Curriculum Vitae – Remus Teodorescu, Prof.

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Education

2019 Making Innovation Happen Programme – INSEAD Business School, Fontainebleau, by IFD (2 weeks)
2009-2010 Research Management Course by CBS Copenhagen, (Leadership, Research-leadership and Leadership in practice, 9 days)
2004 Ph.D. in Power Electronics, Galati University,Romania
1989 Diploma Engineer (5 years) Polytechnic Institute Bucharest, Faculty of Electrotechnics.

Professional Experience

July 2008 – present: Full Professor at Aalborg University, Energy Technology Dpt.
Jan. 2013 – Sep 2018: Visiting Professor 20% with Chalmers University.
Jan. 2004 – June 2008: Associate Professor at Aalborg
Oct. 2000 – Dec. 2003: Research Associate Professor at Aalborg University
Oct. 1998 – Sep. 2000: Research Assistant Professor at Aalborg University
Feb. 1995 – Sep. 1998: Assistant Professor at Galati University, Electrical Engineering Dpt.
Aug. 1993 – Nov. 1993: Honorary Research Associate, University of Birmingham
Oct. 1990 – Jan. 1995: Assistant at Galati University, Electrical Engineering Dept
Oct. 1989 – Sept. 1990: Maintenance Electrical Engineer at Iron & Steel Works Galati

Academic Awards and Honorific Recognitions (Selection)

- Dr. Honoris Causa at University "Transilvania" of Brasov, 2016
- ISI "Highly Cited Researcher" by Thomson Reuters/Clarivate, 2012-2019.
- IEEE Fellow 2012 for contributions to grid-connected renewable energy converter systems technology.
- Innovation Award - Nordjysk University Fund, April 2011
- Best 2009 IEEE PELS chapter as chair of Danish IEEE IAS/PELS/IES Chapter
- Premium Award for Best paper in IET Renewable Power Generation, August 2015

Scientific Publications (440+ Scopus)

Citations **41,695** (h-index: 86 Google Scholar), **27,945** (h-index: 71 Scopus)

Books (5+). Selection:

1. "Grid Converters for Photovoltaics and Wind Power Systems" – ISBN 9780470057513, Wiley & IEEE Press, 2011 (main author)
2. "Design, Control and Application of Modular Multilevel Converters for HVDC Transmission Systems," ISBN: 978-1-118-85156-2, Wiley-IEEE Press, Oct. 2016 (co-author)
3. "Advanced Solutions in Power Systems: HVDC, FACTS, and AI Techniques (IEEE Press Series on Power Engineering)", Wiley-IEEE Press, 2015 (Chapter contribution)

Patents: 10+ (granted and sold to industry)

Project Management as PI (20+, over 100 mio. DKK granted),Selection:

1. *Multi-level medium voltage converter*, 2014–2017, Contractor: EUDP (15.6 mio. DKK granted), Partners: PowerCon, KK-Electronic A/S. Aim: to demonstrate that a new proposed multi-level medium voltage converte rated 6 MW/6.6 kV is suitable for large offshore wind turbines.
2. *Active filter functionalities for power converters in wind power plants*, 2014 – 2016, Contractor: Energinet/ForslEL (3,93 mio. DKK granted) Partners: Dong Energy, ABB, Vestas .Aim: Develop new active filtering solutions integratged in the STATCOM, for large offshore wind power plants.
3. *Vestas Power Program* 2008-2013, Contractor: Vestas (45 mio. DKK granted). 10 PhDs research programme aiming on identifying the most suitable converter technology and control strategy for large turbines in large off-shore farms, to assess the impact of large integration of wind power on utility stability and reliability and to determine the most suitable storage technology that will enable higher wind energy grid integration.
4. *IBESS* - Integrated Battery Energy Storage and STATCOM for the Optimal Operation and Control of WPP in Power Systems 2018- 2021, Contractor IFD (9 mio. DKK granted) partners ABB, Ørsted, Aims to develop an integrated power electronic system with the battery energy storage (BESS) system incorporated into the modular multilevel converter (MMC) topology for large offshore WPP
5. ACEMU - Advanced Components for Electro Mobility Usage,: 2014-2017 Contractor: DSF/EUDP (11.6 mio. DKK granted), Partners: Banke Accessory Drives ApS, Lithium Balance A/S, Meldgaard Miljø A/S. Aims in developing new modular power electronic systems for lithium-sulfur (Li-S) batteries which are directed towards the market for electro-mobility.
6. Intelligent Energy Management System for a Virtual Power Plant, 2010 –2013, Contractor: The Danish National Advanced Technology Foundation (4 mio. DKK granted) Partners: Vestas. Aim: to develop an intelligent energy management system for Virtual Power Plant in order to improve production forecast, reduce fluctuations of output power over time.

Memberships/chairmanships. Selection:

- Member of IEEE-PELS, IE, PES since 1994
- Guest editor for IEEE Transactions on Industrial Electronics, SS on PV, 2008, 2009
- Past Associate editor for IEEE Transactions on Power Electronics 2006 - 2010
- Past Chair of IEEE Danish Section, IAS/IES/PES joint chapter 2005 - 2008
- Member of IDA – The Danish Society of Engineers since 2000

International Cooperation (Selection)

- Academia: UPC Barcelona, RTWH Aachen, TU Delft, ETH Zurich, KTH Stockholm, NTNU Trondheim, Virginia Tech, Federal Univ. of Rio de Janeiro , Tech. Univ. Federico Santa Maria
- Industry: Vestas, ABB, Ørsted, Siemens-Gamesa, Danfoss, KK-Electronic, Lithium Balance, PoweCon

Tutorials at major events (20+) Selection

- PCIM 2019, IEEE SmartGridComm 2018,EPE 2007,2015,2017,2019, ECCE 2009,2010, ISIE2007,2008,2010

Keynote speech at major events (20+) Selection

- ICRERA 2019, Brasov, ICREPQ 2013, Bilbao, OPTIM 2012, Brasov

Advising

- 20+ PhD students at AAU
- Member of evaluation panel of ERC Consolidating Grant 2015 call, Brusssels
- Evaluator for 50+ governmental projects proposals in: Norway, Belgium, Hong Kong, Georgia, etc

Hobby

- Piano playing, classic/jazz

PhD students supervised as main supervisor at AAU:

- Ana-Irina Stan – "Accelerated Lifetime Tests Methodology for Li-Ion batteries"- 16.04.2018
- Vaclav Knap – "Advanced Management System for Li-Sulfur Batteries"- 6.12.2017
- Emanuel-Petre Eni–"Medium Voltage Multi-Megawatt Converter based on SIC devices"- 15.09.2017
- Ghanshyamsinh Vijaysinh Gohil – "Modular Power Converters" – 01.04.2016
- Philipp Braun – "Intelligent Energy Management System for a Virtual Power Plant" – 29.06.2015
- Daniel-Ioan Stroe – "Life-Time Models for Li-Ion Batteries in Grid Support Applications"- 17.11.2014
- Bogdan-Ionut Craciun – "Grid Support and Condition Monitoring for PV Systems" - 24.11.2014
- Michal Sztykiel – "High Voltage Power Converter for large Wind Turbine" –on 31.03.2014
- Cristian Busca–"Lifetime prediction of high-power press-pack IGBTs in wind applications" 25.12.2013
- Rodrigo da Silva – "FACTS based Connection of Wind Power Plants to the Grid" –6.12.2012
- Andrzej G. Adamczyk – "FACTS based Connection of Wind Power Plants to the Grid" –6.12.2012
- Omer Göksu – "Control of Wind Turbines during Symmetrical and Asymmetrical Grid" – 5.12.2012
- Mufit Altin – "Dynamic Frequency Response of Wind Power Plants" 5.12.2012
- Maciej Swierczynski – "Li-ion battery Energy Storage for Augmented Wind Power Plants"- 4.12.2010
- Erhan Demirok–"Control of Grid-Interactive PV Inverters for High Penetration in LV Networks"–22.08.12
- Sanjay Chaudhary – "Wind power plant control for HVDC connection" –17 November 2011
- Osman Senturk – "High Power Density Converters for Large Wind Turbines" –17 November 2011
- Jorge M. Garcia "Voltage Control in Wind Farms" – September 2010
- Tamas Kerekes "Analysis and Modeling of Transformerless PV Inverter Systems "25 September 2009
- Dezso Sera "Real-time Modelling, Diagnostics and Optimised MPPT for Residential PV systems" 2.04.2009
- Mihai Ciobotaru-"Grid Condition Detection and Control of 1-Ph. Distributed Generation Systems"- 6.02.09
- Adrian Timbus "Grid Monitoring and Advanced Control of Distributed Generation Systems"– 28.06.2007

Patents sold to industry (10+). Selection:

1. "Wind turbine power production using positive and negative sequence current component parameters generated based on operational mode" US9382898 B2, PCT/DK2011/050421, published Juy 5, 2016
2. "Power Plants & Energy Storage System for Provision of Grid Ancillary Services" WO2014121794 A1, PCT/DK2013/050032, published Aug. 14, 2014
3. "Virtual Controller of Electromechanical Characteristics for Static Power Converters" WO2012117132 A1, PCT/ ES2012/000047, published 07 September 2012
4. "Virtual Admittance Controller based on Static Power Converters" WO2012117133 A1, PCT/ES2012/000048, published 07 September 2012
5. "Synchronous Power Controller for a Generating System based on Static Power" WO2012117131 A1, PCT/ES2012/000046, published 7 September 2012
6. "Method and System for Operating a Wind Turbine" WO2012062323 A3, PCT/DK2011/050421, published 16 August 2012
7. "Grid Monitoring System and Related Method" WO2010051810 A1, PCT/DK2009/000229, 14 May 2010
8. "Advanced Real-Time Grid Monitoring System and Method" WO2008055499 A3, PCT/DK2007/000483, published 21 August 2008
9. "Electronic Ballast" –patent WO 02/104081 A1, PCT/DK02/00413, issued 27 December 2002