

## NIS MARTENSEN Ph.D.

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### Senior Research Engineer

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Languages: German, English



### WORK EXPERIENCE

- since 02/2008      Research Engineer at Energynautics GmbH, a Germany-based research and consulting company in the area of renewable and distributed generation
- Leading Cell Project simulation engineering, employing advanced usage of DiGSILENT 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      Ph.D. 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

### Scientific Article

1. 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. Brown, T.; Martensen, N.; Ackermann, T.: **“The Solar Power Absorption Capacity of the Seychelles Island Systems”**, 4<sup>th</sup> International Workshop on Integration of Solar Power into Power Systems, Berlin, November 2014.
2. Tröster, E.; Martensen, N.; Brown, T.; Ackermann, T.; Geidel, S.; Langanke, S.: **“Solar Power in a 100% Renewables Scenario for Rhineland-Palatinate”**, 4<sup>th</sup> International Workshop on Integration of Solar Power into Power Systems, Berlin, November 2014.
3. Brown, T.; Martensen, N.; Cherevatskiy, S.; Rikos, E.: **“A Multi-Objective Control Strategy for Distribution Networks with Renewables”**, 4<sup>th</sup> International Workshop on Integration of Solar Power into Power Systems, Berlin, November 2014.
4. Martensen, N.; Tröster, E.; Brown, T.; Ackermann, T.; Geidel, S.; Langanke, S.: **“Wind Power in a 100% Renewables Scenario for Rhineland-Palatinate”**, 13<sup>th</sup> 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.
5. 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.

6. Ćuk, 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.
7. 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.
8. 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.
9. Martensen, N. (Energynautics); Lund, P. (Energinet.dk, Denmark); Kley, H. (Spirae, USA): **“Demonstrating DER-based Voltage Control in the Danish Cell Project”**; CIGRE, Bologna, 2011.
10. Martensen, N., Lund, T., Kley, H., Ackermann, T., Tröster, E.: **„Erste Erfahrungen aus dem dänischen Cell-Projekt“**; ETG-Kongress 2009. Düsseldorf, Germany, 2009.
11. 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.

12. 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.
13. 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.

## Reports

1. Ackermann, T.; Martensen, N.; Untsch, S.; Brown, T.; et al: **“Entwicklung und Durchführung einer Impactanalyse für den Klimaschutzplan Nordrhein-Westfalen”**, Berlin, September 2014.
2. Ackermann, T.; Brown, T.; Martensen, N.; Langanke, S.; Narasimhan, B.; Geidel, S.; Becker-Birck, C.; Ferrey, S.; Chessin, E.; Crowe, J.; Rickerson, W.: **“Consultancy Services for The Assessment of Grid Absorption Capacity, Grid Code, Feed-In Tariffs and Model Power Purchase Agreements for Renewable Energy Systems”**, Darmstadt/Boston, August 2014.
3. Ackermann, T.; Martensen, N.; Brown, T.; Untsch, S.; Troester, E.; Geidel, S.; et al: **“Verteilnetzstudie Rheinland-Pfalz”**, Darmstadt, Freiburg, Munich, January 2014.
4. Ackermann, T.; Martensen, N.; Brown, T.; Untsch, S.; Tröster, E.; Geidel, S.; et al: **“Distribution System Study Rhineland-Palatinate” (English Summary)**, Darmstadt, Freiburg, Munich, January 2014.

Updated: February 2015