

Wissenschaftliche Mitarbeiter am PSL



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Lebenslauf

1999 – Studium der Elektro- und Informationstechnik, RWTH-Aachen, Deutschland
2005

2003 – Studium der Wirtschaftswissenschaften, RWTH-Aachen, Deutschland
2007

2001 – Stipendiat der Prof. Dr. Koepchen-Stiftung
2005

2003 Fachpraktikum, Pennsylvania State University (P.S.U.), State College, Pennsylvania, USA

2004 Studienarbeit, Institut für Elektrische Anlagen und Energiewirtschaft (IAEW), RWTH-Aachen, Deutschland; Thema: Auswirkungen und Absicherung der Wetter-, Strompreis- und Vertriebslastunsicherheit in der Stromerzeugungs- und Handelsplanung

- 2005 Diplomarbeit, Massachusetts Institute of Technology (M.I.T), Cambridge, Massachusetts, USA;
Thema: Replication of diffractive-optical arrays via photocurable nanoimprint lithography
- 2007 Diplomarbeit, Lehrstuhl für Mikroökonomie, RWTH-Aachen, Deutschland; Thema: Auswirkungen
des geregelten Stromnetzzugangs auf das Kundenverhalten in Deutschland
- Seit 2007 Doktorand am EEH, Power Systems Laboratory, ETH Zürich, Schweiz

Forschungsprojekte

- [Integrated Modelling and Analysis of Power and Transportation Systems](#)
- [Vision of Future Energy Networks \(VoFEN\)](#)

Studien- und Masterarbeiten

- [Implementierung und Analyse des lastflussbasierten Auktionsverfahrens für Grenzkapazitäten in Zentraleuropa \[PSL: DA\]](#)

Publikationen

Artikel in wissenschaftlichen Zeitschriften

- [Matthias D. Galus, Stephan Koch and Göran Andersson, Provision of Load Frequency Control by PHEVs, Controllable Loads, and a Cogeneration Unit, IEEE Transactions On Industrial Electronics, Vol. 58, No. 10, October 2011.](#)
- [Matthias D. Galus, Marek Zima, Göran Andersson, On integration of plug-in hybrid electric vehicles into existing power system structures, Energy Policy 38, 2010, pp. 6736–6745.](#)
- [Andersson S.-L., Elofsson A.K., Galus M.D., Göransson L., Karlsson S., Johnsson F. and Andersson G., Plug-in hybrid electric vehicles as regulating power providers: Case studies of Sweden and Germany, Energy Policy, no. 38, 2010.](#)

Konferenzbeiträge

- [M.D. Galus and G. Andersson, Balancing Renewable Energy Source with Vehicle to Grid Services from a Large Fleet of Plug-In Hybrid Electric Vehicles controlled in a Metropolitan Area Distribution Network, Presented at the Cigré 2011 Bologna Symposium, 13-15 September, 2011, Bologna, Italy.](#)
- [Stephan Koch, Matthias D. Galus, Spyros Chatzivasileiadis and Göran Andersson, Emergency Control Concepts for Future Power Systems, Presented at the 18th IFAC World Congress, August 28 – September 2, 2011, Milan, Italy.](#)
- [Lukas A. Wehinger, Gabriela Hug, Matthias D. Galus, and Göran Andersson, Assessing the Effect of Storage Devices and a PHEV Cluster on German Spot Prices by Using Model Predictive and Profit Maximizing Agents, Presented at the 17th Power Systems Computation Conference, Stockholm, Sweden, 2011.](#)
- [Matthias D. Galus, R. A. Waraich, Göran Andersson, Predictive, distributed, hierarchical charging control of PHEVs in the distribution system of a large urban area incorporating a multi agent transportation simulation, Presented at the 17th Power Systems Computation Conference, Stockholm, Sweden, 2011.](#)
- [Spyros Chatzivasileiadis, Matthias D. Galus, Yves Reckinger, Göran Andersson, Q-learning for Optimal Deployment Strategies of Frequency Controllers using the Aggregated Storage of PHEV](#)

[fleets](#), Presented at the IEEE Powertech Conference, Trondheim, Norway, 2011.

- [Andreas Ulbig, Matthias D. Galus, Spyros Chatzivasileiadis and Göran Andersson](#), [General Frequency Control with Aggregated Control Reserve Capacity from Time-Varying Sources: The Case of PHEVs](#), Presented at the 2010 IREP Symposium – Bulk Power System Dynamics and Control – VIII (IREP), August 1-6, 2010, Búzios, RJ, Brazil.
- [Matthias D. Galus, Raffael La Fauci and Göran Andersson](#), [Investigating PHEV Wind Balancing Capabilities using Heuristics and Model Predictive Control](#), Presented at the IEEE PES General Meeting, Minneapolis, USA, 2010.
- [Lukas Wehinger, Matthias Galus and Göran Andersson](#), [Agent-Based Simulator for the German Electricity Wholesale Market Including Wind Power Generation and Widescale PHEV Adoption](#), Presented at the 7th International Conference on the European Energy Market, Madrid, Spain, June 23-25, 2010.
- [Rashid A. Waraich, Matthias Galus, Christoph Dobler, Michael Balmer, Göran Andersson and Kay W. Axhausen](#), [Plug-in Hybrid Electric Vehicles and Smart Grid: Investigations Based on a Micro-Simulation](#), The 12th International Conference of the International Association for Travel Behaviour Research, Jaipur, India, 2009.
- [A.J. del Real, Matthias Galus, C. Bordons and Göran Andersson](#), [Optimal Power Dispatch of Energy Networks including External Power Exchanges](#), Presented at the European Control Conference 2009, Budapest, Hungary, 2009.

Zeige alle

Sonstige Publikationen

- [Matthias Galus and Göran Andersson](#), [An approach for Plug-In Hybrid Electric Vehicle \(PHEV\) integration into Power Systems](#), Extended abstract to poster presented at the Smart Energy Strategies conference, Zurich, Switzerland, 2008.
- [Matthias Galus and M. Schwabe](#), [Wechselbarrieren bei Privatkunden](#), *Energiewirtschaftliche Tagesfragen* 58 Jg., Heft 1/2, 2008.

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