



Brian Vad Mathiesen

Birth date: 10 October 1978, Varde, Denmark

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SHORT BIOGRAPHY

Brian Vad Mathiesen, Professor in Energy Planning and Renewable Energy Systems at Aalborg University, holds a PhD in fuel cells and electrolyzers in future energy systems (2008). His research focuses on technological and socioeconomic transitions to renewables, energy storage, large-scale renewable energy integration and the design of 100% renewable energy systems. He is one of the leading researchers behind the concepts of Smart Energy Systems and electrofuels. He has published 200 scientific articles and reports and is on the Clarivate Web of Science List of Highly Cited Researchers (2015-2021), thus among the top 1% most cited researchers globally. Among other positions, he has been part of the EU Commission expert group on electricity interconnection targets and the Science Advice for Policy by European Academies (SAPEA) Expert Group on A Systemic Approach For the Energy Transition In Europe. He is the Research Coordinator of the Sustainable Energy Planning Research group and was the Principal Investigator (PI) of the RE-INVEST and sEnergies projects. He has been PI, work package leader and participant in more than 75 research projects. In 2012 he founded the MSc programme in Sustainable Cities at Aalborg University. Furthermore, he is an editorial board member of The Journal of Energy Storage (Elsevier) and The Journal of Sustainable Development of Energy, Water & Environment Systems; Associate Editor of Energy, Ecology and Environment (Springer) and Editor of the International Journal of Sustainable Energy Planning and Management. Recently he started the new Elsevier Journal Smart Energy. In addition, he is a member of The Danish Academy of Technical Sciences (ATV), a board member at The Danish Energy Technology Development and Demonstration Programme (EUDP) and deputy chairman of the Advisory Board of the CIP Foundation.

PUBLICATIONS, CITATIONS & INTERNATIONAL RANKING

- **Thomson Reuters** [ISI Highly Cited](#) Researcher within Engineering from 2015 to 2021.
- **WEB of Science:** 94 Articles and h-index = 51 (76801 citations), [WEBofScience](#)
- **Google Scholar:** 341 publications indexed: 21570 citations, h-index: 59, [GoogleScholar](#)
- **SCOPUS:** 116 publications indexed: 13870 citations, h-index: 50, [Scopus](#)

EDUCATION

- PhD, 2008, "Fuel cells and electrolyzers in future energy systems", Aalborg University, Denmark
- ECIU Leadership Development Programme, 2011, International personal leadership and strategic management development programme of the European Consortium of Innovative Universities
- MSc. Eng. in Environmental Management, 2003, Aalborg University, Denmark

EMPLOYMENTS

2014-today	Professor in Energy Planning and Renewable Energy Systems , <i>Department of Planning, Aalborg University, Copenhagen, Denmark</i>
2010-2013	Associate Professor in Energy Planning, <i>Aalborg University, Copenhagen, Denmark</i>
2008-2010	Assistant Professor in Energy Planning, <i>Aalborg University, Copenhagen, Denmark</i>
2005-2008	PhD Fellow, Part of research programme: Efficient conversion of renewable energy with solid oxide cells, <i>Aalborg University, Aalborg Denmark</i>
2004-2005	Research Assistant (part time), <i>Aalborg University, Aalborg, Denmark</i>
2004-2005	Energy and environmental planner, <i>Public Utility Company Aalborg, Aalborg, Denmark</i>
2004	Environmental planner, <i>Sønderjylland County, Åbenrå, Denmark</i>

INTERNATIONAL AND NATIONAL COLLABORATION AND MOBILITY

2017	Visiting researcher, <i>Stanford University</i>
2015	Visiting guest lecturer, PhD level, <i>Kyoto University, Japan</i> ; Evaluation of MSc thesis, <i>University College Cork</i> ; Examiner energy system analyses, <i>University of Southern Denmark</i>
2014	Visiting guest lecturer, MSc level, <i>University of Copenhagen, Denmark</i>
2013	Examiner, PhD level qualifying exam, <i>Aarhus University</i>
2011	Visiting guest lecturer, PhD and MSc level, <i>University of California, Santa Cruz, USA</i>
2010	Visiting guest lecturer, PhD level, <i>Roskilde University, Denmark</i>
2009-2010	Visiting researcher, <i>University of Zagreb</i>
2006	Visiting researcher, <i>Dep. of Energy, Power Engineering and Environment, Roskilde, DTU Risø</i>

EDITORIAL POSITIONS

2020-today	Editor-in-Chief , Smart Energy (Elsevier)
2015-today	Associate Editor , Energy, Ecology and Environment (Springer)
2014-today	Editorial board member , Journal of Energy Storage (Elsevier)
2013-today	Editorial board member , The Journal of Sustainable Development of Energy, Water and Environment Systems – JSDEWES (OAJ)
2013-today	Editor , International Journal of Sustainable Energy Planning and Management (OAJ)
2012-2018	Guest editor , six Special Issues for Energy, The International Journal (Elsevier)
2012-2013	Guest editor , two for Applied Energy (Elsevier)
MANAGEMENT	
2012-today	Research Coordinator , The Sustainable Energy Planning Research Group (30 staff)
2019-2022	Project Coordinator , Quantification of synergies between Energy Efficiency first principle & renewable energy systems (sEEnergies); 6 universities & 3 industrial partners from 7 countries. Horizon 2020; turnover 1.5 M€
2017-2022	Head , RE-Invest: Renewable Energy Investment Strategies (www.reinvestproject.eu); 17 partners from universities, public authorities and industry Denmark, Norway, Germany and the USA; turnover 3.6 M€
2012-2022	Programme Director , MSc in Sustainable Cities programme (25-35 students annually)
2017-2019	Project Coordinator , Heat Roadmap Europe 4 (www.heatroadmap.eu), low-carbon heating & cooling strategies; 14 partners from European universities, public authorities & industry; turnover 2.1M€
2012-2018	Deputy head , 4DH Research Centre (www.4dh.dk); 32 partners from universities & industry in Denmark, Sweden, Croatia and China; turnover 8.5 M€
TEACHING ACTIVITIES, SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS	
2006-today	16 PhD courses at Aalborg University (organiser and/or lecturer)
2009-today	Supervision of 9 PhDs at the Department of Development and Planning (one of which was the winner of the EliteForsk travel grant 2014)
2008-2011	Supervision of 1 PhD, Department of Physics and Energy, University of Limerick, Ireland (winner of the 2010 Globe Forum "Early Careers Research Award", Ireland)
2014-2015	Examiner in PhD Assessment Committees, Aalborg University and University of Zagreb
2009-today	Supervision of master theses (approx. 50), Aalborg University, Denmark
2004-today	Supervision of student projects (approx. 130) and teaching at BSc and MSc level
2009-today	Supervision of 5 international guest researchers and 4 international visiting research trainees
ACADEMIC ADVISORY BOARDS, MEMBERSHIPS & ORGANISATION OF INTERNATIONAL SCIENTIFIC CONFERENCES	
2019-today	Board member, The Danish Energy Technology Development & Demonstration Program (EUDP) .
2017-today	Member of the Danish Academy of Technical Sciences (ATV)
2015-today	Conference chair and organiser of the annual International Conferences on Smart Energy Systems , 4 th Generation District Heating, electrification, electrofuels and energy efficiency, with 300-400 participants from academia & industry
2014-today	Scientific Steering Committee member, International Renewable Energy Storage Conference (IRES), European Association for Renewable Energy EUROSOLAR & World Council for Renewable Energy, organiser of annual conferences with >600 participants from academia & industry
2013-today	Scientific Review Committee member, 8 th -14 th International Renewable Energy Storage Conference and Exhibition (EUROSOLAR – IRES)
2012-today	Management Board Member, International Centre for Sustainable Development of Energy, Water and Environment (SDEWES), organiser of annual conferences with 350-550 academics
2012-today	International Scientific Committee member, International Centre for Sustainable Development of Energy, Water and Environment (SDEWES)
2010-today	Scientific Advisory Board member, International Centre for Sustainable Development of Energy, Water and Environment (SDEWES)
2013-2020	Scientific Award Committee member, 8 th -14 th Conferences on Sustainable Development of Energy, Water and Environment Systems (Dubrovnik) and regional conferences (Lisbon, Novi Sad, Perlermo, Sarajevo, Buenos Aires, Brisbane)
2015	Special session organiser (35 invited papers), 10 th Conference on Sustainable Development of Energy, Water and Environment Systems, "Smart Energy Europe - Challenges and opportunities for a fossil and nuclear free European continent", Dubrovnik, Croatia

2013	Special session organiser (16 invited papers), 8 th Conference on Sustainable Development of Energy, Water and Environment Systems, " <i>Energy System Analysis and Smart Energy Systems (EnergyPLAN)</i> ", Dubrovnik, Croatia
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SCIENTIFIC ADVISORY ACTIVITIES

2019-today	Innovation Fund Denmark. Member of the Climate Solutions Panel
2019-today	Scientific Consultant, solutions for 70% CO ₂ reduction target, Danish Society of Engineers (IDA)
2016-today	Member of the European Commission Expert Group on Electricity Interconnection Targets in the Energy Union
2015-today	Member of UN Sustainable Development Solutions Network Northern Europe (SDSN)
2010-today	Professional university representative in the Smart City/Renewable energy partnership network Gate 21 for companies and public authorities in Greater Copenhagen
2015-2017	Member of Advisory Board members, Smart Energy Transition Project , Academy of Finland
2016-2018	Vice-Chair of the European Commission's Horizon 2020 Advisory Group for Energy (AGE)
2016-2017	Member of Advisory Board, Roadmap for Buildings in Renewable Energy Systems, InnoByg
2015-2016	Scientific Consultant on Renewable Energy Scenarios, Danish Society of Engineers (IDA)
2014	Member of Scientific Advisory Board, Energy for Denmark 2050 Project (DK2050), Danish Architecture Centre (DAC)
2013-2015	Member of Advisory Board, Analyses of the Future Heating System in Greater Copenhagen conducted by HOFOR, CTR and VEKS (district heating utilities in Greater Copenhagen)
2012-2013	Reviewer in the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR), Evaluation of Quality of Research
2010-2012	Scientific Advisor at the Danish Board of Technology on Sustainable Transport Scenarios, technical advisory board for the Danish parliament
2006-2009	Scientific Consultant on Renewable Energy Scenarios, Danish Society of Engineers (IDA)

SELECTED MAJOR COLLABORATIONS AND PROJECTS

2019-today	PI, Quantification of synergies between Energy Efficiency first principle & renewable energy systems (sEEnergies); 6 universities & 3 industrial partners from 7 countries. H2020 funding. Total budget 1.5 M€
2017-today	PI, Renewable Energy Investment Strategies – A two-dimensional interconnectivity approach (RE-Invest); 5 universities, 2 public authorities, a pension fund & 9 industrial partners in Norway, Germany & the USA. Innovation Fund Denmark & industry funding. Total budget 3.6M€
2017-today	Partner, Coordinated operation of integrated energy systems (CORE) 100% renewable energy analyses, 2 universities & 2 industrial partners. EUDP funding. Total budget 1.7 M€
2016-today	Partner, HotMaps , Tools for local heating and cooling strategies. 2 universities & 12 industrial partners. H2020 funding. Total budget 3 M€
2016-today	Partner, Thermos , Thermal modelling, GIS and optimisation. 2 universities & 14 industrial partners. H2020 funding. Total budget 2.9 M€
2016-today	Partner, SmartEnCity , Smart Zero Carbon City concepts for replication and implementation. 2 universities & 33 industrial partners. H2020 funding, Smart Cities lighthouse. Total budget 29M€
2016-2019	PI, Heat Roadmap Europe 4 , 14 country-specific heating & cooling roadmaps (90% of the European demand). 5 universities & 9 industrial partners. H2020 funding. Total budget 2.1 M€
2014-2017	WP leader, CITIES - Strategic Research Centre for IT-Intelligent Energy System in Cities. Decision support & pathways for cities to transform to 100% renewable energy. 5 universities & 35 private partners. Innovation Fund Denmark & industry funding. Total budget 10 M€
2014-2016	Partner, Heat Roadmap Europe 3 Stratego , Impact for Czech Republic, Croatia, Italy, Romania, United Kingdom. 5 universities & 14 private partners. H2020 funding. Danish budget 0.16 M€
2012-2018	Deputy head of the international Strategic Research Centre for 4th Generation District Heating Technologies and Systems for Smart Energy Systems (4DH) . 8 universities & 19 industrial partners in Sweden, Croatia & China. Innovation Fund Denmark & industry funding. Total budget 8.5 M€
2011-2013	Partner, Heat Roadmap Europe 2050 : 1st & 2nd pre-study for EU27/EU28. 2 universities & 3 industrial partners from Germany, Sweden and Belgium. Partly funded by 4DH.
2007-2011	WP leader, CEESA - Coherent Energy and Environmental System Analysis. 100% renewable energy and transport scenarios as well as implementation policies and transition road map. 5 universities & 2 industrial partners. Innovation Fund Denmark Total budget 3 M€.
2005-today	<i>Involved in more than 50 other projects.</i>
