

# Pierre Pinson

## Curriculum Vitae

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Pierre Pinson is internationally recognized as a leading academic in forecasting, (stochastic) optimization and game theory for energy systems and markets, thanks to his multidisciplinary expertise in Operations Research and Management Science, Statistics, Economics, Meteorology and Energy/Electrical Engineering. He has received a number of awards (e.g., IEEE Fellow, ISI/Clarivate Highly-cited Researcher, etc.) and has been a guest at a number of renown institutions (e.g., University of Oxford, Isaac Newton Institute – Cambridge, ECMWF). He is the Editor-in-Chief of the *International Journal of Forecasting*.

## Education and Qualifications

- 2006 Ph.D. Forecasting, Stochastic Optimization, Energy – Ecole des Mines de Paris, France
- 2002 M.Sc. Applied Mathematics – National Institute for Applied Sciences (INSA Toulouse), France

## Employment History

- 2022– **Chair** of Data-centric Design Engineering  
Dyson School of Design Engineering, Imperial College London (UK)
- 2022– **Adjunct Professor** of Operations Research  
Department of Technology, Management and Economics, Technical University of Denmark (DTU)
- 2021–2022 **Professor** of Operations Research  
Department of Technology, Management and Economics, Technical University of Denmark (DTU)
- 2013–2020 **Professor** of Energy Analytics & Markets  
Department of Electrical Engineering, Technical University of Denmark (DTU)
- 2010–2011 **Scientist**, European Centre for Medium-range Weather Forecasts (ECMWF, UK)
- 2008–2013 **Assoc. Prof.**, Department of Applied Mathematics and Computer Science, DTU
- 2006–2008 **Post-doc. fellow**, **Assist. Prof.**, Department of Applied Mathematics and Computer Science, DTU

## Other Positions

- 2019– **Editor-in-Chief**, *International Journal of Forecasting*
- 2019– **Director**, International Institute of Forecasters
- 2021– **Associate Editor**, *OR Spectrum*
- 2021– **Scientific Advisor**, Halspace.ai
- 2019– **Scientific Advisor**, Atmo.ai
- 2014–2019 **Associate Editor**, **Editor** *International Journal of Forecasting*
- 2010–2019 **Editor**, *Wind Energy*
- 2011–2016 **Editor**, *IEEE Transactions on Power Systems* (and *IEEE Power Engineering Letters*)

## Visiting Positions

- 2019 Isaac Newton Institute for Mathematical Sciences, Cambridge, UK (Simons Fellow, 3 months)
- 2016 Ecole Nationale Supérieure, Rennes, France (Visiting Professor, 1 week)
- 2009 University of Washington, Department of Statistics (Visiting Researcher, 2 months)
- 2009 University of Oxford, Mathematical Institute (Visiting Researcher, 1 month)

## Recent Honours and Awards

- 2021 ISI/Clarivate Highly-cited Researcher 2021 (cross-field)
- 2020 ISI/Clarivate Highly-cited Researcher 2020 (cross-field)
- 2020 IEEE Fellow
- 2019 ISI/Clarivate Highly-cited Researcher 2019 (cross-field)
- 2019 Simons Fellowship, Isaac Newton Institute, Cambridge, UK
- 2018 IDA Elektropris
- 2017 Emerald Citation of Excellence, 2017, for highly cited paper in Business and Economics
- 2014 ERC Consolidator Grant application given a grade A (ranked highly after second round, though not funded due to limited budget)

## Impact and Citations

- ISI Web of knowledge: ~7750 (h-index = 47)
- Scopus: ~9600 (h-index = 50)
- Google Scholar: ~16500 (h-index = 65)
- Numerous highly-cited papers (currently 11 in ISI Web of Science, top 1% citations in their field)

## Current Membership

- International Institute of Forecasters (IIF)
- Institute for Operations Research and Management Sciences (INFORMS)
- Institute of Electrical and Electronics Engineers (IEEE)

## Teaching and Education

- 2022 "42586 - Decisions under uncertainty" (B.Sc.)
- 2020–2020 "31762 - Introduction to energy analytics" (B.Sc.)
- 2016–2020 "31765 - Optimization in modern power systems" (M.Sc.)
- 2014–2020 "31761 - Renewables in electricity markets" (M.Sc.)
- 2016 "31xxx - Game theory in electricity markets" (M.Sc./Ph.D.)
- 2016–2020 "31792 - Advanced optimization and game theory for energy systems" (Ph.D.)
- 2015–2020 Leader of the study line "Electric Energy Systems" of the M.Sc. in Sustainable Energy (DTU)
- 2010–2020 Ad-hoc courses in e.g. forecasting, stochastic optimization, etc.

## Service

- **Academic evaluation and recruiting** (15 positions): Masdar Institute of Technology, Aarhus University, Colorado School of Mines, University of Michigan, University College London, Mines ParisTech, Chinese University of Hong Kong, Tallinn University of Technology, UiT (Norway), Tafila Technical University (Jordan), Aalto University (Finland). University of Reading (UK), University of Bath (UK), Dartmouth College (USA)
- **PhD evaluation** (>50 theses): University of Oxford, ETH, EPFL, Monash University, University of Sydney, Mines ParisTech, Aarhus University, Aalborg University, UCD, KTH, CBS, Luleå University, NTNU, Ecole Polytechnique, Toulouse University, Ecole Centrale Paris/Supélec, TU Eindhoven, Bonn University, Rennes University, University of Zaragoza, University of Catalogna, University of Castilla La Mancha, University Politecnica Madrid, University of Innsbruck, University of Thessaloniki, University of Twente, ENS, University Paris-Saclay, University of Copenhagen, Uppsala University, University of Liege, University of Twente, etc.
- **Reviewer for research project proposals**: Academy of Finland, Swedish Research Council, Aut. Province of Bolzano (Austria), FONDECYT, (Chile), ANR (France), FNR (Luxembourg), NWO (The Netherlands), MITACS (Canada), Zhejiang University (China), City University of Hong Kong (China), FNR (Belgium), ETH (Zurich), etc.
- **Reviewer for book proposals**: IET, John Wiley & Sons, Springer, Elsevier
- **Journal referee** for more than 60 journals in operations research and management science, statistics, meteorology, climate science, economics, energy engineering, electrical engineering, environmental engineering
- **Conferences** (Scientific/Programme Committee/Reviewer): PMAPS 2020, PSCC 2020, IEEE PowerTech 2019, PSCC 2018, IEEE PowerTech 2017, PSCC 2016, IEEE PowerTech 2015, ACC 2015, etc.

## Funding

Throughout my academic career, I have received substantial funding from varied sources e.g. national and international research councils, as well as industry directly. Nearly all of these grants were for collaborative research and innovation projects, with partners in both academia and industry. The total external funding I have attracted for my research activities is in the order of 12 M€.

- **Smart4RES** (EU H2020, 2019-2022): New business models in forecasting, e.g. based on distributed learning and data markets.
- **EMBER** (EU H2020, 2019-2022): Proposal and analysis of consumer-centric markets for heat (and electricity).
- **SCA** (EU Interreg H2020, 2017-2020): Focus on energy communities in the Øresund region
- **Best Paths** (EU H2020, 2014-2018): Scalability and benefit assessment of HVDC system deployment over Europe.
- **Ecogrid EU** (EU FP7, 2013-2015): Market concepts proposal and evaluation for the optimal management of demand response.
- **TWENTIES** (EU FP7, 2012-2013): Probabilistic forecasting for Dynamic Line Rating.
- **WIRE** (EU COST, 2011-2015): Participant in renewable energy forecasts benchmarking group, as well as dynamic line rating working group.

- **Wind in Øresund** (EU Interreg, 2008-2012): Education, research and demonstration for the optimal integration of wind energy in the Øresund region. Close collaboration with Lund University, Centre for Mathematical Sciences.
- **SafeWind** (EU FP7, 2008-2012): Coordination of research and development efforts towards new methods for wind power forecasting accounting for spatio-temporal characteristics, regimes, etc.
- **NORSEWinD** (EU FP7, 2008-2012): Research and development efforts for demonstrating benefits of having wind measurements from the North Sea area for improvement of wind power forecasts over the Denmark region.
- **ANEMOS.plus** (EU FP6, 2008-2011): Coordination of the evaluation of the benefits of wind power forecasts and associated uncertainty estimation when used in decision-making
- **Multi-DC** (Danish IF, 2016-2020): Market-based operation of DC links and DC grids with application to the Scandinavian region.
- **The Energy Collective** (Danish ForskEL, 2016-2020): Design and demonstration of consumer centric and community-driven electricity markets based on peer-to-peer exchanges.
- **Ecogrid 2.0** (Danish EUDP, 2016-2018): Market concepts proposal and evaluation for the optimal management of demand response.
- **EnergyLab Nordhavn** (Danish EUDP, 2015-2018): Research and demonstration on integrated market solutions (e.g., heat and electricity) at both wholesale and retail levels.
- **CITIES** (Danish DSF, 2014-2019): Research Centre on IT-Intelligent Energy Systems - Leading work package on Intelligent Aggregation and Markets.
- **PROAIN** (Danish-Chinese IF, 2014-2017): Danish-Chinese collaborative project on active distribution grid management. Large demonstration in China led by Tsinghua University and State Grid Corporation of China
- **'5s' - Future Electricity Markets** (Danish DSF, 2013-2017): Research in the design of future electricity markets, with focus on market clearing mechanisms, better integration of demand and its flexibility, impact on investment, etc.
- **FastWind** (Danish ForskEL, 2011-2013): Fast monitoring and verification of wind turbine and wind farm power curves
- **EaseWind** (Danish ForskEL, 2011-2014): Relevant forecasting products for wind turbines to provide ancillary services in order to support grid operations
- **Radar@Sea** (Danish ForskEL, 2009-2012): Short-term wind (power) forecasting at Horns Rev using real-time data from an onsite Local Area Weather Radar
- **GigaStore - Potential for solar-powered heat storage in Denmark** (Industrial, 2016-2017): Collaborative project with European Energy A/S (Denmark) to model and analyse large-scale renewable heat storage in the Danish market context
- **HD-RESforecasts - High-dimensional modelling and forecasting for renewable energy generation** (Industrial, EDF, 2016-2017): Collaborative project with EDF (France) to develop approaches for high-dimensional forecasting of wind and solar power generation
- **GenScen - Scenario generation for renewable generation in operational and planning studies** (Industrial, EPRI, 2015): Collaborative project with EPRI (US) to produce scenario of renewable energy generation in large dimensions for test cases in the UK and Midwest US
- **Spatio-temporal correction of wind power forecasts** (Industrial, DONG Energy, 2009-2011): Collaborative project with DONG Energy and ENFOR A/S in order to improve wind power forecast accuracy for the DONG wind energy portfolio
- **Impact of stochastic generation on EU cross-border flows** (Industrial, APG Verbund, 2010): Collaborative project with APG Verbund for analysing and demonstrating the effect of wind energy production on the flows over the whole European power system

## Books

1. J.M. Morales, A. Conejo, H. Madsen, **P. Pinson**, M. Zugno (2014). *Integrating renewables in electricity markets: Operational problems*. Springer, International Series in Operations Research and Management Science, vol. 205

## Journal Articles

1. **P. Pinson**, G. Kariniotakis (2004). On-line assessment of prediction risk for wind power production forecasts. *Wind Energy* 7(2), pp. 119-132
2. H. Madsen, **P. Pinson**, T.S. Nielsen, H.Aa. Nielsen, G. Kariniotakis (2005). Standardizing the performance evaluation of short-term wind power prediction models. *Wind Engineering* 29(6), pp. 475-489
3. **P. Pinson**, S. Lozano, I. Marti, G. Kariniotakis, G. Giebel (2007). ViLab: a Virtual Laboratory for collaborative research on wind power forecasting. *Wind Engineering* 31(2), pp. 117-121

4. **P. Pinson**, H.Aa. Nielsen, J.K. Møller, H. Madsen, G. Kariniotakis (2007). Nonparametric probabilistic forecasts of wind power: required properties and evaluation. *Wind Energy* 10(6), pp. 497-516
5. **P. Pinson**, C. Chevallier, G. Kariniotakis (2007). Trading wind generation with short-term probabilistic forecasts of wind power. *IEEE Transactions on Power Systems* 22(3), pp. 1148-1156
6. **P. Pinson**, L.E.A. Christensen, H. Madsen, P.E. Sørensen, M.H. Donovan, L.E. Jensen (2008). Regime-switching modelling of the fluctuations of offshore wind generation. *Journal of Wind Engineering and Industrial Aerodynamics* 96(12), pp. 2327-2347
7. P. Sørensen, N.A. Cutululis, A. Viguera-Rodriguez, H. Madsen, **P. Pinson**, L.E. Jensen, J. Hjerrild, M. Donovan (2008). Modelling of power fluctuations from large offshore wind farms. *Wind Energy* 11(1), pp. 29-43
8. **P. Pinson**, H.Aa. Nielsen, H. Madsen, T.S. Nielsen (2008). Local linear regression with adaptive orthogonal fitting for the wind power application. *Statistics and Computing* 18(1), pp. 59-71
9. B. Klöckl, G. Papaefthymiou, **P. Pinson** (2008). Probabilistic tools for planning and operating power systems with distributed energy storage. *E I Elektrotechnik und Informationstechnik* 125(12), pp. 460-465
10. **P. Pinson**, T.S. Nielsen, H.Aa. Nielsen, N.K. Poulsen, H. Madsen (2009). Temperature prediction at critical points in district heating systems. *European Journal of Operational Research* 194(1), pp. 163-176
11. **P. Pinson**, G. Papaefthymiou, B. Klöckl, H.Aa. Nielsen, H. Madsen (2009). From probabilistic forecasts to statistical scenarios of short-term wind power production. *Wind Energy* 12(1), pp. 51-62
12. **P. Pinson**, H. Madsen (2009). Ensemble-based probabilistic forecasting at Horns Rev. *Wind Energy* 12(2), pp. 137-155
13. **P. Pinson**, H.Aa. Nielsen, H. Madsen, G. Kariniotakis (2009). Skill forecasting from ensemble predictions of wind power. *Applied Energy* 86(7-8), pp. 1326-1334
14. P. Giabardo, M. Zugno, **P. Pinson**, H. Madsen (2010). Feedback, competition and stochasticity in a day-ahead electricity market. *Energy Economics* 32(2), pp. 292-301
15. T. Jónsson, **P. Pinson**, H. Madsen (2010). On the market impact of wind energy forecasts. *Energy Economics* 32(2), pp. 313-320
16. **P. Pinson**, P. McSharry, H. Madsen (2010). Reliability diagrams for nonparametric density forecasts of continuous variables: accounting for serial correlation. *Quarterly Journal of the Royal Meteorological Society* 136(646), pp. 77-90
17. C.L. Vincent, G. Giebel, **P. Pinson**, H. Madsen (2010). Resolving non-stationary spectral signals in wind speed time-series using the Hilbert-Huang transform. *Journal of Applied Meteorology and Climatology* 49(2), pp. 253-267
18. **P. Pinson**, G. Kariniotakis (2010). Conditional prediction intervals of wind power generation. *IEEE Transactions on Power Systems* 25(4), pp. 1845-1856
19. F. Thordarson, H. Madsen, H.Aa. Nielsen, **P. Pinson** (2010). Conditional weighted combination of wind power forecasts. *Wind Energy* 13(8), pp. 751-763
20. J. Tastu, **P. Pinson**, E. Kotwa, H.Aa. Nielsen, H. Madsen (2011). Spatio-temporal analysis and modeling of wind power forecast errors. *Wind Energy* 14(1), pp. 43-60
21. G. Reikard, **P. Pinson**, J. Bidlot (2011). Forecasting ocean waves - The ECMWF wave model and time-series methods. *Ocean Engineering* 38(10), pp. 1089-1099
22. C. Gallego, **P. Pinson**, H. Madsen, A. Costa, A. Cuerva (2011). Influence of local wind speed and direction on wind power dynamics - Application to offshore very short-term prediction. *Applied Energy* 88(11), pp. 4087-4096
23. C.L. Vincent, **P. Pinson**, G. Giebel (2011). Wind fluctuations over the North Sea. *International Journal of Climatology* 31(11), pp. 1584-1595
24. **P. Pinson**, G. Reikard, J. Bidlot (2012). Probabilistic forecasting of the wave energy flux. *Applied Energy* 93, pp. 364-370
25. P.-J. Trombe, **P. Pinson**, H. Madsen (2012). A general probabilistic forecasting framework for offshore wind power fluctuations. *Energies* 5(3), pp. 621-657
26. **P. Pinson**, H. Madsen (2012). Adaptive modeling and forecasting of wind power fluctuations with Markov-switching autoregressive models. *Journal of Forecasting* 31(4), pp. 281-313
27. J.M. Morales, **P. Pinson**, H. Madsen (2012). A transmission-cost-based model to estimate the amount of market-integrable wind resources. *IEEE Transactions on Power Systems* 27(2), pp. 1060-1069
28. **P. Pinson**, R. Girard (2012). Evaluating the quality of scenarios of short-term wind power generation. *Applied Energy* 96, pp. 12-20
29. **P. Pinson** (2012). Very short-term probabilistic forecasting of wind power with generalized logit-Normal distributions. *Journal of the Royal Statistical Society, Series C* 61(4), pp. 555-576
30. **P. Pinson** (2012). Adaptive calibration of  $(u, v)$ -wind ensemble forecasts. *Quarterly Journal of the Royal Meteorological Society* 138(666), pp. 1273-1284
31. **P. Pinson**, R. Hagedorn (2012). Verification of the ECMWF ensemble forecasts of wind speed against analyses and observations. *Meteorological Applications* 13(4), pp. 484-500

32. T. Jónsson, **P. Pinson**, H.Aa. Nielsen, H. Madsen, T.S. Nielsen (2013). Forecasting day-ahead electricity prices accounting for the impact of wind power generation. *IEEE Transactions on Sustainable Energy* 4(1), pp. 210-218
33. O. Corradi, H. Ochsenfeld, H. Madsen, **P. Pinson** (2013). Controlling electricity consumption by forecasting its response to varying prices *IEEE Transactions on Power Systems* 28(1), pp. 421-429
34. M. Zugno, J.M. Morales, **P. Pinson**, H. Madsen (2013). A bilevel model for electricity retailers participation in a demand response market environment. *Energy Economics* 36, pp. 182-197
35. S. Alessandrini, S. Sperati, **P. Pinson** (2013). A comparison between the ECMWF and COSMO Ensemble Prediction Systems applied to short-term wind power forecasting. *Applied Energy* 107, pp. 271-280
36. M. Zugno, J.M. Morales, **P. Pinson**, H. Madsen (2013). Pool strategy of a price-maker wind power producer. *IEEE Transactions on Power Systems* 28(3), pp. 3440-3450
37. M. Zugno, T. Jónsson, **P. Pinson** (2013). Trading wind energy on the basis of probabilistic forecasts of both wind generation and market quantities. *Wind Energy* 16(6), pp. 909-926
38. C. Wan, Z. Xu, **P. Pinson** (2013). Direct interval forecasting of wind power. *IEEE Transactions on Power Systems (Power Engineering Letters)* 28(4), pp. 4877-4878
39. M. Zugno, **P. Pinson**, H. Madsen (2013). The impact of wind power on European cross-border power flows. *IEEE Transactions on Power Systems* 28(4), pp. 3566-3575
40. G. Dorini, **P. Pinson**, H. Madsen (2013). Chance-constrained optimization of demand response to price signals. *IEEE Transactions on Smart Grid* 4(4), pp. 2072-2080
41. **P. Pinson** (2013). Wind energy: Forecasting challenges for its optimal management. *Statistical Science* 28(4), pp. 564-585 (invited)
42. P.-J. Trombe, **P. Pinson**, H. Madsen (2014). Automatic classification of offshore wind regimes with weather radar observations. *IEEE Journal of Selected Topics in Earth Observations and Remote Sensing* 7(1), pp. 116-125
43. T. Hong and co-authors (2014). Guest editorial: Special section on analytics for energy forecasting with applications to smart grid. *IEEE Transactions on Smart Grid* 5(1), pp. 399-401
44. J. Tastu, **P. Pinson**, P.-J. Trombe, H. Madsen (2014). Probabilistic forecasts of wind power generation accounting for geographically dispersed information. *IEEE Transactions on Smart Grid* 5(1), pp. 480-489
45. J.M. Morales, M. Zugno, S. Pineda, **P. Pinson** (2014). Electricity market clearing with improved dispatch of stochastic producers. *European Journal of Operational Research* 235(3), pp. 765-774
46. J.M. Morales, M. Zugno, S. Pineda, **P. Pinson** (2014). Redefining the merit order of stochastic generation in forward markets. *IEEE Transactions on Power Systems (Power Engineering Letters)* 29(2), pp. 992-993
47. **P. Pinson** (2014). Comments on: Space-time wind speed forecasting for improved power system dispatch. *TEST* 23(1), pp. 26-29
48. T. Hong, **P. Pinson**, S. Fan (2014). Global Energy Forecasting Competition 2012 (GEFCom2012). *International Journal of Forecasting* 30(2), pp. 357-363
49. C. Wan, Z. Xu, **P. Pinson**, Z.Y. Dong, K.P. Wong (2014). Probabilistic forecasting of wind power generation using extreme learning machine. *IEEE Transactions on Power Systems* 29(3): pp. 1033-1044 (invited)
50. C. Wan, Z. Xu, **P. Pinson**, Z.Y. Dong, K.P. Wong (2014). Optimal prediction intervals of wind power generation. *IEEE Transactions on Power Systems* 29(3), pp. 1166-1174
51. T.I. Petroliaigis, **P. Pinson** (2014). Early warnings of extreme winds utilising the ECMWF Extreme Forecast Index. *Meteorological Applications* 21(2), pp. 171-185
52. T. Jónsson, **P. Pinson**, H.Aa. Nielsen, H. Madsen (2014). Exponential smoothing approaches for prediction in real-time electricity markets. *Energies* 7(6), pp. 3710-3732
53. **P. Pinson**, J. Tastu (2014). Discussion of "Prediction intervals for short-term wind farm generation forecasts" and "Combined nonparametric prediction intervals for wind power generation". *IEEE Transactions on Sustainable Energy* 5(3), pp. 1018-1019
54. C. Zhang, Y. Ding, N.C. Nordentoft, **P. Pinson**, J. Østergaard (2014). FLECH - A Danish market solution for DSO congestion management through DER flexibility services. *Journal of Modern Power System and Clean Energy* 2(2), pp. 126-133
55. N. O'Connell, **P. Pinson**, H. Madsen, M. O'Malley (2014). Benefits and challenges of electric demand response: A critical review. *Renewable & Sustainable Energy Reviews* 39, pp. 686-699
56. T. Jónsson, **P. Pinson**, H.Aa. Nielsen, H. Madsen (2014). Density forecasting of day-ahead electricity prices using time-adaptive quantile regression. *Energies* 7(9), pp. 5523-5547
57. P.-J. Trombe, **P. Pinson**, et al. (2014). Weather radars - the new eyes of offshore wind farms. *Wind Energy* 17(11), pp. 1767-1787
58. H.M.I. Pousinho, J. Contreras, **P. Pinson**, V.M.F. Mendes (2015). Offering strategies for hybrid concentrated solar-fossil power plants through robust optimization. *International Journal of Electric Power and Energy Systems* 67, pp. 639-650
59. **P. Pinson**, M. O'Malley (2015). Foreword for the special section on wind and solar energy: uncovering and accommodating their impacts on electricity markets. *IEEE Transactions on Power Systems* 30(3), pp. 1557-1559

60. S. Sperati, S. Alessandrini, **P. Pinson**, G. Kariniotakis (2015). The “WIRE” benchmarking exercise on short-term forecasting models for renewable power generation. *Energies* 8(9), pp. 9594-9619
61. A. Staid, **P. Pinson**, S.D. Guikema (2015). Probabilistic maximum-value wind prediction for offshore environments. *Wind Energy* 18(10), pp. 1725-1738
62. A. Michiorri, H.M. Nguyen, S. Alessandrini, J.B. Bremnes, S. Dierer, E. Ferrero, B.E. Nygaard, **P. Pinson**, N. Thomaidis, S. Uski-Joutsenvuo (2015). Forecasting for dynamic line rating. *Renewable & Sustainable Energy Reviews* 52, pp. 1713-1730
63. H. Ding, **P. Pinson**, Z. Hu, Y. Song (2016). Integrated bidding and operating strategies for wind farms enhanced with storage. *IEEE Transactions on Sustainable Energy* 7(1), pp. 163-172
64. Z. Ben Bouallègue, **P. Pinson**, P. Friederichs (2016). Quantile forecast discrimination ability and value. *Quarterly Journal of the Royal Meteorological Society* 141(693), pp. 3415-3424
65. G. He, Q. Chen, C. Kang, **P. Pinson**, Q. Xia (2016). Optimal bidding strategy of battery storage in power markets considering performance based regulation and battery cycle life. *IEEE Transactions on Smart Grid* 7(5), pp. 2359-2367
66. J. Dowell, **P. Pinson** (2016). Very-short-term probabilistic wind power forecasts by sparse vector autoregression. *IEEE Transactions on Smart Grid* 7(2), pp. 763-770
67. N. O’Connell, **P. Pinson**, H. Madsen, M. O’Malley (2016). Economic dispatch of demand-side balancing through asymmetric block offers. *IEEE Transactions on Power Systems* 31(4), pp. 2999-3007
68. N. Davis, **P. Pinson**, A. Hahmann, N.-E. Clausen, M. Zagar (2016). Identifying and characterizing the impact of turbine icing on wind farm power generation. *Wind Energy* 19(8), pp. 1503-1518
69. W.A. Bukhsh, C. Zhang, **P. Pinson** (2016). A multiperiod OPF model under renewable generation uncertainty and demand-side flexibility. *IEEE Transactions on Smart Grid* 7(3), pp. 1495-1503
70. L. Exizidis, J. Kazempour, **P. Pinson**, Z. De Greve, F. Vallée (2016). Sharing wind power forecasts in electricity markets: A numerical analysis. *Applied Energy* 176, pp. 65-73
71. F. Golestaneh, **P. Pinson**, H.B. Gooi (2016). Generation and evaluation of space-time trajectories of photovoltaic generation. *Applied Energy* 176, pp. 80-91
72. C. Zhang, Q. Wang, J. Wang, M. Korpås, **P. Pinson**, J. Østergaard, M.E. Khodayar (2016). Trading strategies for distribution company with stochastic distributed energy resources. *Applied Energy* 177, pp. 625-635
73. T. Soares, **P. Pinson**, T.V. Jensen, H. Morais (2016). Optimal offering strategies for wind power in energy and primary reserve markets. *IEEE Transactions on Sustainable Energy* 7(3), pp. 1036-1045
74. H. Ding, **P. Pinson**, Z. Hu, Y. Song (2016). Optimal offering for wind-storage systems using linear decision rules. *IEEE Transactions on Power Systems* 31(6), pp. 5061-5070
75. S. Delikaraoglou, J.M. Morales, **P. Pinson** (2016). Impact of inter- and intra-regional coordination in markets with a large renewable component. *IEEE Transactions on Power Systems* 31(6), pp. 4755-4764
76. A. Papakonstantinou, **P. Pinson** (2016). Information uncertainty in electricity markets: Introducing probabilistic offers. *IEEE Transactions on Power Systems* 31(6), pp. 5202-5203
77. M. Xu, **P. Pinson**, Z. Lu, Y. Qiao, Y. Min (2016). Adaptive robust polynomial regression for power curve modeling with application to wind power forecasting. *Wind Energy* 19(12), pp. 2321-2336
78. Z. Ben Bouallègue, T. Heppelmann, S. Theis, **P. Pinson** (2016). Generation of scenarios from calibrated ensemble forecasts with a dynamic ensemble copula coupling approach. *Monthly Weather Review* 31(5), pp. 4737-4750
79. F. Golestaneh, **P. Pinson**, H.B. Gooi (2016). Very short-term nonparametric probabilistic forecasting of renewable energy generation - with application to solar energy. *IEEE Transactions on Power Systems* 31(5): 3850-3863
80. T. Hong, **P. Pinson**, S. Fan, H. Zareipour, A. Troccoli, R. Hyndman (2016). Probabilistic energy forecasting: Global Energy Forecasting Competition 2014 and beyond. *International Journal of Forecasting* 32(3), pp. 896-913
81. P. Wang, F. Wen, **P. Pinson**, J. Østergaard (2017). A ranking method for peak load shifting considering different types of data. *ASCE Journal of Energy Engineering* 142(4), art. no. 04016016
82. Y. Zhan, Q.P. Zheng, J. Wang, **P. Pinson** (2017). Decision-dependent stochastic generation expansion planning with large amounts of wind power *IEEE Transactions on Power Systems* 32(4): 3015-3026
83. **P. Pinson**, L. Mitridati, C. Ordoudis, J. Østergaard (2017). Towards fully renewable energy systems – Experience and trends in Denmark. *CSEE Journal of Power and Energy Systems* 3(1): 26-35
84. E.M. Larsen, **P. Pinson**, F. Leimgruber, F. Judex (2017). From demand response evaluation to forecasting - Methods and results from the EcoGrid EU experiment. *Sustainable Energy, Grids and Networks* 10: 75-83
85. F. Bona, N. Gast, J.-Y. Le Boudec, **P. Pinson**, D. Tomozei (2017). Attribution mechanisms for ancillary service costs induced by variability in power delivery. *IEEE Transactions on Power Systems* 32(3): 1891-1901
86. H. Ding, **P. Pinson**, Z. Hu, J. Wang, Y. Song (2017). Optimal offering and operating strategy for a large wind-storage system as a price maker. *IEEE Transactions on Power Systems* 32(6): 4904-4913
87. T.V. Jensen, **P. Pinson** (2017). RE-Europe: a large-scale dataset for a future renewable-energy based European power system. *Nature, Scientific Data* 4, art. no. 170175
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158. L. Frölke, T. Sousa, **P. Pinson** (2021). A network-aware market mechanism for decentralized district heating systems. *Applied Energy* 306(A), art. no. 117956
159. A. Tosatto, F. Moret, T. Baroche, **P. Pinson** (2021). Loss allocation in joint transmission and distribution peer-to-peer markets. *IEEE Transactions on Power Systems* 36(3), pp 1833-1842
160. V. Dvorkin Jr., F. Fioretto, P. Van Hentenryck, J. Kazempour, **P. Pinson** (2021). Differentially-private optimal power flow for distribution grids. *IEEE Transactions on Power Systems*, in press/available online
161. V. Dvorkin, A. Ratha, **P. Pinson**, J. Kazempour (2021). Stochastic control and pricing for natural gas networks. *IEEE Transactions on Control of Networked Systems*, in press/available online
162. Z. Guo, **P. Pinson**, S. Chen, Q. Yang, Z. Yang (2021). An asynchronous online negotiation mechanism for real-time peer-to-peer electricity markets. *IEEE Transactions on Power Systems*, in press/available online
163. F. Petropoulos and co-authors (2021). Forecasting: Theory and practice. *International Journal of Forecasting*, in press/available online

### Submitted & Working Papers

164. A. Ratha, **P. Pinson**, H. Le Cadre, A. Virag, J. Kazempour (2021). Moving from linear to conic markets for electricity
165. A. Tosatto, X. M. Beseler, J. Østergaard, P. Pinson, S. Chatzivasileiadis (2021). North Sea energy islands: Impact on national markets and grids
166. **P. Pinson**, L. Han, J. Kazempour (2021). Regression markets and application to energy forecasting
167. H. Wen, **P. Pinson**, J. Ma, J. Gue, Z. Jin (2021) Continuous and distribution-free probabilistic wind power forecasting

### Conference Publications (peer-reviewed)

1. **P. Pinson**, G. Kariniotakis (2003). Wind power forecasting using fuzzy-neural networks enhanced with on-line prediction risk assessment. IEEE PowerTech Conference 2003, Bologna, Italy
2. **P. Pinson**, G. Kariniotakis (2003). On-line assessment of prediction risk for wind power production forecasts. European Wind Energy Conference 2003, Madrid, Spain
3. G. Kariniotakis, **P. Pinson** (2004). Uncertainty of short-term wind power forecasts - A methodology for on-line assessment. PMAPS 2004, IEEE Conference, 'Probabilistic Methods Applied to Power Systems', pp. 729-736, Ames, Iowa (USA), pp. 729-736 (invited)
4. **P. Pinson**, G. Kariniotakis, D. Mayer (2004). Uncertainty and prediction risk assessment of short-term wind power forecasts. EAWC Conference 2004, 'The science of making torque from wind', Delft, The Netherlands
5. **P. Pinson**, H.Aa. Nielsen, T.S. Nielsen, H. Madsen, G. Kariniotakis (2006). Properties of interval and quantile forecasts of wind generation and their evaluation. European Wind Energy Conference 2006, Athens, Greece

6. **P. Pinson**, J. Juban, G. Kariniotakis (2006). On the quality and value of probabilistic forecasts of wind generation. PMAPS 2006, IEEE Conference, 'Probabilistic Methods Applied to Power Systems', Stockholm, Sweden, June 2006, pp. 1-7 (*invited*)
7. **P. Pinson**, G. Papaefthymiou, B. Klockl, H.Aa. Nielsen (2007). Generation of statistical scenarios of short-term wind power production. IEEE PowerTech Conference 2007, Lausanne, Switzerland
8. **P. Pinson**, H.Aa. Nielsen, H. Madsen, G. Kariniotakis (2007). Skill forecasting from different wind power ensemble prediction methods. J. Phys.: Conf. Ser. 75 012046, The 2nd Conference on 'The Science of Making Torque from Wind', Lyngby, Denmark
9. **P. Pinson**, H. Madsen, P.E. Sørensen, J.R. Kristoffersen, L.E. Jensen (2008). Forecasting the potential magnitude of power fluctuations at large offshore wind farms with an adaptive Markov-switching approach. EWEC'08, European Wind Energy Conference, Scientific Track, Brussels, Belgium
10. B. Klöckl, G. Papaefthymiou, **P. Pinson** (2008). Probabilistic tools for planning and operating power systems with distributed energy storage. CIGRE 2008, Paris, France
11. G. Papaefthymiou, **P. Pinson** (2008). Modeling of spatial dependence in wind power forecasting uncertainty. PMAPS 2008, IEEE Conference, 'Probabilistic Methods Applied to Power Systems', Puerto Rico (*invited*)
12. **P. Pinson**, H. Madsen (2008). Probabilistic forecasting of wind power at the minute time-scale with Markov-switching autoregressive models. PMAPS 2008, IEEE Conference, 'Probabilistic Methods Applied to Power Systems', Puerto Rico
13. **P. Pinson**, H. Madsen, H.Aa. Nielsen, T.S. Nielsen, N.K. Poulsen (2008). Modeling the nonlinear temperature response of district heating systems for model predictive control applications. 11th Annual Symposium on District Heating and Cooling, Reykjavik, Iceland
14. C.L. Vincent, G. Giebel, **P. Pinson** (2009). Characterisation of wind variability at the Horns Rev wind farm. EWEC'09, European Wind Energy Conference, Scientific Track, Marseille, France
15. **P. Pinson**, G. Papaefthymiou, B. Klöckl, J. Verboomen (2009). Dynamic sizing of energy storage for hedging wind power forecast uncertainty. IEEE Power Engineering Society General Meeting 2009, Calgary, Canada
16. B. Klöckl, **P. Pinson** (2009). Effects of increasing wind power penetration on the physical operation of large electricity market systems. IEEE/CIGRE symposium 2009, Calgary, Canada
17. J. Tastu, **P. Pinson**, H. Madsen (2010). Multivariate conditional parametric models for the spatio-temporal analysis of wind power forecast errors. EWEC'10, European Wind Energy Conference, Scientific Track, Warsaw, Poland
18. S. Alessandrini, **P. Pinson**, R. Hagedorn, G. Decimi, S. Sperati (2010). An application of ensemble/multi model approach for wind power production forecasting. 10th EMS Conference, European Meteorological Society, Zurich, Switzerland
19. **P. Pinson** (2011). Ensemble and probabilistic forecasting of  $(u, v)$ -wind for the energy application. 11th EMS Annual Meeting and 10th European Conference on Applied Meteorology (ECAM), Berlin, Germany (*invited*)
20. S. Alessandrini, **P. Pinson**, S. Sperati, G. Decimi (2011). The influence of the new ECMWF Ensemble Prediction System resolution on wind power forecast accuracy and uncertainty estimation. 11th EMS Annual Meeting and 10th European Conference on Applied Meteorology (ECAM), Berlin, Germany
21. A. Bossavy, R. Girard, N. Siebert, **P. Pinson**, G. Kariniotakis (2011). Forecasting uncertainty around the timing of large variation of wind power. 11th EMS Annual Meeting and 10th European Conference on Applied Meteorology (ECAM), Berlin, Germany (*Outstanding Poster Award*)
22. P.-J. Trombe, **P. Pinson**, H. Madsen, N.E. Jensen, L.B. Pedersen, A. Sommer, N.F. Le (2011). Can weather radars help monitoring and forecasting wind power fluctuations at large offshore wind farms? 10th International Workshop on Large-Scale Integration of Wind Power and Transmission Networks, Aarhus, Denmark
23. **P. Pinson**, T. Jónsson, M. Zugno, J.M. Morales, H. Madsen, B. Klöckl (2012). Statistical analysis of the impact of wind power on market quantities and power flows. IEEE Power Engineering Society General Meeting 2012, San Diego, California, US (*invited*)
24. J. Tastu, **P. Pinson**, H. Madsen (2012). Spatio-temporal correction of wind power probabilistic forecasts. 11th International Workshop on Large-Scale Integration of Wind Power and Transmission Networks, Lisbon, Portugal
25. S. Alessandrini, S. Sperati, C. Diego, A. Pitto, **P. Pinson** (2012). An application and verification of ensemble forecasting of wind power to calculate operational risk indices for power grids. 11th International Workshop on Large-Scale Integration of Wind Power and Transmission Networks, Lisbon, Portugal
26. B. Barahona, P.-J. Trombe, N.A. Cutululis, **P. Pinson** (2013). Regime-based control to reduce power fluctuations from offshore wind power plants. IEEE PowerTech Conference 2013, Grenoble, France
27. S. Delikaraoglou, K. Heussen, **P. Pinson** (2014). Operational strategies for activation of control reserves in view of stochastic generation. PSCC 2014, Wroclaw, Poland
28. S. Delikaraoglou, **P. Pinson**, R. Eriksson, T. Weckesser (2015) Optimal dynamic capacity allocation of HVDC interconnections for cross-border exchange of balancing services in presence of uncertainty. CIGRE Symposium "Across-borders HVDC systems and electricity markets", Lund, Sweden
29. S. Delikaraoglou, A. Papakonstantinou, C. Ordoudis, **P. Pinson** (2015). Price-maker wind power producer participating in a joint day-ahead and real-time market. 12th IEEE International Conference European Energy Market, Lisbon, Portugal

30. E.M. Larsen, **P. Pinson**, G. Le Ray, G. Giannopoulos (2015). Demonstration of market-based real-time electricity pricing on a congested feeder. 12th IEEE International Conference European Energy Market, Lisbon, Portugal
31. C. Ordoudis, M. Zugno, **P. Pinson**, J.M. Morales (2015). Stochastic unit commitment via progressive hedging - Extensive analysis of solution methods. IEEE PowerTech Conference 2015, Eindhoven, The Netherlands
32. W.A. Bukhsh, A. Papakonstantinou, **P. Pinson** (2016). A robust optimisation approach using CVaR for unit commitment in a market with probabilistic offers. IEEE International Energy Conference 2016 (EnergyCon), Leuven, Belgium
33. C. Ordoudis, **P. Pinson** (2016). Impact of renewable energy forecast imperfections on market-clearing outcomes. IEEE International Energy Conference 2016 (EnergyCon), Leuven, Belgium.
34. E. Mocanu, H. Phuong Nguyen, M. Gibescu, E.M. Larsen, **P. Pinson** (2016). Demand forecasting at low aggregation levels using factored conditional restricted Boltzmann machine. 19th Power Systems Computation Conference (PSCC), Genoa, Italy
35. J. Kazempour, **P. Pinson** (2016). Effects of risk aversion on market outcomes: A stochastic two-stage equilibrium model. IEEE Probabilistic Methods Applied to Power Systems (PMAPS) 2016, Beijing, China
36. **P. Pinson** (2016). Introducing distributed learning approaches in wind power forecasting. IEEE Probabilistic Methods Applied to Power Systems (PMAPS) 2016, Beijing, China
37. L. Mitridati, **P. Pinson** (2016). Optimal coupling of heat and electricity systems: A stochastic hierarchical approach. IEEE Probabilistic Methods Applied to Power Systems (PMAPS) 2016, Beijing, China
38. A. Papakonstantinou, **P. Pinson** (2016). Population dynamics for renewables in electricity markets: A minority game view. IEEE Probabilistic Methods Applied to Power Systems (PMAPS) 2016, Beijing, China
39. N. Mazzi, **P. Pinson** (2016). Purely data-driven approaches to trading of renewable energy generation. European Electricity Market Conference (EEM) 2016, Porto, Portugal
40. E.B. Iversen, I. Arduin, **P. Pinson** (2016). RESGen: Renewable Energy Scenario Generation platform. IEEE PES General Meeting, Boston (MA), USA
41. L. Exizidis, J. Kazempour, **P. Pinson**, Z. de Greve, F. Vallee (2016). Strategic wind power trading considering rival wind power production. IEEE PES Innovative Smart Grid Technologies (ISGT) – Asia, Melbourne, Australia
42. C. Ordoudis, S. Delikaraoglou, **P. Pinson**, J. Kazempour (2017). Exploiting flexibility of coupled electricity and natural gas markets: A price-based approach. IEEE PowerTech 2017 Conference, Manchester, UK
43. L. Halilbasic, S. Chatzivasileiadis, **P. Pinson** (2017). Coordinating flexibility under uncertainty in multi-area AC and DC grids. IEEE PowerTech Conference 2017, Manchester, UK
44. N. Vespermann, S. Delikaraoglou, **P. Pinson** (2017). Offering strategy of a price-maker energy storage system in day-ahead and balancing markets. IEEE PowerTech Conference 2017, Manchester, UK
45. F. Thams, L. Halilbasic, **P. Pinson**, S. Chatzivasileiadis, R. Eriksson (2017). Data-driven security-constrained OPF. IREP Conference 2017, Porto, Portugal
46. F. Moret, T. Baroche, E. Sorin, **P. Pinson** (2018). Negotiation algorithms for peer-to-peer electricity markets: Computational properties. PSCC Conference 2018, Dublin, Ireland
47. L. Bobo, S. Delikaraoglou, N. Vespermann, J. Kazempour, **P. Pinson** (2018). Offering strategy of an aggregator in a flexibility balancing market using asymmetric block offers. PSCC Conference 2018, Dublin, Ireland
48. L. Halilbasic, F. Thams, A. Venzke, S. Chatzivasileiadis, **P. Pinson** (2018). Data-driven security-constrained AC-OPF for operations and markets. PSCC Conference 2018, Dublin, Ireland
49. G. Le Ray, M. H. Christensen, **P. Pinson** (2019). Detection and characterization of domestic heat pumps. IEEE PowerTech Conference, Milano, Italy
50. M. H. Christensen, **P. Pinson** (2019). Data-driven learning from dynamic pricing data – Classification and forecasting. IEEE PowerTech Conference, Milano, Italy
51. A. Schwele, C. Ordoudis, J. Kazempour, **P. Pinson** (2019). Coordination of power and natural gas systems: Convexification approaches for linepack modeling. IEEE PowerTech Conference, Milano, Italy
52. C. Kok, J. Kazempour, **P. Pinson** (2019). A DSO-Level contract market for conditional demand response. IEEE PowerTech Conference, Milano, Italy
53. A. M. Radoszynski, V. Dvorkin, **P. Pinson** (2019). Accommodating bounded rationality in pricing demand response. IEEE PowerTech Conference, Milano, Italy
54. T. Baroche, F. Moret, **P. Pinson** (2019). Prosumer markets: A unified formulation. IEEE PowerTech Conference, Milano, Italy

## Book Chapters

- 1 **P. Pinson**, G. Giebel, N.-E. Clausen (2013). Onshore and offshore wind energy. In: R. Pielke, G. Kallos (eds.), *Reference Module in Earth Systems and Environmental Sciences* (Elsevier), from *Climate Vulnerability*, pp. 53-64
- 2 **P. Pinson**, P. McSharry, R. Girard (2013). Stochastic power generation. In: H.H. Larsen and L.S. Petersen (eds.), *DTU International Energy Report 2013: Energy storage options for future sustainable energy systems*, pp. 24-28

3. J. Tastu, **P. Pinson**, H. Madsen (2015). Space-time trajectories of wind power generation: Parametrized precision matrices under a Gaussian copula approach. *Lecture Notes in Statistics: Modeling and Stochastic Learning for Forecasting in High Dimension*, Springer, pp. 267-296
4. R. Bessa, J. Dowell, **P. Pinson** (2015). Renewable energy forecasting. *Smart Grid Handbook*, Wiley, pp. 1-21
5. N. Mazzi, **P. Pinson** (2017). Wind power in electricity markets and the value of forecasting. *Renewable Energy Forecasting - From Models to Applications*, Elsevier, pp. 259-278
6. **P. Pinson**, J. Messner (2017). Application of post-processing for renewable energy. *Statistical Processing of Ensemble forecasts*, Elsevier
7. **P. Pinson**, F. Moret, T. Baroche, A. Papakonstantinou (2020). Negotiation approaches for sharing systems - From pool-based to peer-to-peer. *Control and Optimization Analytics for the Sharing Economy - New Opportunities for Engineers and Mathematicians*, Springer

### Broader Readership

1. **P. Pinson**, G. Giebel, H. Madsen (2008). Forecasting of wind generation - The wind power of tomorrow on your screen today! *WindTech International* 4(8), pp. 32-35
2. T.I. Petroligis, **P. Pinson** (2012). Early indication of extreme winds utilising the Extreme Forecast Index. *ECMWF Newsletter* 132, pp. 13-19
3. **P. Pinson**, H. Madsen (2013). Forecasting the conditional dynamic elasticity of electricity consumers. *ERCIM News* 92, pp. 11
4. **P. Pinson** (2013). Prévoir l'électricité produite par nos énergies renouvelables (in French). *Mathematics for Planet Earth (Mathématiques de la planète Terre)*, "Un jour, une brève", [mpt2013.fr](http://mpt2013.fr)
5. **P. Pinson** (2013). Rendre la consommation d'électricité plus flexible et contrôlable (in French). *Mathematics for Planet Earth (Mathématiques de la planète Terre)*, "Un jour, une brève", [mpt2013.fr](http://mpt2013.fr)
6. S. Cros, **P. Pinson** (2018). Le défi météorologique des énergies solaire et éolienne pour les énergies renouvelables. *La Revue des Mines*

### Invited/Keynote Talks (selection)

- Now that we are getting so much data, what do we do with it?, Probabilistic Methods Applied to Power Systems Conference, 2020
- Big data analytics in future electricity grids. Power Systems Computation Conference, July, 2020
- Recent problems in renewable energy forecasting: towards high-dimensional problems. University of East Anglia, March 2019
- Show me your forecast, I will show you mine! Are we going towards energy data markets? University of Waterloo, October 2018
- Community and peer-to-peer electricity markets. UCD, Ireland, September 2018
- Community and peer-to-peer electricity markets. MIT, USA, April 2018
- Community and peer-to-peer electricity markets. University of Oxford, UK, November 2017
- Wind power forecasting: Nonlinearity, dimensionality and sharing aspects. ISF 2017, Cairns, Australia
- High-dimensional modelling and forecasting for wind power generation. Monash University, June 2017
- Post-processing of ensemble forecasts for renewable energy applications. Meteo-France, May 2017
- Prosumer-centric electricity markets - Is that where digitization is taking us? UVIG US-Denmark workshop, May 2017
- Renewables in electricity markets - Coordination and offering problems. Institut Henri Poincaré, April 2017
- Show me your forecast, I will show you mine! Are we going towards energy data markets? EDF, April 2017
- Prosumer-centric electricity markets - Energy collectives and peer-to-peer exchanges. ETH Zurich, April 2017
- Towards future electricity markets with large penetration of renewable generation. ETH Zurich, October 2015
- Towards future electricity markets with large penetration of renewable generation. TU Eindhoven, May 2015
- Modelling of high-dimensional space-time dynamics of renewables. Université Paris 7, January 2015
- Towards the usage of new large datasets for renewable energy applications. University of Bonn, December 2014
- Offshore wind power fluctuations - Modelling and forecasting. Tsinghua University, October 2014

- Stochastic renewable energy generation in electricity markets - Forecasting and optimization challenges. University of Hong Kong, October 2014
- The value of probabilistic information for energy applications - from theory to reality. German Weather Service (DWD), October 2013
- Future electricity markets dominated by stochastic drivers. IEEE ISGT 2013, DTU
- Discrimination ability of the Energy score(s). University of Heidelberg, October 2013
- Renewable energy forecasts ought to be probabilistic! WIPFOR - Forecasting for the energy industry, Paris, June 2013
- Stochastic power generation from renewables: forecasting and optimization challenges for its optimal integration. Energy Systems Week, Cambridge (UK), April 2013
- Probability forecasting for energy: minutes to months. National meeting of the Royal Meteorological Society, Imperial College, London, UK, October 2012
- Wind power in markets and power systems: the contribution of meteorology? Seminar Series, University of Reading, Department of Meteorology, October 2012
- Integration of wind and solar energy through joint prediction. TRES project workshop, Las Palmas, Spain, September 2012
- The most promising sources: wind, solar, waves. Marcus Evans - Strategic Weather Risk Management for the Energy Industry, Amsterdam, May 2011
- Point, probabilistic or scenario forecasts of wind power generation? Seminar Series, University of Castilla La Mancha, November 2010
- Probabilistic forecasting of wind power generation: the points of view of forecasters and of forecast users. University of Washington, April 2009
- Regime-switching dynamics and nonstationarity of wind speed/power time-series. Texas A&M, April 2009
- Dynamics of a market significantly penetrated by wind power. Vinddag 2008, November 2008.
- Selected topics related to wind power modeling, forecasting and decision-making - Nonlinearity and nonstationarity. Lund University, November 2008
- Uncertainty: how to quantify it... and how to use it. in Workshop: 'Best practice in the use of short-term forecasting of wind power', Delft, October 2006

## Ph.D. Students

- Amandine Pierrot: *Renewable energy forecasting* (2020-...)
- Linde Frölke: *Community-based and peer-to-peer markets for integrated energy systems* (2019-...)
- Benedikt Sommer (with K. Holst): *High-dimensional time series forecasting for empty container repositioning problems* (2019-...)
- Anubhav Ratha (with J. Kazempour and A. Virag): *Market mechanisms for integrated energy system management* (2018-...)
- Andrea Tosatto (with S. Chatzivasileiadis): *Optimization and market integration of multi-area AC/HVDC grids under uncertainty* (2021)
- Vladimir Dvorkin (with J. Kazempour): *Advanced game-theoretical problems in future electricity markets* (2021)
- Anna Schwele (with J. Kazempour): *Market mechanisms for integrated energy system management* (2020)
- Andreas Venzke (with S. Chatzivasileiadis): *Optimization, operation and control for AC-DC grids* (2020)
- Thomas Baroche (with ENS Rennes): *Peer-to-peer and community-driven electricity markets: grid costs and operations* (2020)
- Fabio Moret (with Thanasis Papakonstantinou): *Peer-to-peer and community-driven electricity markets: market design and operations* (2020)
- Morten H. Christensen: *Predicting and mobilizing energy flexibility in intelligent buildings* (2020)
- Lejla Halilbasic (with S. Chatzivasileiadis): *Impact of HVDC on the European power system* (2019)
- Guillaume Le Ray (with O. Winther): *Profiling and detection problems with dynamic smart metering data streams* (2019)

- Lesia Mitridati (with J. Kazempour): *Market-based approaches to the coordination of heat and electricity systems* (2019)
- Christos Ordoudis (with J. Kazempour and J.M. Morales): *Market-based approaches to the coordination of gas and electricity systems* (2018)
- Nicolò Mazzi: *Optimal offering and operating strategies in electricity markets* (2017)
- Tue V. Jensen: *Systemic aspects of highly renewable energy markets* (2017)
- Amanda Lenzi (with B. Ersbøll): *Statistical modelling of space-time processes with applications in meteorological and renewable energy forecasting* (2017)
- Tiago Soares (with H. Morais): *Energy and ancillary services in future electricity markets* (2017)
- Stefanos Delikaraoglou (with K. Heussen and J.M. Morales): *Modelling of market-based cross-border exchange of balancing power* (2016)
- Zied Ben Bouallègue (with A. Henze): *Calibration and verification of probabilistic meteorological forecasts for energy-related applications* (2016)
- Ditte Mølgård Heide-Jørgensen (with T. Boomsma and N. Detlefsen): *Intra hour model for the power market in systems with high wind penetration* (2016)
- Qi Wang (with J.M. Morales, S. Pineda and Peter Meibom): *System-wide socio-economic and reliability impact of active management of distribution grids and distributed energy resources* (2016)
- Niamh O'Connell (with H. Madsen and M. O'Malley): *Stochastic dynamics of demand response and the impact on power systems service provision* (2016)
- Chunyu Zhang: *Market design and network planning for distribution grid* (2015)
- Emil Mahler Larsen (with Y. Ding and J. Østergaard): *Electricity market design for distributed energy resources and flexible demand* (2015)
- Julija Tastu (with H. Madsen): *Short-term wind power forecasting: probabilistic and space-time aspects* (2013)
- Marco Zugno (with H. Madsen and J.M. Morales): *Optimization under uncertainty for management of renewables in electricity markets* (2013)
- Pierre-Julien Trombe (with H. Madsen): *Modelling and forecasting of wind power generation – Regime-switching approaches* (2013)
- Tryggvi Jónsson (with N.K. Poulsen): *Forecasting and decision-making in electricity markets with focus on wind energy* (2012)
- Claire L. Vincent (with G. Giebel and A. Hahmann): *Predictability of wind fluctuations at large offshore wind farms* (2011)

## Ph.D. Guests

- Ingrid Collado (UPC): *Forecasting demand-side flexibility* (2020)
- Tatiana Chernova (Skoltech): *Peer-to-peer markets under uncertainty* (2020)
- Zhenwei Guo (Zhejiang University): *Online optimization approaches to peer-to-peer markets* (2019-2020)
- Carla Goncalves (INESC Porto): *Privacy in distributed forecasting and data markets* (2019)
- Li Bai (Uni. Pisa): *Forecast reconciliation problems in wind power forecasting* (2018)
- Ciaran Gilbert (Uni. Strathclyde): *Very high-resolution forecasting offshore and forecast reconciliation* (2018)
- Iris van Beuzekom (TU Eindhoven): *Planning problems for multi-energy systems* (2016)
- Bruno Schyska (University of Oldenburg): *Parametrized learning approaches for renewable energy investment problems* (2016)
- Yunpeng Xiao (Xi'an Jiaotong, China): *Demand-response in electricity markets: offering and operations* (2016-2017)
- Yongning Zhao (CAS, China): *Spatio-temporal aspects in wind power forecasting* (2016-2017)
- Ayman Esmat (UC3M, Spain): *Market architecture and operations from demand-side flexibility* (2016)
- Gergo Barta (Budapest University of Technology and Economics, Hungary): *Online learning for distributed probabilistic forecasting* (2016)
- Nicolo Mazzi (Uni. Padova, Italy): *Strategic offering in the Italian electricity market* (2015)

- Victoria Guerrero Mestre (UCLM, Spain): *Stochastic unit commitment with line switching* (2015)
- Roman Le Goff Latimier (ENS Rennes, France): *Distributed and multiobjective pricing schemes for EV charging* (2015)
- Lazaros Exizidis (Uni. Mons, Belgium): *Equilibrium of strategic wind power producers in electricity markets* (2015)
- Erick Bezerra (Universidade Federal do Ceara, Brazil): *Recursive kernel least squares approaches to very short term wind power forecasting* (2014-2015)
- Huajie Ding (Tsinghua Uni., China): *Optimal operation of distributed wind-storage systems* (2014-2015)
- Man Xu (Tsinghua Uni., China): *Robust approaches in wind power forecasting* (2014-2015)
- Jethro Dowell (Uni. Strathclyde, UK): *Spatial aspects of probabilistic wind power forecasting* (2014)
- Andrea Staid (Johns Hopkins, US): *Probabilistic maximum-value wind prediction for offshore environments* (2013)
- Can Wan (Hong Kong Polytechnic Uni., China): *Interval forecast generation and verification* (2013)
- Cristian Waimann (Uni. Buenos Aires, Argentina): *Spatial power curves and gridded wind power forecasts* (2012)
- Cristobal Gallego (UPM, Spain): *Regime-switching models for very short-term offshore wind power forecasting* (2010)