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Senior Research Engineer

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WORK EXPERIENCE

in Germany, Denmark, Lebanon, Seychelles, Barbados, Costa Rica, Honduras, Guatemala, Armenia, Vietnam, India

since 02/2008 Research Engineer at Energynautics GmbH, a Germany-based research and consulting company in the area of renewable and distributed generation

Project management, Design and development of Grid Codes, Consulting on flexibility in power systems, Microgrids, Development of simulation models, Analyses of transmission and distribution systems, Leading Cell Project simulation engineering, employing advanced usage of DlgSILENT PowerFactory simulation technology

02/2003 – 01/2008 Research fellow at the Institute of Electrical Power Systems, Technische Universität Darmstadt, Germany

07/1998 – 09/2002 Student research assistant at the Institute of Applied Mechanics, Technische Universität Clausthal, work including: CFD simulation, and tutorials in applied mechanics

EDUCATION

02/2003 – 05/2010 Dr.-Ing. from Technische Universität Darmstadt, Germany on “Virtual Power Plants with Micro-Cogeneration”

10/1997 – 11/2002 Diplom Energiesystemtechnik, Technische Universität Clausthal, Clausthal-Zellerfeld, Germany

EDUCATIONAL ACTIVITIES

10/2011 Lecturing the tutorial on “Validation of Wind Turbine Models” at the 10th International Workshop on Large-Scale Integration of Wind Power into Power Systems as well as on Transmission Networks for Offshore Wind Power Plants, Aarhus, Denmark, 2011.

PUBLICATIONS

Journal Articles

1. Brown, T.; Ackermann, T.; Martensen, N.: **“Solar Power Integration on the Seychelles Islands”**, Field Actions Science Reports (FACTS Reports), Special Issue 15/2016, pp 46-53.
2. Martensen, N.; Lund, P.; Kley, H.; Tröster, E.; Ackermann, T.: **“The Danish cell project – Status and perspective of a smart grid demonstration”**; VGB Power Tech., Vol. 91/2011, pp. 64-68.

Conference Papers

1. Schierhorn, P.-P.; Martensen, N.: **„The Role of Grid Codes in Isolated Power Systems”**, 5th International Hybrid Power Systems Workshop, Virtual, May 2021
2. Martensen, N.; Masendorf, D.; Hempel, S.: **„Contributions to DER Integration from the 3DMicroGrid Project”** , 10th International Workshop on Integration of Solar Power and Storage into Power Systems, Virtual, November 2020
3. Martensen, N.; Masendorf, D.; Gambín Belinchón, P. et al.: **“Active Power Sharing in Microgrids Using Multiple Grid-Forming Inverter”**, 4th International Hybrid Power Systems Workshop, Crete, Greece, May 2019.
4. Martensen, N.; Masendorf, D.; Gambín Belinchón, P. et al.: **“Framework Design for Smart Microgrids”**, 3rd International Hybrid Power Systems Workshop, Tenerife, Spain, May 2018.

5. Wagner, L.; Martensen, N.; Montealegre, F.: "Sizing of Secondary Reserves Covering Short-Term Variability", 15th Wind Integration Workshop, Vienna, Austria, November 2016.
6. Schierhorn, P.-P.; Martensen, N.; Ackermann, T.: "**The Role of Grid Codes for VRE Integration into Power Systems**", 6th Solar Integration Workshop, Vienna, Austria, November 2016.
7. Martensen, N.; Ackermann, T.: "**The Barbados Grid Code as a Template for a Caribbean Grid Code – Following the Ideas of the ENTSO-E Grid Codes**", 6th Solar Integration Workshop, Vienna, Austria, November 2016.
8. Jati, A.; Martensen, N.: "**Using Solar Power to Increase Power System Efficiency**", 5th International Workshop on Integration of Solar Power into Power Systems, Brussels, Belgium, October 2015.
9. Brown, T.; Martensen, N.; Ackermann, T.: "**The Solar Power Absorption Capacity of the Seychelles Island Systems**", 4th International Workshop on Integration of Solar Power into Power Systems, Berlin, Germany, November 2014.
10. Tröster, E.; Martensen, N.; Brown, T.; Ackermann, T.; Geidel, S.; Langanke, S.: "**Solar Power in a 100% Renewables Scenario for Rhineland-Palatinate**", 4th International Workshop on Integration of Solar Power into Power Systems, Berlin, Germany, November 2014.
11. Brown, T.; Martensen, N.; Cherevatskiy, S.; Rikos, E.: "**A Multi-Objective Control Strategy for Distribution Networks with Renewables**", 4th International Workshop on Integration of Solar Power into Power Systems, Berlin, November 2014.
12. Martensen, N.; Tröster, E.; Brown, T.; Ackermann, T.; Geidel, S.; Langanke, S.: "**Wind Power in a 100% Renewables Scenario for Rhineland-Palatinate**", 13th International Workshop on Large-Scale Integration of Wind Power into Power Systems as well as on Transmission Networks for Offshore Power Plants, Berlin, November 2014.

13. Kuwahata, R.; Martensen, N.; Ackermann, T. (Energynautics); Teske, S. (Greenpeace International): **“The Role of Microgrids in Accelerating Energy Access”**; 3rd IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe), Berlin, Germany, 2012.
14. Čuk, V.; Ribeiro, P. F.; Cobben, J. F. G.; Kling, W. L.; Isleifsson, F. R.; Bindner, H. W.; Martensen, N.; Samadi, A.; Söder, L.: **“Considerations on the Modeling of Photovoltaic Systems for Grid Impact Studies”**; 1st International Workshop on Integration of Solar Power into Power Systems, Aarhus, Denmark, October 2011.
15. Lund, P. (Energinet.dk, Denmark), Martensen, N.; Ackermann, T.; (Energynautics), Harrell, J. (Spirae, USA): **“The Role of Wind Turbines in Smart Distribution Systems”**; 10th International Workshop on Large-Scale Integration of Wind Power into Power Systems as well as on Transmission Networks for Offshore Wind Power Plants, Aarhus, Denmark, October 2011.
16. Martensen, N. (Energynautics); Lund, P. (Energinet.dk, Denmark); Mathew, N. (Spirae, USA): **“The Cell Controller Pilot Project: From surviving system black-out to market support”**; 21st International Conference on Electricity Distribution (CIRED), Frankfurt, Germany, June 2011.
17. Martensen, N. (Energynautics); Lund, P. (Energinet.dk, Denmark); Kley, H. (Spirae, USA): **“Demonstrating DER-based Voltage Control in the Danish Cell Project”**; CIGRE Symposium, Bologna, 2011.
18. Martensen, N., Lund, T., Kley, H., Ackermann, T., Tröster, E.: **„Erste Erfahrungen aus dem dänischen Cell-Projekt“**; ETG-Kongress 2009. Düsseldorf, Germany, 2009.
19. Martensen, N.; Tröster, E. (Energynautics); Lund, P. (Energinet.dk, Denmark); Holland, R. (Spirae, USA): **“Models and Simulations for the Danish Cell Project: Running PowerFactory with OPC and Cell Controller”**; 8th International Workshop on Large-Scale Integration of Wind

- Power into Power Systems as well as on Transmission Networks for Offshore Wind Power Plants, Bremen, Germany, October 2009.
20. Martensen, N. (Energynautics); Kley, H.; Cherian, S.; Pacific, O. (Spirae, USA); Lund, P. (Energinet.dk, Denmark): **“The Cell Controller Pilot Project: Testing a Smart Distribution Grid in Denmark”**; Grid-Interop, Denver, USA, 2009.
 21. Ackermann, T.; Martensen, N.; Tröster, E. (Energynautics); Lund, P. (Energinet.dk, Denmark); Knazkins, V.: **“Overview of the Danish Cell Project”**; 7th International Workshop on Large-Scale Integration of Wind Power into Power Systems as well as on Transmission Networks for Offshore Wind Power Plants, Madrid, Spain, May 2008.

Published Reports

1. Agora Energiewende, (Authors: Ropenus, S. et al./Agora Energiewende; Martensen, N. et al./Energynautics): **„Toolbox für die Stromnetze“ [German]**, 2018
2. IRENA, (Authors: Ackermann, T., Martensen, N., Brown, T., Schierhorn, P.-P., Boshell, F. G., & Ayuso, M.): **“Scaling up variable renewable power: The role of grid codes”**, 2016
3. Ackermann, T.; Martensen, N.; Untsch, S.; Brown, T.; et al: **“Entwicklung und Durchführung einer Impactanalyse für den Klimaschutzplan Nordrhein-Westfalen” [German]**, Berlin, September 2014.
4. Ackermann, T.; Martensen, N.; Brown, T.; Untsch, S.; Troester, E.; Geidel, S.; et al: **“Verteilnetzstudie Rheinland-Pfalz“ [German]**, Darmstadt, Freiburg, Munich, January 2014.