6th E-Mobility Power System Integration Symposium

organized by energynautics

10 OCT 2022

THE HAGUE
NETHERLANDS

PRELIMINARY PROGRAM AS OF 19 JULY 2022

Important: This preliminary program is subject to changes. It is strongly recommended to check back regularly.

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TIMETABLE 6TH E-MOBILITY INTEGRATION SYMPOSIUM

MONDAY, 10 OCTOBER 2022		
E-Mobility Power System Integration Symposium		
08:00 – 09:00	FOYER 2.0	
	REGISTRATION	
09:00 – 09:20	ROOM 2.1 + 2.2	
	OPENING: **WELCOME AND** **INTRODUCTION**	
09:20 – 11:00	ROOM 2.1 + 2.2	
	SESSION 1: KEYNOTE SESSION	
	COFFEE BREAK (20 MIN)	
11:20 – 13:15	ROOM 2.1 + 2.2	ROOM 2.3
	SESSION 2A: SMART CHARGING	**SESSION 2B:** MODELLING ASPECTS
	LUNCH (60 MIN)	
14:15 – 15:55	ROOM 2.1 + 2.2	ROOM 2.3
	SESSION 3A: SMART CHARGING II	**SESSION 3B:** E-MOBILITY AND RENEWABLE ENERGY INTEGRATION
	COFFEE BREAK (20 MIN)	
16:15 – 17:55	ROOM 2.1 + 2.2	ROOM 2.3
	SESSION 4A: DISTRIBUTION GRID ISSUES	**SESSION 4B:** TBA
18:00 – 18:45	ROOM 2.1 + 2.2	
	SESSION 5: PODIUM DISCUSSION & CLOSURE	
18:45	**NETWORKING EVENT** **(LOCATION TBA)**	

MONDAY, 10 OCTOBER 2022

08:00 – 09:00 **Registration**
09:00 – 09:20 **Welcome**

09:20 – 11:00 SESSION 1: KEYNOTE SESSION
> Session Chair T. Ackermann (Energynautics, Germany)

09:20 – 10:40 Presentations (20 min. each)

- **Is there Enough Electricity for E-Mobility?**
  M. Steinbach (TU Eindhoven, Netherlands) – tbc (Submission-ID Emob22-xxx)
- **From Small Idea to an Important Trusted European Crowd Balancing Platform**
  R. Kerkmeester (CEO Equigy, Netherlands)
  (IEA, France) (Submission-ID Emob22-xxx)
- **TBA**
  R. de Jongh, G. Nynke Noteboom (Lightyear One, Netherlands)
- **Time is Now: Smart Charging of Electric Vehicles**
  J. Burger, J. Hildermeier (Regulatory Assistance Project, Belgium) (Submission-ID EMOB22-109)
- **TBA**
  NN (IEA, France) (Submission-ID Emob22-xyz)

10:40 – 11:00 Discussions

11:00 – 11:20 COFFEE BREAK

11:20 – 13:15 SESSION 2A: SMART CHARGING
> Session Chair TBA

11:20 – 13:00 Presentations (20 min. each)

- **A Case Study on Energy Management and Charging Monitoring of Battery Electric Vehicles in Parking Garages**
  R. Otto, M. Brennenstuhl, E. Duminil, B. Schröter, D. Uckelmann (HFT Stuttgart, Germany) (Submission-ID EMOB22-17)
- **Combining Energy Storage with EV Fleet Charging**
  A. Rutgers (ChargeSim BV, Netherlands) (Submission-ID EMOB22-73)
- **Planning Charging Hubs for Battery Electric Vehicles and Trucks on the German Motorway Network - Assessing the Challenges from a Distribution Network Perspective**
  K. Burges (RE-xpertise, Germany), F. Probst, S. Kippelt (ef.Ruhr GmbH, Germany) (Submission-ID EMOB22-121)
- **SMECON Box - Secure EV Charging Using the "FNN Steuerbox"**
  D. Masendorf, P. Henzel, R. Al Sayyed, T. Schlösser (Energynautics, Germany) (Submission-ID EMOB22-29)
- **Short-Term Prediction of of Electric Vehicle Charging Station Availability using Cascaded Machine Learning Models**
  C. Hecht, J. Figgener (RWTH Aachen University, Germany | Juelich Aachen Research Alliance, JARA-Energy, Germany) , D. U. Sauer (RWTH Aachen University, Germany | Juelich Aachen Research Alliance, JARA-Energy, Germany | Helmholtz Institute Muenster/Forschungszentrum Jülich, Germany) (Submission-ID EMOB22-55)

13:00– 13:15 Discussions

11:20 – 13:15	SESSION 2B: MODELLING ASPECTS
> Session Chair	TBA

11:20 – 13:00 Presentations (20 min. each)

- **Analysis of the Peak Shaving Potential of Bidirectionally Chargeable Electric Vehicles in a Field Trial**
  V. Engwerth (FfE – Forschungsstelle für Energiewirtschaft, Germany), A. Ostermann (FfE – Forschungsstelle für Energiewirtschaft, Germany | TUM – Technical University of Munich, Germany), K. Sommer (FfE – Forschungsstelle für Energiewirtschaft, Germany) (Submission-ID EMOB22-150)
- **Co-Simulation based Analysis of the Grid Capacity for Electric Vehicles in Districts with a Need for Sustainable Energy Refurbishment: The Case of a District in Lower Saxony**
  H. Wagner (elenia Institute for High Voltage Technology and Power Systems, Germany), F. Peñaherrera V. (OFFIS Institute for Information Technology, Germany), S. Fayed (University of Applied Sciences Emden/Leer, Germany), O. Werth, S. Eckhoff (Leibniz University Hannover, Germany), B. Engel (elenia Institute for High Voltage Technology and Power Systems, Germany), M. H. Breitner (Leibniz University Hannover, Germany), S. Lehnhoff (OFFIS Institute for Information Technology, Germany), J. Rolink (University of Applied Sciences Emden/Leer, Germany) (Submission-ID EMOB22-117)
- **Analysis of the Intraday Use Case in the Field Trial of the Bidirectional Charging Management Project**
  T. Haug (FfE – Forschungsstelle für Energiewirtschaft, Germany), A. Ostermann (FfE – Forschungsstelle für Energiewirtschaft, Germany| TUM – Technical University of Munich) (Submission-ID EMOB22-27)
- **Qualification of Charging Pattern Accuracy by a Two-Level Validation Approach for the Case of Germany**
  N. Wulff (DLR – German Aerospace Center, Germany), N. Refa (ElaadNL, Netherlands), F. Miorelli, H.-C. Gils, P. Jochem (DLR – German Aerospace Center, Germany), N. Refa (ElaadNL, Netherlands) (Submission-ID EMOB22-94)
- **Modelling of EV Integration in the Energy System From an Actor's Perspective**
  M. Hinterstocker (FfE, Germany) (Submission-ID EMOB22-105)

13:00– 13:15 Discussions

13:15 – 14:15 LUNCH BREAK

14:15 – 15:55	SESSION 3A: SMART CHARGING II
> Session Chair	TBA

14:15 – 15:35 Presentations (20 min. each)

- **Methodology for the Conceptual Design of Application-Specific and Requirement-Oriented Charging Robots**
  M. Nieradzik, P. Driesch, T. Bruckmann (University of Duisburg-Essen, Germany), F. Przioda, R. Hindera (BMW Group, Germany), D. Schramm (University of Duisburg-Essen, Germany) (Submission-ID EMOB22-108)
- **Smart Battery. A Key Technology for Operational Battery Performance Optimization.**
  R. Teodorescu, A. Kulkarni, P. Bharadwaj, R. Di Fonso (Aalborg University, Denmark) (Submission-ID EMOB22-156)
- **Use of flexibilities through grid-serving charging strategies**
  C. Daam, J. T. Meyer, J. Gemassmer (Reiner Lemoine Institut, Germany) (Submission-ID EMOB22-54)
- **Presentation Bangladesh 1**
  NN (Company, Bangladesh) (Submission-ID EMOB22-xxx)

15:35 – 15:55 Discussions

14:15 – 15:55	SESSION 3B: E-MOBILITY AND RENEWABLE ENERGY INTEGRATION
> Session Chair	TBA

14:15 – 15:35 Presentations (20 min. each)

- **Realization of the surplus Renewable Energy in E-Vehicles through Controlled Charging Infrastructure in large cities (2050 scenario)**
  J. Banerjee (Self, Germany) (Submission-ID EMOB22-144)
- **Analysis of System Efficiency Losses and their Financial Effects for a DC-Coupled PV-based EV Charging Station**
  A. Starosta, P. Jhaveri, N. Munzke, M. Hiller (Karlsruhe Institute of Technology – KIT, Germany) (Submission-ID EMOB22-57)
- **Design of the Community-to-Vehicle-to-Community (C2V2C) for enhanced electro-mobility in photovoltaic energy-sharing building communities**
  P. Huang, E. M. Ocampo Alvarez (Dalarna University Falun,Sweden) (Submission-ID EMOB22-124)
- **Presentation Bangladesh 2**
  NN (Company, Bangladesh) (Submission-ID EMOB22-xxx)

15:35 – 15:55 Discussions

15:55 – 16:15 COFFEE BREAK

16:15 – 17:55	SESSION 4A: DISTRIBUTION GRID ISSUES
> Session Chair	TBA

16:15 – 17:35 Presentations (20 min. each)

- **Avoiding Low-Voltage Grid Overloads Through Curative Grid Operator Intervention with Focus on Electric Vehicles**
  M. Müller, S. Rodler (FfE, Germany | TUM – Technical University Munich, Germany), N. Jooß (FfE, Germany) (Submission-ID EMOB22-7)
- **Monitoring of Low-Voltage Grids Using Artificial Neural Networks and Its Field Test Application based on the beeDIP-Platform**
  Z. Liu (University of Kassel, Germany), J. Ringelstein (Fraunhofer IEE, Germany), M. Ernst (University of Kassel, Germany), B. Requardt (Fraunhofer IEE, Germany), E. Zauner, K. Baumbusch (Thuega AG, Germany), S. Wende-von Berg, M. Braun (University of Kassel, Germany | Fraunhofer IEE, Germany) (Submission-ID EMOB22-49)
- **Assessing the Energy Equity Benefits of Energy Storage Solutions**
  B. Tarekegne, J. Kerby, R. O'Neil (Pacific Northwest National Laboratory, USA) (Submission-ID EMOB22-145)
- **What Roles Should Utilities Play in Evs Adoption?**
  C. Lee, B. Shanahan (Burns & McDonnell, United States) (Submission-ID EMOB22-92)

17:35 – 17:55 Discussions

16:15 – 17:55	SESSION 4B: TBA
> Session Chair	TBA
16:15 – 17:35	**Presentations (20 min. each)**

- **Comparing different prices models and their impact on the charging times of battery electric vehicles**
  L. Ebbert, G.-L. Di Modica, J. Wussow, B. Engel (elenia Institute for High Voltage Technology and Power Systems, Technical University of Brunswick, Germany) (Submission-ID EMOB22-19)
- **TBA**
  NN
- **Fuel Cell Electrical Vehicles as Mobile Coupled Heat and Power Backup-Plant in Neighbourhoods with Recent Low-Energy Standards**
  T. Tiedemann, M. Kroener, C. Agert (DLR – German Aerospace Center, Germany) (Submission-ID EMOB22-153)
- **Efficiency Model for Combined Heat Supply in Old Buildings with Air/Water Heat Pumps and Fuel Cell Vehicles**
  J. Dasenbrock, M. Kroener, M. Vehse, C. Agert (German Aerospace Center Institute of Networked Energy Systems, Germany) (Submission-ID EMOB22-113)

17:35 – 17:55	Discussions

18:00 – 18:45	SESSION 5: CLOSING SESSION
> Session Chair	TBA
18:00 – 18:40	

Title TBA

- **Panelists:**
  - TBA

18:40– 18:45	Closure

18:45 – 21:00 Networking Event (Location TBA)

POSTER PRESENTATIONS

- **Blockchain-Based Logging of Bidirectional EV Charging Data**
  M. Hinterstocker (FfE, Germany) (Submission-ID EMOB22-103)
- **Electric Vehicle Charging Architecture Model to Obtain an Method for Analyzing Charging Scenarios Within Multiple Stakeholders and Use Cases.**
  J. Eickelmann (PION Technology, Germany), B. Engel (TU Braunschweig, Germany) (Submission-ID EMOB22-66)