6th E-Mobility Power System Integration Symposium

organized by energynautics

10 OCT 2022

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FINAL AGENDA

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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	
	OPENING: **WELCOME AND** **INTRODUCTION**	
09:20 – 11:00	ROOM 2.1	
	SESSION 1: KEYNOTE SESSION	
	GROUP PHOTO | COFFEE BREAK (30 MIN)	
11:30 – 13:15	ROOM 2.1	ROOM 2.2
	SESSION 2A: SMART CHARGING I	**SESSION 2B:** MODELLING ASPECTS
	LUNCH (60 MIN)	
14:15 – 15:30	ROOM 2.1	ROOM 2.2
	SESSION 3A: SMART CHARGING II	**SESSION 3B:** CHARGING INFRASTRUCTURE
	COFFEE BREAK (30 MIN)	
16:00 – 17:20	ROOM 2.1	ROOM 2.2
	SESSION 4A: DISTRIBUTION GRID ISSUES	**SESSION 4B:** MODELLING OF E-MOBILITY ASPECTS
17:30 – 18:15	ROOM 2.1	
	SESSION 5: PODIUM DISCUSSION & CLOSURE	
18:30	**18:30** **NETWORKING EVENT** (FOYER)	

MONDAY, 10 OCTOBER 2022

08:00 – 09:00 Registration

All times in the session tables show Central European Summer Times (CEST), the orange stripes show the starting times of the sessions below in additional time zones.

03:00 New York | 04:00 Rio de Janeiro | 08:00 London | 12:30 New Delhi | 14:00 Jakarta | 15:00 Beijing | 16:00 Tokyo | 18:00 Sydney

09:00 – 09:20 Welcome

09:20 – 11:00 SESSION 1: KEYNOTE SESSION

03:20 New York | 04:20 Rio de Janeiro | 08:20 London | 12:50 New Delhi | 14:20 Jakarta | 15:20 Beijing | 16:20 Tokyo | 18:20 Sydney

> Session Chair Thomas Ackermann (Energynautics, Germany) | Mart van der Meijden (TenneT TSO, Netherlands)

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

- **Tennet's Perspective**
  A. Jonker (Tennet, Netherlands)
- **EV Charging Infrastructure and Grid Integration: International Perspectives and the Role of Public Authorities**
  J. Warichet (IEA, France)
- **From Small Idea to an Important Trusted European Crowd Balancing Platform**
  R. Kerkmeester (CEO Equigy, Netherlands)
- **Lightyear One**
  R. de Jongh, G. Nynke Noteboom (Lightyear One, Netherlands)

10:40 – 11:00 Discussions

11:00 – 11:30 COFFEE BREAK

11:30 – 13:15 SESSION 2A: SMART CHARGING I

05:30 New York | 06:30 Rio de Janeiro | 10:30 London | 15:00 New Delhi | 16:30 Jakarta | 17:30 Beijing | 18:30 Tokyo | 20:30 Sydney

> Session Chair Eckehard Tröster (Energynautics, Germany

11:30 – 12:50 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, D. Uckelmann, B. Schröter (Stuttgart University of Applied Sciences, 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 – a Distribution System 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, **R. Al Sayyed**, P. Henzel, T. Schlösser (Energynautics, Germany) (Submission-ID EMOB22-29)

12:50– 13:15 Discussions

11:30 – 13:15 SESSION 2B: MODELLING ASPECTS

05:30 New York | 06:30 Rio de Janeiro | 10:30 London | 15:00 New Delhi | 16:30 Jakarta | 17:30 Beijing | 18:30 Tokyo | 20:30 Sydney

> Session Chair Thorsten Schlößer (Energynautics, Germany)

11:30 – 12:50 Presentations (20 min. each)

- **Analysis of the Peak Shaving Potential of Bidirectionally Chargeable Electric Vehicles in a Field Trial**
  A. Ostermann (FfE – Research Institute for Energy Economics and Industry | TUM – Technical University of Munich, Germany), **V. Engwerth**, K. Sommer (FfE – Research Institute for Energy Economics and Industry, Germany) (Submission-ID EMOB22-150)
- **Co-Simulation-Based Analysis of the Grid Capacity for Electric Vehicles in Districts: The Case of "Am Ölper Berge" in Lower Saxony**
  H. Wagner (TU Brunswick – elenia, 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 (TU Brunswick – elenia, 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**
  A. Ostermann (FfE – Research Institute for Energy Economics and Industry | TUM – Technical University of Munich), **T. Haug**, V. Regener (FfE – Research Institute for Energy Economics and Industry, Germany) (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 (DLR – German Aerospace Center, Germany), P. Jochem (DLR – German Aerospace Center | KIT – Karlsruhe Institute of Technology, Germany) (Submission-ID EMOB22-94)

12:50– 13:15 Discussions

13:15 – 14:15 LUNCH BREAK

14:15 – 15:30 SESSION 3A: SMART CHARGING II

08:15 New York | 09:15 Rio de Janeiro | 13:15 London | 17:45 New Delhi | 19:15 Jakarta | 20:15 Beijing | 21:15 Tokyo | 23:15 Sydney

> Session Chair Leonard Hülsmann (Energynautics, Germany)

14:15 – 15:15 Presentations (15 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)
- **Realise Flexibility Potential of EV Fleets through Grid-Serving Charging Strategies**
  J. T. Meyer, C. Daam, J. Gemassmer (Reiner Lemoine Institut, Germany) (Submission-ID EMOB22-54)
- **GIZ's Report-3 on EV Charging Infrastructure and its Grid Integration**
  S. Dräxler (GIZ, Germany)
- **How to Charge Easy Bikes in Bangladesh the Smart Way**
  T. Schlößer, E. Tröster (Energynautics, Germany), **M. Rohman** (WZPDCL, Bangladesh), (Submission-ID EMOB22-xxx)

15:15 – 15:30 Discussions

14:15 – 15:30	SESSION 3B: CHARGING INFRASTRUCTURE
08:15 New York | 09:15 Rio de Janeiro | 13:15 London | 17:45 New Delhi | 19:15 Jakarta | 20:15 Beijing | 21:15 Tokyo | 23:15 Sydney	
> Session Chair	Thomas Ackermann (Energynautics, Germany)
14:15 – 15:15	Presentations (20 min. each)

- **Electric Road Systems (ERS) - Presentation of eHighway Technology Using the Example of eHighway Hessen**
  I. Rudgartser (Federal Autobahn GmbH, Germany)
- **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)
- **Short-Term Prediction of Electric Vehicle Charging Station Availability Using Cascaded Machine Learning Models**
  C. Hecht (RWTH Aachen University | Juelich Aachen Research Alliance, JARA-Energy, Germany), R. Aghsaee, F. Schwinger (RWTH Aachen University, Germany), J. Figgener (RWTH Aachen University | Juelich Aachen Research Alliance, JARA-Energy, Germany), M. Jarke (RWTH Aachen University | Fraunhofer FIT, Germany), D. U. Sauer (RWTH Aachen University, Germany | Juelich Aachen Research Alliance, JARA-Energy, Germany | Helmholtz Institute Muenster, Germany) (Submission-ID EMOB22-55)

15:15 – 15:30	Discussions

15:30 – 16:00 COFFEE BREAK

16:00 – 17:20	SESSION 4A: DISTRIBUTION GRID ISSUES
10:00 New York | 11:00 Rio de Janeiro | 15:00 London | 19:30 New Delhi | 21:00 Jakarta | 22:00 Beijing | 23:00 Tokyo | 01:00 Sydney	
> Session Chair	Bernd Engel (TU Brunswick – elenia | SMA, Germany)
16:00 – 17:00	Presentations (20 min. each)

- **Avoiding Low-Voltage Grid Overloads Through Curative Grid Operator Intervention with Focus on Electric Vehicles**
  M. Müller, S. Rodler (FfE – Research Institute for Energy Economics and Industry | TUM – Technical University of Munich, Germany), N. Jooß (FfE – Research Institute for Energy Economics and Industry, 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, Germany), S. Wende-von Berg, M. Braun (University of Kassel | Fraunhofer IEE, Germany) (Submission-ID EMOB22-49)
- **Assessing the Energy Equity Benefits of Mobile Energy Storage Solutions**
  J. Kerby, A. Kumar Bharati, B. Tarekegne (Pacific Northwest National Laboratory, USA) (Submission-ID EMOB22-145)

17:00 – 17:20	Discussions

16:00 – 17:20	SESSION 4B: MODELLING OF E-MOBILITY ASPECTS
10:00 New York | 11:00 Rio de Janeiro | 15:00 London | 19:30 New Delhi | 21:00 Jakarta | 22:00 Beijing | 23:00 Tokyo | 01:00 Sydney	
> Session Chair	Eckehard Tröster (Energynautics, Germany)
16:00 – 17:00	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 (TU Brunswick – elenia, Germany) (Submission-ID EMOB22-19)
- **Electric Vehicle Charging Journey Architecture Model to Obtain a Method for Analyzing Charging Scenarios Within Multiple Stakeholders and Use Cases.**
  J. Eickelmann (PION Technology, Germany), B. Engel (TU Brunswick, Germany) (Submission-ID EMOB22-66)
- **Fuel Cell Electrical Vehicles as Mobile Coupled Heat and Power Backup-Plant in Neighbourhoods with Low-Energy Standards Buildings**
  T. Tiedemann, M. Kroener, M. Vehse, C. Agert (DLR – German Aerospace Center, Germany) (Submission-ID EMOB22-153)

17:00 – 17:20	Discussions

17:30 – 18:15	SESSION 5: CLOSING SESSION
11:30 New York | 12:30 Rio de Janeiro | 16:30 London | 21:00 New Delhi | 22:30 Jakarta | 23:30 Beijing | 00:30 Tokyo | 02:30 Sydney	
> Session Chair	Thorsten Schlößer (Energynautics, Germany)
17:30 – 18:10	

- **Overcoming Current Challenges in Charging Station Rollout to Meet Rising Mobility Demand**

PANELISTS:

- **Gautham Ram Chandra Mouli** (TU Delft, Netherlands)
- **Stephen Dräxler** (GIZ, Germany)
- **Andrew Rutgers** (ChargeSim, Netherlands)
- **Karsten Burges** (RE-xpertise, Germany)

18:10– 18:15	Closure

18:30
Networking Event

POSTER PRESENTATIONS

- **Blockchain-Based Logging of Bidirectional EV Charging Data**
  M. Hinterstocker, L. Wasmeier, P. Dossow (FfE – Research Institute for Energy Economics and Industry, Germany)
  (Submission-ID EMOB22-103)