

## THOMAS ACKERMANN, PH.D.

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### CEO

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Languages: German, English



### WORK EXPERIENCE

**in Germany, Sweden, Denmark, New Zealand, China, Croatia, Australia, USA, Oman, Chile, India, Philippines, Kenya, Seychelles, Costa Rica, Japan, Barbados, Guatemala, Honduras, Armenia, Jordan, Indonesia, Mongolia, Thailand, Estonia, Greece, Cyprus**

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|---|--|
| since 06/2000                           | CEO and founding partner of Energynautics GmbH, a Germany-based research and consulting company in the area of renewable and distributed generation<br><a href="http://www.energynautics.com/">http://www.energynautics.com/</a> |
| since 07/1998<br>(part time since 2002) | Research fellow at the Royal Institute of Technology (KTH), Department of Electric Power Engineering, Stockholm, Sweden  |
| 07/1997 – 06/1998                       | Industrial Research Limited (IRL), Science and Technology Research Company, Christchurch, New Zealand, Position: Research Engineer   |
| 03/1996 – 05/1997                       | DesignPower Ltd., Engineering Consultants, Wellington, New Zealand, Position: Project leader   |
| 03/1995 – 01/1996                       | Tacke Windtechnik GmbH, Wind Turbine Manufacturer, Germany   |

### EDUCATION

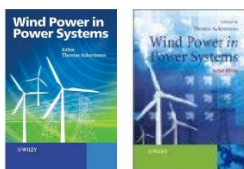
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|-------------------|---|
| 07/1998 – 05/2004 | Ph.D. from Royal Institute of Technology (KTH), Department of Electrical Engineering, Stockholm, Sweden   |
| 02/1996 – 05/1997 | Master of Science in Physics, University of Otago, Dunedin, New Zealand   |
| 09/1988 – 02/1995 | Dipl.-Ing. der Fachrichtung Wirtschaftsingenieurwesen, equivalent to a combined Master's Degree in Mechanical Engineering & Business Administration, TU Berlin, Germany |

## EDUCATIONAL ACTIVITIES

- Continuously                    Lecturing various courses related to wind/renewable energy and wind/renewable power integration into power system, such as:
- **Wind Energy Systems Course**, KTH, Stockholm, Sweden (since 2000, annually)
  - **Wind Energy Part of the Renewable Energy Technology Course 1**, KTH, Stockholm, Sweden (since 2000, annually)
  - **Wind Energy Part of the Renewable Energy Technology Course 2**, KTH, Stockholm, Sweden (since 2005, annually)
  - **Wind Power Short Course**, UWIG, USA (since 2006, annually)
  - **Renewable Energy Short Course**, Hector Business School, KIT Karlsruhe, Germany (since 2015, annually)
- 07/2016                            **Visiting Erskine Fellow**, Department of Electrical and Computer Engineering, College of Engineering at the University of Canterbury, Christchurch, New Zealand (1 month)
- 2011 – 2014                      Lecturing the course on **Renewable Energies** at Technische Universität Darmstadt, Germany
- 2009 – 2014                      Lecturing the course on **Wind Power Development and Use**, SIDA/Life.se, Karlstad, Sweden
- 2008 – 2012                      Lecturing the course on **Frontiers of the Multidimensional Energy Society on Smartgrids**, School of Industrial Engineering and Management, KTH, Stockholm, Sweden

## SELECTED PUBLICATIONS

### Books and contributions to books



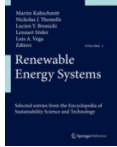
1. Ackermann, T. (ed.): **“Wind Power in Power Systems“**, 2<sup>nd</sup> Edition, 1120 pages, April 2012, Wiley & Sons, UK. The book includes 7 chapters completely or partly written by Ackermann, T. (1<sup>st</sup> Edition: January 2005).



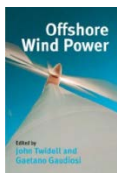
2. Ackermann, T. (ed.): **“Wind Power in Power Systems“**, Japanese Edition, November 2013, Ohmsha Ltd., Japan.



- Ackermann, T.; Kuwahata, R.: **“Global Wind Power Installations.”** In Robert A. Meyers (ed.) **Encyclopedia of Sustainability Science and Technology**, 2012, Springer Verlag. Volume 7, pp. 4474- 4492.



- Ackermann, T.; Kuwahata, R.: **“Global Wind Power Installations.”** In Martin Kaltschmitt, Nickolas J. Themelis, Lucien Y. Bronicki, Lennart Soeder and Luis A. Vega (eds.) **Renewable Energy Systems**, 2013, Springer, New York. pp. 1020-1038.



- Ackermann, T.: Chapter 6: **“Windfarm Power Connection”.** In Gaetano Gaudiosi and John Twidell (eds.): **Offshore Wind Power**, 2009, Multi Science, UK.

## Journals



- Ackermann, T. (Editor) **IET Renewable Power Generation**, Vol. 9., Issue 1, January 2015
- Ackermann, T. (Co-editor): **Wind Energy** Journal (since November 2004), Wiley & Sons.

## Reports

- Ackermann, T.; Martensen, N.; Untsch, S.; Brown, T.; et al: **“Entwicklung und Durchführung einer Impactanalyse für den Klimaschutzplan Nordrhein-Westfalen”**, Berlin, September 2014.
- 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.
- Teske, S.; Brown, T.; Tröster, E.; Schierhorn, P.-P.; Ackermann, T.: **“powE[R] 2030 – A European Grid for 3/4 Renewable Electricity by 2030“**, Greenpeace Germany, March 2014.

4. Tröster, E.; Untsch, S.; Brown, T.; Geidel, S.; Narasimhan, B.; Schierhorn, P.-P.; Ackermann, T.: **“Kurzgutachten zur Eigenstromerzeugung in Rheinland-Pfalz“**, Darmstadt, March 2014.
5. Ackermann, T.; Martensen, N.; Brown, T.; Untsch, S.; Troester, E.; Geidel, S.; et al: **“Distribution System Study Rhineland-Palatinate“** (English Summary), Darmstadt, Freiburg, Munich, January 2014.
6. Ackermann, T.; Kuwahata, R. (main authors): **“A Guide to Operational Impact – Analysis of Variable Renewables: Application to the Philippines“**, The World Bank Group, May 2013.
7. Ackermann, T.; Cherevatskiy, S.; Brown, T.; et al: **“Smart Modeling of Optimal Integration of High Penetration of PV (Smooth PV)“**, May 2013.
8. Ackermann, T.; Kuwahata, R.: **“Lessons learned from international Wind Integration Studies - AEMO Wind Integration WP4(A)“**, Langen, Germany, December 2011.
9. Fürsch, M.; Hagspiel, S.; Jägemann, C.; Nagl, S.; Lindenberg, D.; Glotzbach, L.; Tröster, E.; Ackermann, T.: **“Roadmap 2050 – a closer look: Cost-efficient RES-E penetration and the role of grid extensions“**, Cologne and Langen, Germany, October 2011.
10. Tröster, E., Kuwahata, R., Ackermann, T.: **“European Grid Study 2030/2050“**, Langen, Germany, January 2011.

#### Scientific articles with review

1. Ackermann, T.; Prevost T.; Vittal V.; Roscoe, A. J.; Matevosyan, J.; Miller, N.: **“Paving the Way – A future without Inertia is closer than you think“**, IEEE power & energy magazine, Volume 15, Issue 6, November/Dezember 2017, pp. 61-69.

2. Brown, T.; Ackermann, T.; Martensen, N.: **“Solar Power Integration on the Seychelles Islands” / “Intégration de l’énergie solaire aux Seychelles”**, FACTS Reports, Veolia Institute, Second Semester 2016, pp. 46-53.
3. Ackermann, T.; Carlini, E. M.; Ernst, B.; Groome, F.; Orths, A.; O’Sullivan, J.; de la Torre Rodriguez, M.; Silva, V.: **“Integrating Variable Renewables in Europe: Current Status and Recent Extreme Events”**, IEEE power & energy magazine, Volume 13, Number 6, November/December 2015.
4. Ackermann, T.; Ellis, A.; Fortmann, J.; Matevosyan, J.; Muljadi, E.; Piwko, R.; Pourbeik, P.; Quitmann, E.; Sorensen, P.; Urdal, H.; Zavadil, B.: **“Code Shift – Grid Specifications and Dynamic Wind Turbine Models”**, IEEE power & energy magazine, November/December 2013.
5. 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.
6. Dubaric, E.; Giannoccaro, D.; Bengtsson, R.; Ackermann, T.: **“Patent data as indicators of wind power technology development”**, World Patent Information, (2011), Volume 33, Issue 2, June 2011, pp. 144-149.
7. Ackermann, T.; Ancell, G.; Borup, L.D.; Eriksen, P.B.; Ernst, B.; Groóme, F.; Lange, M.; Möhrlen, C.; Orths, A.G.; O’Sullivan, J.; DeLa Torre, M.: **“Where the Wind Blows”**, IEEE Power and Energy Magazine, 7 (6), 2009, pp. 65-75.
8. Smith, J.C., Thresher, R., Zavadil, R., DeMeo, E., Piwko, R., Ernst, B., Ackermann, T.: **“A Mighty Wind”**, IEEE Power and Energy Magazine, 7 (2), 2009, pp. 41-51.
9. Ackermann, T.; Abbad, J. R.; Dudurych, I. M.; Erlich, I.; Holttinen, H.; Kristoffersen, J. R. ; Sørensen, P. E.: **„European Balancing Act“**, IEEE PES Magazine, Power and Energy for a Special Issue on Wind Power, November/December 2007, pp. 90-103.

Total number of reviewed scientific publications: >60  
plus approximately 80 workshop/seminar publications