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SESSION 2B: DISTRIBUTION NETWORKS I

11:40 – 13:30 | 14 October 2019 | Redwood B | Session Chair: P.-P. Schierhorn (Energynautics, Germany)

- **Fundamentals for Planning and Operation of Urban Distribution Power Systems with Integration of Electromobility and Heating Sector**
  S. A. Ali, P. Wintzek, F. Möhrke, M. Zdrallek (University of Wuppertal, Germany), J. Monscheidt, X. Yan, B. Gemsjäger, A. Slupinski (Power Technologies International - Siemens AG, Germany) (Submission-ID EMOB19-209)
- **Methodology for Simulation of Large Distribution Grids with Dynamic Generation of Load Profiles**
  M. Müller, J. Reinhard, T. Estermann (Forschungsstelle für Energiewirtschaft (FfE), Germany (Submission-ID EMOB19-41)
- **Electric Vehicle and Heat Pump Hosting Capacity Assessment for a German 25,000-noded Distribution Network**
  L. Hülsmann, T. Schlößer, E. Tröster (Energynautics, Germany), M. Koch, U. Ohl (EWR Netz, Germany) (Submission-ID EMOB19-276)
- **Impact of High Penetration of Electric Vehicles, Heat Pumps and Photovoltaic Generation on Distribution Grids – An Analysis of a German Case**
  T. Mu, D. Bekasow, **P. Hensel** (RZVN Wehr, Germany) (Submission-ID EMOB19-103)

13:00 – 13:30 **Discussions**

SESSION 2C: MODELLING ASPECTS

11:40 – 13:30 | 14 October 2019 | Redwood C | Session Chair: J. Charles Smith (ESIG, USA)

- **Agent Based Coordination Mechanisms for Grid Serving Control of Charging Stations**
  M. Ludwig, S. Azad, J. Mehlich, F. Paulat, M. Zdrallek (University of Wuppertal, Germany) (Submission-ID EMOB19-20)
- **Development of a Tool for the Determination of Simultaneity Factors in PEV Charging Processes**
  A. Märtz, L. Held, P. Jochem, J. Wirth, M. Suriyah, T. Leibfried (Karlsruhe Institute of Technology (KIT), Germany) (Submission-ID EMOB19-84)
- **Probabilistic Analysis of Electric Vehicles' Impact on Transmission and Distribution Networks**
  B. Blažič, A. Božiček, M. Pantoš (University of Ljubljana, Slovenia), M. Kolenc, U. Salobir (ELES, Slovenia) (Submission-ID EMOB19-85)
- **Charging of Company Fleets – Power Requirement and Flexibility Based on the Mapping of Conventional-Car Usage to BEVs**
  J. Wenske, M. Frey, P. Bickel, J. Binder (Center for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW), Germany) (Submission-ID EMOB19-218)

SESSION 3A: CHARGING INFRASTRUCTURE I

14:15 – 16:00 | 14 October 2019 | Redwood A | Session Chair: Jamie Dunckley (EPRI, USA)

- **Towards Grid-Friendly Electric Vehicle Charging: Architectural Concept and Field Trials**
  D. Danner, A. Alyousef, H. de Meer (University of Passau, Germany), P. Danner, W. Duschl (Bayernwerk, Germany) (Submission-ID EMOB19-220)
- **Bidirectional Charging Management – Field Trial and Measurement Concept for Assessment of Novel Charging Strategies**
  M. Hinterstocker, M. Müller, T. Kern, A. Ostermann, P. Dossow, C. Pellinger , S. von Roon (FfE, Germany) (Submission-ID EMOB19-29)
- **Estimation of Charging Profiles Based on a Mobility Model and Visit Characteristics for Different Types of Locations**
  M. Köller (Siemens, Germany | University of Erlangen-Nuremberg, Germany), P. Awater, B. Gemsjäger (Siemens, Germany), T. Deß, M. Luther (University of Erlangen-Nuremberg, Germany) (Submission-ID EMOB19-247)
- **Real-Time Simulation of EV Grid Integration with Internet-Inspired Charging Control**
  E. Ucer (The University of Alabama, USA), **N. Erdogan** (University College Cork, Ireland), S. Rahman, M. Kisacikoglu (The University of Alabama, USA) (Submission-ID EMOB19-166)

SESSION 3B: ELECTRIC NATION SMART CHARGING TRIAL – IMPACT ON USER ACCEPTANCE AND GRID STABILIZATION

14:15 – 16:00 | 14 October 2019 | Redwood B | Session Chair: Thorsten Schlößer (Energynautics, Germany)

- **Introduction to the Project**
  Esther Dudek (EA Technology, United Kingdom) (Submission-ID EMOB19-292)
- **GreenFlux Smart Charging System**
  Lennart Verheijen (Greenflux, Netherlands) (Submission-ID EMOB19-293)
- **Charging Behaviour Findings**
  Esther Dudek (EA Technology, United Kingdom)
- **Conclusion from the Trial and Future Steps**
  Lennart Verheijen (Greenflux, Netherlands)

The contributions and discussions of this session are not part of the proceedings.

SESSION 3C: INFRASTRUCTURE ASPECTS

14:15 – 16:00 | 14 October 2019 | Redwood C | Session Chair: Paul Gardner (Paul Gardner Energy Consulting, United Kingdom)

- **Perspective from the USA: The EV Market, EV Charging Infrastructure Market and the Grid**
  D. Bowermaster, W. Collins, J. Dunckley, M. Duvall, M. Kosowski, M. Alexander (Electric Power Research Institute, USA) (Submission-ID EMOB19-272)
- **The Contribution of Carbon-Optimized Battery Electric Vehicle Charging to the Decarbonization of a Multi-Modal Energy System**
  D. Husarek, S. Paulus, M. Huber, M. Metzger, S. Niessen (Siemens, Germany) (Submission-ID EMOB19-137)
- **Potentials of Battery Storage Systems to Increase the Self-Consumption of Photovoltaics in Charging of Electric Vehicles in Residential Buildings**
  M. Shepero, R. Fachrizal, J. Munkhammar, J. Widén (Uppsala University, Sweden) (Submission-ID EMOB19-63)
- **Scenario Analyses of a Dynamic LVDC Smart-Trolleybus-Network with Battery-Assisted Traction Loads**
  D. Baumeister, M. Salih, M. Wazifehdust, M. Koch, P. Steinbusch, M. Zdrallek (University of Wuppertal, Germany), S. Mour (SWS Netze Solingen, Germany), C. Troullier (Stadtwerke Solingen, Germany) (Submission-ID EMOB19-55)

SESSION 4A: CHARGING INFRASTRUCTURE II

16:20 – 18:10 | 14 October 2019 | Redwood A | Session Chair: TBA

- **Integrated Expansion Strategies for Public Charging Infrastructure in Cities**
  M. Sprengeler, P. Nguyen, K. Matulla, J. Ackermann, G. Stryi-Hipp (Fraunhofer ISE, Germany) (Submission-ID EMOB19-152)
- **Location-Specific Dimensioning of Electric Vehicle Destination Charging Infrastructure**
  C. Möller, E. Schnittmann, K. Kotthaus, M. Zdrallek (University of Wuppertal, Germany), P. Sindberg (Ubitricity Distributed Energy Systems, Germany) (Submission-ID EMOB19-83)
- **Optimal Operation of V2H and Stationary Storage Batteries in a Massive PV Penetrated Consumer Group**
  T. Sadatome, Y. Ueda (Tokyo University of Science, Japan, Japan) (Submission-ID EMOB19-269)
- **Data-Based Analysis of the Utilization of Publicly Promoted Charging Infrastructure**
  F. Lobas-Funck, L. Prawatky (National Organisation Hydrogen and Fuel Cell Technology (NOW), Germany) (Submission-ID EMOB19-88)
- **Analysis of the Technical and Economic Potential of Current Charging Solutions for High-Power Charging (HPC) Parks for Battery Electric Vehicles (xEVs)**
  R. Scholdan, S. Schrader (P3 group, Germany) (Submission-ID EMOB19-235)

SESSION 4B : DISTRIBUTION NETWORKS II

16:20 – 18:10 | 14 October 2019 | Redwood B | Session Chair: Nis Martensen (Energynautics, Germany)

- **Increasing Grid Visibility on the Basis of Smart Meters as a Building Block for Grid Integration of Electromobility**
  S. Azad (University of Wuppertal, Germany), B. Brandherm (German Research Center for Artificial Intelligence, Germany), J. Zimpel (Voltaris, Germany), A. Schalk (VSE, Germany), C. Breuer (STEAG Technischer Service, Germany), N. Neusel-Lange (SPIE SAG, Germany) (Submission-ID EMOB19-128)
- **Review of LV Network Development and Design for Electrified Domestic Heat and Transport**
  P. Lyons, S. Pukhrem, A. Walsh (ESB Networks, Ireland), P. Carroll (University College, Dublin) (Submission-ID EMOB19-98)
- **Integration of Electric Vehicles in Extreme Suburban Grids with the Support of Extended Functionality of PV Storage Systems**
  J. Wussow, G.-L. Di Modica, B. Engel (Technische Universität Braunschweig, Germany) (Submission-ID EMOB19-14)
- **Strategies for Intelligent Low-Voltage Network Monitoring – Detection of Unregistered Electric Vehicles Using a Recurrent Neural Network**
  B. J. Groene, S. Hempel, E. Tröster (Energynautics, Germany) (Submission-ID EMOB19-278)
- **Methods for Assessing Worst-Case Scenarios for Distribution Grids in the Context of Electric Mobility**
  J. Ulffers (Fraunhofer IEE, Germany | University of Kassel, Germany), A. Scheidler (Fraunhofer IEE, Germany), M. Braun (Fraunhofer IEE, Germany | University of Kassel, Germany) (Submission-ID EMOB19-162)

Session 4C: Market and Regulatory Aspects

16:20 – 18:10 | 14 October 2019 | Redwood C | Session Chair: Thomas Ackermann (Energynautics, Germany)

- **The Use of Electric Vehicles for Optimal Power Procurement and Grid Support in Local Energy Communities**
  E. Schnittmann, B. Dahlmann, R. Schmidt, S. Azad, M. Zdrallek (University of Wuppertal, Germany), T. Armoneit (Stadtwerke Iserlohn, Germany) (Submission-ID EMOB19-59)
- **Electrified Land Transport and Low Temperature Heating in Australia**
  C. Cheng, A. Nadolny, B. Lu, A. Blakers, M. Stocks (Australian National University, Australia) (Submission-ID EMOB19-225)
- **The Impact of Incentives on Electric Vehicle Adoption**
  J. Dunckley, D. Bowermaster (Electric Power Research Institute, United States), R. Hledik (The Brattle Group, United States), M. Long (Electric Power Institute, United States), A. Levy, N. Irwin (The Brattle Group, United States) (Submission-ID EMOB19-113)
- **Increasing the Photovoltaic Self-Consumption and Reducing Peak Loads in Residential Buildings with Electric Vehicle Smart Charging**
  R. Fachrizal, J. Munkhammar (Uppsala University, Sweden) (Submission-ID EMOB19-45)
- **Scenario-Based Assessment of the Smart Grid Traffic Light Concept Including the Flexibility from Electric Vehicles**
  N. Körber, M. Vasconcelos (RWTH Aachen, Germany) (Submission-ID EMOB19-112)

SESSION 5 – CLOSING SESSION/PANEL DISCUSSION

18:15 – 18:50 | 14 October 2019 | Redwood B | Moderator Daniel Bowermaster (EPRI – Electric Power Research Institute, USA)

Panelists:

- Esther Dudek (EA Technology, United Kingdom)
- Jonathon Dyson (Greenview Strategic Consulting, Australia)
- Konstantin Kunz (ENERCON, Germany) - tbc
- Kazuhiko Ogimoto (The University of Tokyo, Japan)

The contributions and discussions of this session are not part of the proceedings.

POSTER PRESENTATION PAPER

- **Design and Implementation of Integrated V2G Control for House, Building, and Power System**
  Y. Oshikubo, Y. Ota, T. Nakajima (Tokyo City University, Japan) (Submission-ID EMOB19-142)