAL DESIGN IN 48V MILD HYBRID DC-DC CONVERTER**
Deok-Kwan CHOI, *Hyundai Mobis*, KR

DS2-39 **DESIGN SPACE EXPLORATION AND HYBRIDIZATION OF THE KIIRA-EV SMACK**
Richard MADANDA, *Electric and Hybrid Vehicles*, NL

DS2-40 **CHARACTERISTIC ANALYSIS OF THE SELF-EXCITED EDDY CURRENT BRAKE ACCORDING TO THE PARAMETER VARIATIONS**
Taechul JEONG, *Hanyang University*, KR

DS2-41 **ECONOMIC HYBRID TRANSMISSION SYSTEM USING CLUTCHLESS GEARED MANUAL TRANSMISSION**
Huiun SON, *KAIST*, KR

DS2-42 **AN EFFICIENCY-BASED ENERGY MANAGEMENT STRATEGY FOR SERIES HYBRID ELECTRIC VEHICLES**
Soonkyu JEONG, *Agency for Defense Development*, KR

DS2-43 **EFFECT OF DRIVING PATTERN PARAMETERS ON FUEL-ECONOMY FOR DIESEL AND HYBRID ELECTRIC CITY BUSES**
Ming CHI, *Tsinghua University*, CN

DS2-44 **DESIGN OF A HIGH EFFICIENCY CONTROLLER OF A BI-DIRECTIONAL DC-DC CONVERTER FOR 48V MILD HEV**
Seongjun LEE, *Hyundai Mobis*, KR

DS2-45 **SIMULINK MODELING FOR HYBRID VEHICLE DYNAMIC CHARACTERISTICS**
Jung Pyo HONG, *Hanyang University*, KR

DS2-46 **FUEL SAVING OF POWER TRAIN MODELING IN THE PARALLEL HYBRID TRACTOR**
Hyeonseop YI, *Seoul National University*, KR

DS2-47 **PARAMETER DESIGN OF REGENERATIVE BRAKING STRATEGY AND BATTERY RANGE OF USE OF ELECTRIC VEHICLE USING THE OPTIMIZATION TECHNIQUE**
Kiyoung KIM, *Seoul National University*, KR

DS2-48 **MULTI-OBJECTIVE OPTIMIZATION OF A MULTI-MODE POWER-SPLIT HYBRID ELECTRIC VEHICLE CONSIDERING BATTERY DEGRADATION**
Chengliang YIN, *Shanghai Jiao Tong University*, CN

DS2-49 **DEVELOPMENT OF FUEL EFFICIENCY IMPROVEMENT ALGORITHM FOR HYBRID ELECTRIC VEHICLE BASED ON THE ADAS SENSORS**
Jaejoon KWON, *Kookmin University*, KR

DS2-50 **STUDY ON OPTIMIZATION OF PARALLEL HYBRID ELECTRIC ASSIST CONTROL STRATEGY**
Zhenpo WANG, *Beijing Institute of Technology*, CN

DS2-51 **FUEL ECONOMY IMPROVEMENT OF AN ELECTRIC ALL WHEEL DRIVE SYSTEM (E-AWD)**

Sangjae LEE, *Hyundai Motor Group*, KR

Plug-In Hybrid Electric Vehicles

DS2-52 **INVESTIGATION OF ENERGY EFFICIENCY OF HYBRID BIMODAL VEHICLE**
Jakub BERNATT, *Institute of Electrical Drives & Machines KOMEL*, PL

DS2-53 **A NOVEL COORDINATION CONTROL OF PLUG-IN 4WD HYBRID ELECTRIC VEHICLE USING FUZZY PID**
Lihong QIU, *Hefei University of Technology*, CN

DS2-54 **EVALUATION OF THE PLUG-IN ELECTRIC VEHICLES TECHNOLOGICAL ROADMAP IN CHINA**
Jiuyu DU, *State Key Laboratory of Automotive Safety and Energy, Tsinghua University,* CN

DS2-55 **CONTROL STRATEGY TO IMPROVE FUEL ECONOMY FOR PLUG-IN HYBRID ELECTRIC VEHICLE CONSIDERING DEGREE OF DRIVER AGGRESSION**
Jingyu CHOI, *Sungkyunkwan University*, KR

DS2-56 **ENERGY MANAGEMENT STRATEGY CONSIDERING CABIN HEATING FOR PLUG-IN HYBRID ELECTRIC VEHICLE**
Sunyoung PARK, *Sungkyunkwan University*, KR

DS2-57 **CONTROL STRATEGY WITH THE SLOPE OF SOC TRAJECTORY FOR PLUG-IN DIESEL HYBRID ELECTRIC VEHICLE WITH DUAL CLUTCH TRANSMISSION**
Kyuhyun SIM, *Sungkyunkwan University*, KR

DS2-58 **IMPACT OF ELECTRIC VEHICLES IN SIZING THE POWER TRANSFORMER IN MICRO-GRID SYSTEM**
Paul CODANI, *PSA Peugeot Citroën*, FR

DS2-59 **DRIVING PATTERN PREDICTION MODEL FOR HYBRID ELECTRIC BUSES BASED ON READL-WORLD DRIVING DATA**
Jing WANG, *Tsinghua University*, CN

Urban Electric Mobility

DS2-60 **AUTOBIKES: AUTONOMOUS ELECTRIC BICYCLES FOR FIRST AND LAST-MILE MOBILITY ON DEMAND**
Selvasurendhiran M. SUBRAMANIAN, *Singapore University of Technology and Design*, SG

DS2-61 **DESIGN OF A NOVEL HYBRID ELECTRIC BICYCLE**
Youssef MAKARI, *University of Technology, Sydney*, AU

DS2-62 **ELECTRIC VEHICLE USER MOBILITY ANALYSIS WITH DASHBOARD CAMERA IN JEJU ISLAND, KOREA**
Sang Kyu HWANG, *KOTI (Korea Transport Institute)*, KR

DS2-63 **NOVEL PROPULSION & ENERGY RECHARGE ARCHITECTURES FOR URBAN VEHICLES**
Yongsheng HE, *General Motors R&D*, US

DS2-64 **A TOOL FOR WELL-TO-WHEELS EVALUATION OF ALTERNATIVE PUBLIC TRANSPORT MEANS.**
Carlo VILLANTE, *University of L'Aquila*, IT

Public Policy & Promotion

DS2-65 **A “LIVING LABORATORY” FOR ELECTRIC MOBILITY IN THE UNITED STATES**
Jeff ALLEN, *Drive Oregon*, US

DS2-66 **SUPPORTIVE POLICY ANALYSIS FOR PROMOTING ELECTRIC VEHICLE PRODUCTS IN BEIJING**
Jingjing QU, *Tsinghua University*, CN

DS2-67 **SYNERGY BETWEEN ELECTRIC VEHICLES AND PHOTOVOLTAIC INSTALLATIONS IN**

BELGIUM
Bram ROTTHIER, *KU Leuven*, BE

DS2-68 **THE COUNCIL GOING ELECTRIC**
Harm-Jan IDEMA, *APPM*, NL

DS2-69 **SURVEYING THE CHASM: INFLUENCES ON THE MARKET DIFFUSION OF ELECTRIC VEHICLES**
David BEETON, *Urban Foresight Ltd.,* UK

DS2-70 **THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT ' S (BAAQMD) EV PROJECT – MOVING FORM EARLY APOTION TO THE MASS MARKET**
Jack BROADBENT, *Bay Area Air Quality Management District,* US

DS2-71 **SHOWCASE ELECTRIC MOBILITY GERMANY: KEY ASPECTS OF THE EVALUATING AND RESEARCH ACTIVITIES**
Sven LIERZER, *BridgingIT GmbH,* DE

DS2-72 **DRIVING AND CHARGING PATTERNS OF ELECTRIC VEHICLE CUSTOMER FOR PRIVATE USE IN KOREA**
Jiyoung PARK, *KOTI (Korea Transport Institute),* KR

Introduction, Demonstration & Marketing

DS2-73 **THE CHOICE OF BATTERY ELECTRIC VEHICLES FOR URBAN LOGISTICS: A CONJOINT BASED CHOICE ANALYSIS**
Philippe LEBEAU, *Vrije Universiteit Brussel*, BE

DS2-74 **A DEMONSTRATION OF THE PERFORMANCE OF S2G (SHIP TO GRID) SYSTEM IN A DETACHED FISHING ISLAND**
Shigeyuki MINAMI, *Osaka City University*, JP

DS2-75 **ELECTRIC BUS WITH A BATTERY EXCHANGE SYSTEM**
Woongchul CHOI, *Kookmin University*, KR

DS2-76 **A STUDY OF DRIVING RANGE ESTIMATION FOR CITY ELECTRIC BUSES BASED ON TAIWAN EV PILOT RUN PROJECT**
Wen-Hsien HSU, *ARTC*, TW

DS2-78 **ANALYSIS OF RESPONSE OF CHINA NEW ENERGY VEHICLE MARKETS TO GOVERNMENT POLICIES**
Hong SHI, *State Key Laboratory of Automotive Safety and Energy, Tsinghua University*, CN

DS2-79 **LESSONS LEARNED FROM DUTCH PILOTS IN E-DISTRIBUTION**
Adrie SPRUIJT, *University of Applied Science Rotterdam*, NL

Standardization & Regulation

DS2-77 **POWER RATING OF HYBRID ELECTRIC VEHICLES FOR VEHICLE CLASSIFICATION**
Dongseok CHOI, *KATR*I, KR