Salvador Pineda Morente

CONTACT INFORMATION	Department of Electrical Engineering University of Málaga Málaga, Spain	phone: +34 681600943 e-mail: spineda@uma.es homepage: spineda.uma.es

RESEARCHER ID	ORCID: 0000-0002-1089-0970 ResearcherID: M-1407-2014 Scopus Author ID: 26649593600

RESEARCH INTERESTS

Power system operations and economics, renewable integration, reliability, capacity expansion planning, convex optimization, stochastic programming, electricity markets and equilibrium models.

EDUCATION

University of Málaga, Málaga, Spain

B.Sc. Degree and M.Sc. Degree in Electrical Engineering (European diploma)   **September 2006**

- Master's Thesis Title: Calculation Methods of Available Transfer Capability in Power Systems.

University of Castilla-La Mancha, Ciudad Real, Spain

Ph.D. Degree in Electrical Engineering   **May 2011**

- Title: Medium-term Electricity Trading for Risk-averse Power Producers via Stochastic Programming.
- Supervisor: Professor Antonio J. Conejo.
- Jury: Dr. Juan J. Rubio, Dr. Julian Barquin, Dr. Stein-Erik Fleten, Dr. Fernando Oliveira, and Dr. Miguel Carrión.

PROFESSIONAL EXPERIENCE

University of Málaga, Málaga, Spain   **October 2016 − present**
Associate professor

University of Copenhagen, Copenhagen, Denmark   **September 2014 − September 2016**
Associate professor

University of Copenhagen, Copenhagen, Denmark   **May 2013 − August 2014**
Assistant professor

Technical University of Denmark, Lyngby, Denmark   **June 2012 − April 2013**
Assistant professor

Technical University of Denmark, Lyngby, Denmark   **June 2011 − May 2012**
Postdoctoral researcher

University of Castilla-La Mancha, Ciudad Real, Spain   **July 2007 − May 2011**
Ph.D. student

University of Castilla-La Mancha, Ciudad Real, Spain   **March 2007 − June 2007**
Research assistant

JOURNAL PUBLICATIONS

1. J.G. De la Varga, S. Pineda, J.M. Morales, Á. Porras, "Learning-based Improvement in State Estimation for Unobservable Systems" accepted in ***Electric Power System Research***, 2024. (link)

2. A. Stratigakos, S. Pineda, J.M. Morales, "Decision-focused linear pooling for probabilistic forecast combination" accepted in ***International Journal of Forecasting***, 2024. (link)

3. C. Domínguez, R. Gázquez, J. M. Morales, S. Pineda, "The Cooperative Maximum Capture Facility Location Problem" in ***Computers and Operations Research***, vol. 170, p. 106782, 2024. (link)

4. A. Porras, L. Roald, J. M. Morales, S. Pineda, "Unifying Chance-Constrained and Robust Optimal Power Flow for Resilient Network Operations" in ***IEEE Transactions on Control of Network Systems***, 2024. (link)

5. S. Pineda, J. M. Morales, A. Porras, C. Domínguez, "Tight Big-Ms for Optimal Transmission Switching" in *Electric Power System Research*, vol. 234, 2024. (link)

6. S. Pineda, J. M. Morales, A. Jiménez-Cordero, "Learning-Assisted Optimization for Transmission Switching" in *TOP*, 2024. (link)

7. A. Stratigakos, S. Pineda, J. M. Morales, G. Kariniotakis, "Interpretable Machine Learning for DC Optimal Power Flow with Feasibility Guarantees" in *IEEE Transactions on Power Systems*, vol. 39, no. 3, pp. 5126-5137, 2024. (link)

8. A. Porras, C. Domínguez, J. M. Morales, S. Pineda, "Tight and Compact Sample Average Approximation for Joint Chance Constrained Optimal Power Flow" in *INFORMS Journal on Computing*, vol. 35, no. 6, pp. 1454-1469, 2023. (link)

9. J. M. Morales, M. A. Muñoz, S. Pineda, "Prescribing net demand for electricity market clearing" in *Operations Research Perspectives*, vol. 10, 2023. (link)

10. A. Elias, J. M. Morales, S. Pineda, "A high dimensional functional time series approach to evolution outlier detection for grouped smart meters" in *Quality Engineering*, vol. 35, no. 3, pp. 371-387, 2022. (link)

11. A. Jiménez-Cordero, J. M. Morales, S. Pineda, "Warm-starting constraint generation for mixed-integer optimization: A Machine Learning approach" in *Knowledge-Based Systems*, vol. 253, p. 109570, 2022. (link)

12. A. Porras, S. Pineda, J. M. Morales, A. Jiménez-Cordero, "Cost-driven Screening of Network Constraints for the Unit Commitment Problem" in *IEEE Transactions on Power Systems*, vol. 38, no 1, p. 42-51, 2023. (link)

13. S. Pineda, J. M. Morales, "Is learning for the unit commitment problem a low-hanging fruit?" in *Electric Power Systems Research*, vol. 207, 2022. (link)

14. M. A. Muñoz, S. Pineda, J.M. Morales, "A bilevel framework for decision-making under uncertainty with contextual information" in *OMEGA*, vol. 108, 2022. (link)

15. J. M. Morales, S. Pineda, Y. Dvorkin, "Learning-based Coordination of Transmission and Distribution Operations" in *IEEE Transactions on Power Systems*, vol. 37, no. 4, pp. 2858-2868, 2022. (link)

16. T. K. Boomsma, S. Pineda, D. M. Heide-Jørgensen, "The spot and balancing markets for electricity: Open- and closed-loop equilibrium models"in *Computational Management Science*, vol. 19, no 2, p. 309-346, 2022. (link)

17. V. Bucarey, M. Labbé, J. M. Morales, S. Pineda, "A dynamic programming approach to segmented isotonic regression" in *Omega*, vol. 105, pp. 102516, 2021. (link)

18. A. Jiménez-Cordero, J.M. Morales, S. Pineda "A novel embedded min-max approach for feature selection in nonlinear SVM classification" in *European Journal of Operations Research*, vol. 293, no. 1, pp. 24-35, 2021. (link)

19. R. Fernández-Blanco, J.M. Morales, S. Pineda "Forecasting the Price-Response of a Pool of Buildings via Homothetic Inverse Optimization" in *Applied Energy*, vol. 290, pp. 116791, 2021. (link)

20. M. Grzanic, J. M. Morales, S. Pineda, T. Capuder "Electricity cost sharing in energy communities under dynamic pricing and uncertainty" in *IEEE Access*, vol. 9, pp. 30225-30241, 2021. (link)

21. A. Porras, R. Fernández-Blanco, J.M. Morales, S. Pineda, "An Efficient Robust Approach to the Day-ahead Operation of an Aggregator of Electric Vehicles" in *IEEE Transactions on Smart Grids*, vol. 11, no. 6, pp. 4960-4970, 2020. (link)

22. R. Fernández-Blanco, J.M. Morales, S. Pineda, A. Porras, "Inverse optimization with kernel regression: Application to the power forecasting and bidding of a fleet of electric vehicles", in *Computers and Operations Research*, vol. 134, pp. 105405, 2021. (link)

23. M.A. Muñoz, J.M. Morales, S. Pineda, "Feature-driven Improvement of Renewable Energy Forecasting and Trading" in *IEEE Transactions on Power Systems*, vol. 35, no. 5, pp. 3753-3763, 2020. (link)

24. S. Pineda, J.M. Morales, A. Jiménez-Cordero, "Data-Driven Screening of Network Constraints for Unit Commitment", in *IEEE Transactions on Power Systems*, vol. 35, no. 5, pp. 3695-3705, 2020. (link)

25. S. Pineda, R. Fernández-Blanco and J.M. Morales, "Time-Adaptive Unit Commitment", in **IEEE Transactions on Power Systems**, vol. 34, no. 5, 3869-3878, 2019. (link)

26. S. Pineda and J.M. Morales, "Solving Linear Bilevel Problems Using Big-Ms: Not All That Glitters Is Gold", in **IEEE Transactions on Power Systems**, vol. 34, no. 4, 2469-2471, 2019. (link)

27. H. C. Bylling, S. Pineda and T. K. Boomsma, "The Impact of Short-term Variability and Uncertainty on Long-term Power Planning Problems", accepted in **Annals of Operations Research**, 2018. (link)

28. S. Pineda and J.M. Morales, "Chronological time-period clustering for optimal capacity expansion planning with storage", in **IEEE Transactions on Power Systems**, vol. 33, no. 6, 7162 - 7170, 2018. (link)

29. S. Pineda, H. Bylling and J. M. Morales, "Efficiently solving linear bilevel programming problems using off-the-shelf optimization software", in **Optimization and engineering** vol. 19, no. 1, pp. 187-211, 2018. (link)

30. S. Pineda, T.K. Boomsma and S. Wogrin, "Renewable generation expansion under different support schemes: A stochastic equilibrium approach" in **European Journal of Operational Research**, vol. 266, no. 3, pp. 1086-1099, 2018. (link)

31. J. M. Morales and S. Pineda, "On the Inefficiency of the Merit Order in Forward Electricity Markets with Uncertain Supply", in **European Journal of Operational Research**, vol. 261, no. 2, pp. 789-799, 2017. (link)

32. S. Pineda and J. M. Morales, "Capacity expansion of stochastic power generation under two-stage electricity markets", in **Computers & Operations Research**, vol. 70, pp. 101-114, 2016. (link)

33. S. Pineda, J.M. Morales and T.K. Boomsma, "Impact of Forecast Errors on Expansion Planning of Power Systems with a Renewables Target", in **European Journal of Operations Research**, vol. 548, no. 3, pp. 1113-1122, February 2016. (link)

34. Y. Hu, J. M. Morales, S. Pineda, M. J. Sánchez, P. Solana, "Dynamic multi-stage dispatch of isolated wind-diesel power systems", **Energy Conversion and Management**, vol. 103, pp. 605-615, October 2015. (link)

35. S. Pineda, J.M. Morales, Y. Ding and J. Østergard, "Impact of Equipment Failures and Wind Correlation on Capacity Expansion Planning", in **Electric Power System Research**, vol. 116, pp. 451-458, November 2014. (link)

36. J. M. Morales, M. Zugno, S. Pineda and P. Pinson, "Redefining the Merit Order of Stochastic Generation in Forward Markets", accepted in **IEEE Transactions on Power Systems**, vol.29, no.2, pp. 992-993, March 2014. (link)

37. J. M. Morales, M. Zugno, S. Pineda and P. Pinson "Electricity Market Clearing With Improved Scheduling of Stochastic Production", in **European Journal of Operational Research**, vol. 235, no. 3, 2014. (link)

38. Y. Ding, S. Pineda, P. Nyeng, J. Østergard, E. Larsen and Q. Wu, "Real-time Market Concept Architecture for EcoGrid EU - A Prototype for European Smart Grids", in **IEEE Transactions on Smart Grids**, vol. 4, no. 4, pp. 2006-2016, 2013. (link)

39. S. Pineda and A. J. Conejo, "Using Electricity Options to Hedge Against the Financial Risks of Power Producers", in **Journal of Modern Power Systems and Clean Energy**, vol. 1, no. 2, pp. 101–109, 2013. (link)

40. S. Pineda and A. J. Conejo, "Managing the financial risks of electricity producers using options", in **Energy Economics**, vol. 34, no. 6, pp. 2216–2227, November 2012. (link)

41. Y. Lee, J. Hur, R. Baldick, and S. Pineda, "New Indices of Market Power in Transmission-Constrained Electricity Markets", in **IEEE Transactions on Power Systems**, vol. 26, no. 2, pp. 681–689, May 2011. (link)

42. S. Pineda, A. J. Conejo and M. Carrión, "Insuring unit failures in electricity markets", in **Energy Economics**, vol. 32, no. 6, pp. 1268–1276, November 2010. (link)

43. S. Pineda and A. J. Conejo, "Scenario Reduction for Risk-Averse Electricity Trading", in **IET Generation, Transmission & Distribution**, vol. 4, no. 6, pp. 694–705, June 2010. (link)

44. J. M. Morales, S. Pineda, A. J. Conejo and M. Carrión, "Scenario reduction for futures market trading in electricity market", in ***IEEE Transactions on Power Systems***, vol. 24, no. 2, pp. 878–888, May 2009. (link)

45. S. Pineda, A. J. Conejo and M. Carrión, "Impact of unit failure on forward contracting", in ***IEEE Transactions on Power Systems***, vol. 23, no. 4, pp. 1768–1775, November 2008. (link)

SUPERVISION OF STUDENTS

PhD students
- José Gómez de la Varga (with Juan M. Morales): *Physics-informed machine learning for power system operation* (to be defended in 2026).
- Álvaro Porras Cabrera (with Juan M. Morales): *Enhancing Power System Operation through Learning* (Sep, 2023).
- Miguel A. Muñoz Diaz (with Juan M. Morales): *Leveraging Big Data in Power System Operation* (Sep, 2022).
- Henrik Bylling (with Trine Boomsma): *Bilevel Optimization with Applications in Energy* (Feb, 2019).
- Ditte Heide-Jørgensen (with Trine Boomsma and Pierre Pinson): *Operations Management in Short Term Power Markets* (Aug, 2016).
- Qi Wang(with Trine Boomsma and Pierre Pinson): *Real-time trading strategies for proactive distribution company with distributed generation and demand response* (Sept, 2016).

MSc students
- Jesús Huete "Optimization of photovoltaic generation systems with storage" (2024), Universidad de Málaga (España)
- Álvaro Porras "Optimization for the Day-ahead Operation of an Aggregator of Electric Vehicles" (2020), Universidad de Málaga (España)
- David Márquez "Estrategias de cobertura de riesgo de productores renovables por medio de derivados climatológicos" (2018), Universidad de Málaga (España)
- Jonas Johansen Næsby: *Solving the kidney exchange problem using integer programming* (2015).
- Lars-Erik Høiler Kanstrup: *Flexible Demand to Facilitate the Integration of Renewables into Power Systems Using k-means Clustering* (2015).
- Henrik Bylling: *Comparison of Methods to solve Linear Bilevel Optimization Problems* (2015).
- Sara Mohamad El-Wali: *Decomposition methods for mutistage stochastic linear problems* (2015).
- Pavol Hronsky: *Strategic Behavior of Power Producers in Two Stage Electricity Markets* (2015).
- Niamh O'Connell (with Pr. J. Østergard and Asst. Prof. Q. Wu): *Congestion management of electricity distribution networks operating under a real time market* (2012).
- Dario Sacchetti (with Assoc. Prof. C. N. Rasmussen): *Modeling of power system containing demand response* (2012).
- Yang Li (with Assoc. Prof. Y. Ding): *Studies of electricity network tariff* (2012).

BOOKS

1. C. Domínguez, Á. Porras, S. Pineda, J. M. Morales "Optimal power flow under uncertainty". Chapter of book: Encyclopedia of Electrical and Electronic Power Engineering, Elsevier, 2023, Pages 765-776, ISBN 9780128232118.

2. S. Pineda, J. M. Morales, S. Wogrin "Mathematical programming for power systems". Chapter of book: Encyclopedia of Electrical and Electronic Power Engineering, Elsevier, 2023, Pages 722-733, ISBN 9780128232118.

3. S. Wogrin, S. Pineda, D. A. Tejada-Arango, *Applications of Bilevel Optimization in Energy and Electricity Markets.* Chapter of book: S. Dempe and A. Zemkoho, *Bilevel Optimization: Advances and Next Challenges.* Springer-Verlag, Heidelberg, 2020. ISBN: 978-3-030-52119-6.

4. S. Wogrin, S. Pineda, D. A. Tejada-Arango, I. C. Gonzalez-Romero, *Transmission Expansion Planning Outside the Box: A Bilevel Approach.* Chapter of book: S. Lumbreras, H. Abdi and A. Ramos, *Transmission Expansion Planning: The Network Challenges of the Energy Transition.* Springer-Verlag, Heidelberg, 2020. ISBN: 978-3-030-49427-8.

5. J. M. Morales, S. Pineda and M. Zugno, *Market design for future clean electricity systems: Advances based on optimization under uncertainty.* Chapter of book: *Handbook of Clean Energy Systems*, Vol. 4: Intelligent Energy Systems, John Wiley & Sons, Chichester, UK, 2015. ISBN: 9781118991978.

6. Y. Ding, J. Østergard, S. Pineda and Q. Wu, *The Smart Grid as a Response to Spread the Concept of Distributed Generation.* Chapter of book: V. Piemonte, M. De Falco and A. Basile, *Sustainable Development in Chemical Engineering Innovative Technologies.* John Wiley & Sons, Ltd, Chichester, UK, 2013. ISBN: 978-1-119-95352-4.

7. A. J. Conejo, R. García-Bertrand, M. Carrión and S. Pineda, *Futures Market Trading for Electricity Producers and Retailers.* Chapter of book: S. Rebennack, P. M. Pardalos, M. V. F. Pereira and N. A. Iliadis, *Handbook of Power Systems.* Springer-Verlag, Heidelberg, 2010. ISBN: 978-3-642-02492-4.

CONFERENCE CONTRIBUTIONS

1. S. Pineda, J. M. Morales, A. Porras, C. Domínguez, "Tight Big-Ms for Optimal Transmission Switching" in ISMP 2024, Montreal, Canada, July 21-26, 2024.

2. A. Jiménez-Cordero, S. Pineda, J. M. Morales, "A data-based approach for solving the Rank Pricing Problem" in EURO Conference, Copenhague, Denmark, June 30 - July 3, 2024.

3. J. G. de la Varga, S. Pineda, J. M. Morales, A. Porras "Learning-based State Estimation in Distribution Systems with Asynchronized Measurements" in EURO Conference, Copenhague, Denmark, June 30 - July 3, 2024.

4. S. Pineda, J. M. Morales, A. Jiménez-Cordero "Learning-Assisted Optimization for Transmission Switching" in EURO Conference, Copenhague, Denmark, June 30 - July 3, 2024.

5. A. Stratigakos, S. Pineda, J. M. Morales, "Decision-Focused Forecast Combination" in International Symposium On Forecasting, Dijon, France, June 30 - July 3, 2024.

6. S. Pineda, J. M. Morales, A. Porras, C. Domínguez, "Tight Big-Ms for Optimal Transmission Switching" in PSCC 2024, Paris, France, June 3-7, 2024.

7. S. Pineda, J. M. Morales, A. Jiménez-Cordero, "Machine-Learning-aided Optimal Transmission Switching" in SEIO 2023, Elche, Spain, November 7-10, 2023

8. C. Domínguez Sánchez, R. Gázquez, J. M. Morales, S. Pineda, "A Bilevel formulation and Benders Decomposition for the Cooperative Maximum Capture Facility Location" in SEIO 2023, Elche, Spain, November 7-10, 2023.

9. S. Pineda, J. M. Morales, Á. Porras, C. Domínguez, "Tightening big-M for Optimal Transmission Switching" in IFORS 2023, Santiago, Chile, July 10-14, 2023.

10. Á. Porras, L. Roald, J. M. Morales, S. Pineda, "Integrating Automatic and Manual Reserves in Optimal Power Flow via Chance Constraints" in IFORS 2023, Santiago, Chile, July 10-14, 2023.

11. C. Domínguez, R. Gázquez, J. M. Morales, S. Pineda, "Bilevel formulation and two exact resolution approaches for the maximum capture facility location with random OWA utilities" in IFORS 2023, Santiago, Chile, July 10-14, 2023.

12. S. Pineda, M. A. Muñoz, J. M. Morales, "A bilevel framework for decision-making under uncertainty with contextual information" in PowerTech 2023, Belgrade, Serbia, June 25-29, 2023.

13. S. Pineda, J. M. Morales, A. Jiménez-Cordero, "A Novel Machine Learning Approach for Solving Optimal Transmission Switching" in EUROYoung Workshop, ESSEC Business School, Cergy, France, June 5-6, 2023.

14. A. Porras, C. Domínguez, J. M. Morales, S. Pineda, "Tight and Compact Sample Average Approximation for Joint Chance Constrained Optimal Power Flow" in INFORMS 2022, Indianapolis, EEUU, October 16-19, 2022.

15. J. M. Morales, S. Pineda, Y. Dvorkin, "Learning the price response of active distribution networks for TSO-DSO coordination" in PES General Meeting, Denver, EEUU, 17-21 July 2022.

16. S. Pineda, J.M. Morales, A. Jiménez-Cordero, "Data-Driven Screening of Network Constraints for Unit Commitment" in PES General Meeting, Denver, EEUU, 17-21 July 2022.

17. S. Pineda, J. M. Morales, "Is learning for the unit commitment a low-hanging fruit?", EURO 2022, Espoo, Finland, 3 - 6 July, 2022.

18. J. M. Morales, M. A. Muñoz, S. Pineda, "Value-oriented forecasting of net demand for electricity market clearing" EURO 2022, Espoo, Finland, 3 - 6 July, 2022.

19. A. Jiménez-Cordero, J. M. Morales, S. Pineda, "A novel machine-learning-aided approach for warm-starting constraint generation methods in MILPs" EURO 2022, Espoo, Finland, 3 - 6 July, 2022.

20. M. A. Muñoz, S. Pineda, J. M. Morales, "A bilevel framework for decision-making under uncertainty with contextual information" ECSO-CMS 2022, Venice, Italy, 29-30th June 1st July.

21. C. Domínguez, A. Porras, J. M. Morales, S. Pineda "A MIP approach to tackle the Optimal Power Flow problem with probabilistic constraints" ECSO-CMS 2022, Venice, Italy, 29-30th June 1st July.

22. A. Elıas, J.M. Morales and S. Pineda, "Functional depth measures in the context of functional time series", Spanish Conference on Statistics and Operations Research (SEIO), 7-10 June 2022, Granada, Spain.

23. A. Jiménez-Cordero, J.M. Morales González, S. Pineda, "On warm-starting constraint generation methods via machine learning tools for solving mixed-integer programs", Spanish Conference on Statistics and Operations Research (SEIO), 7-10 June 2022, Granada, Spain.

24. S. Pineda, M.Á. Muñoz, J.M. Morales, "A bilevel framework for decision-making under uncertainty with contextual information", Spanish Conference on Statistics and Operations Research (SEIO), 7-10 June 2022, Granada, Spain.

25. J. Huete, A. Elıas, J.M. Morales, S. Pineda, "Forecasting multiple buildings energy consumption", Spanish Conference on Statistics and Operations Research (SEIO), 7-10 June 2022, Granada, Spain.

26. C. Domınguez, J.M. Morales, S. Pineda, Á. Porras, "Chance-Constrained Optimization applied to the Optimal Power Flow problem: a MIP approach", Spanish Conference on Statistics and Operations Research (SEIO), 7-10 June 2022, Granada, Spain.

27. A. Elías, J.M. Morales and S. Pineda "Evolution outliers in high dimensional functional time series", 14th International Conference of the ERCIMWG on Computational and Methodological Studies (CMStatistics 2021), London, UK 18 - 20 December, 2021.

28. A. Jiménez-Cordero, J. M. Morales and S. Pineda, "An offline-online strategy to improve MILP performance via Machine Learning tools", New Bridges between Mathematics and Data Science, 8-11 November, 2021, Valladolid, Spain.

29. S. Pineda, J. M. Morales and Y. Dvorkin, "Learning-based Coordination of Transmission and Distribution Operations", EURO 2021, Athens, Greece, 11 - 14 July, 2021.

30. M.A.Muñoz, J.M.Morales and S.Pineda, "A Bilevel Framework for Decision-making Under Uncertainty with Contextual Information", EURO 2021, Athens, Greece, 11 - 14 July, 2021.

31. Á.Porras, J.M. Morales, S.Pineda and A. Jiménez-Cordero, "Cost-aware Constraint Screening for the Unit Commitment Problem", EURO 2021, Athens, Greece, 11 - 14 July, 2021.

32. A. Jiménez-Cordero, J. M. Morales and S. Pineda, "On Improving MILP Performance via Machine Learning Tools", EURO 2021, Athens, Greece, 11 - 14 July, 2021.

33. A. Jiménez-Cordero, J. M. Morales and S. Pineda "A Novel Embedded Min-max Approach for Feature Selection in Nonlinear Support Vector Machine Classification" Session candidates for the Ramiro Melendreras prize Jornadas SEIO 2021, 9 -11 June, 2021

34. S. Pineda, J.M. Morales, A. Jiménez-Cordero, "Data-Driven Screening of Network Constraints for Unit Commitment", PowerTech Conference, Madrid, Spain, June 28 - July 2, 2021.

35. S. Pineda, R. Fernandez-Blanco, J.M. Morales, "Time-adaptive unit commitment", PowerTech Conference, Madrid, Spain, June 28 - July 2, 2021.

36. A.Porras; R.Fernández-Blanco; J.M.Morales; S.Pineda, "An Efficient Robust Approach to the Day-Ahead Operation of an Aggregator of Electric Vehicles", PowerTech Conference, Madrid, Spain, June 28 - July 2, 2021.

37. M.A.Muñoz; J.M.Morales; S.Pineda, "Data-driven Strategies For Trading Renewable Energy Production", PowerTech Conference, Madrid, Spain, June 28 - July 2, 2021.

38. S. Pineda, J.M. Morales, A. Jiménez-Cordero, "Data-Driven Screening of Network Constraints for Unit Commitment", INFORMS Annual Meeting, Washinton DC, USA, 7-13 November 2020.

39. A. Porras, R. Fernández-Blanco, J.M. Morales, S. Pineda, "An Efficient Robust Approach To The Day-ahead Operation Of An Aggregator Of Electric Vehicles", INFORMS Annual Meeting, Washinton DC, USA, 7-13 November 2020.

40. A. Jiménez-Cordero, J.M. Morales, S. Pineda, "Interpretable Learning In Power System Operations", INFORMS Annual Meeting, Washinton DC, USA, 7-13 November 2020.

41. M. A. Muñoz, S. Pineda, J.M. Morales, "Optimal Strategy of a Cournot Firm through Profit-Driven Learning", INFORMS Annual Meeting, Washinton DC, USA, 7-13 November 2020.

42. J.M. Morales, R. Fernández-Blanco, S. Pineda "A Homothetic Inverse Optimization Approach To Forecast The Price-response Of A Pool Of Buildings", INFORMS Annual Meeting, Washinton DC, USA, 7-13 November 2020.

43. S. Martin , S. Pineda, J. Pérez-Ruiz, N. Alguacil, A. Ruiz-Gonzalez "Practical Framework for Problem-Based Learning in an Introductory Circuit Analysis Course" 2020 IEEE Global Engineering Education Conference (EDUCON), Porto, Portugal, 2020.

44. A. Jiménez-Cordero, J.M. Morales, S. Pineda "A min-max approach to feature selection for nonlinear SVM classification", *V Congeso de Jóvenes Investigadores de la RSME*, Castellón, Spain, 27-31 January 2020.

45. S. Wogrin, D. A. Tejada-Arango, S. Pineda, J. M. Morales, "Analyzing Time Period Aggregation Methods for Power System Investment and Operation Models with Renewables and Storage", *INFORMS Annual Meeting*, Seattle, USA, 20-23 October 2019.

46. J.M. Morales, M.A. Muñoz, S. Pineda, "A Mathematical Optimization Approach to Enhanced Renewable Energy Forecasting and Trading", *INFORMS Annual Meeting*, Seattle, USA, 20-23 October 2019.

47. R. Fernandez-Blanco, J.M. Morales, S. Pineda, A. Porras, "A Data driven Forecasting Model for an Aggregator of Electric Vehicles via Inverse Optimization" , *INFORMS Annual Meeting*, Seattle, USA, 20-23 October 2019.

48. S. Pineda, R. Fernandez-Blanco, J.M. Morales, "Time-adaptive unit commitment" , *INFORMS Annual Meeting*, Seattle, USA, 20-23 October 2019.

49. S. Wogrin, D. Tejada-Arango, S. Pineda, J.M. Morales, "What time-period aggregation method works best for power system operation models with renewables and storage?" *2nd International Conference on Smart Energy Systems and Technologies*, Porto, Portugal, 9-11 September, 2019.

50. A. Porras, R. Fernández-Blanco, J.M. Morales, S. Pineda, "Day-ahead Operation of an Aggregator of Electric Vehicles via Optimization under Uncertainty", *2nd International Conference on Smart Grid Systems and Technologies*, Porto, Portugal, 9-11 September, 2019.

51. R. Fernandez-Blanco, S. Pineda, J. M. Morales, "How can smart buildings be price-responsive?", *13th IEEE PowerTech*, Milan, Italy, 23-27 June, 2019.

52. S. Pineda, J. M. Morales, "Efficiently Solving Linear Bilevel Programming Problems using Off-the-Shelf Optimization Software", *30th European Conference on Operational Research (EURO)*, Dublin, Ireland, 23-26 June, 2019.

53. J. M. Morales, R. Fernandez-Blanco, S. Pineda, "A fast algorithm to estimate the cost and the right-hand side parameter vectors in inverse linear optimization", *30th European Conference on Operational Research (EURO)*, Dublin, Ireland, 23-26th June, 2019.

54. A. Porras, R. Fernandez-Blanco, S. Pineda, J. M. Morales, "Day-ahead Operation of an Aggregator of Electric Vehicles via Optimization under Uncertainty", *30th European Conference on Operational Research (EURO)*, Dublin, Ireland, 23-26 June, 2019.

55. S. Pineda, N. Alguacil, J. Perez-Ruiz, S. Martin, A. Ruiz, "Individualized exercises for continuous assessment in engineering", *7th Teaching Education Conference*, London, UK, 21-24 May, 2019.

56. M.A. Muñoz, J.M. Morales, S. Pineda, "Data-driven Strategies for Trading Renewable Energy Production", *INFORMS Annual Meeting*, Phoenix, USA, 4-7 November 2018.

57. S. Pineda, H. Bylling, J.M. Morales, "Efficiently Solving Linear Bilevel Programming Problems using Off-the-Shelf Optimization Software", *INFORMS Annual Meeting*, Phoenix, USA, 4-7 November 2018.

58. S. Pineda, J. M. Morales, "Chronological Time-Period Clustering for Optimal Capacity Expansion Planning With Storage", *29th European Conference on Operational Research (EURO)*, Valencia, Spain, 8-11 July 2018.

59. S. Pineda, J. M. Morales, "Chronological Time-Period Clustering for Optimal Capacity Expansion Planning With Storage", *23rd International Symposyum on Mathematical Programming (ISMP)*, Burdeaux, France, 1-6 July 2018.

60. A. Triviño, M. Duran, S. Pineda, A. Aguado, S. de la Torre, "TESLA: A Gamification framework to motivate students in Industrial Engineering", *1st Workshop on Gamification and Games for Learning (GamiLearn'17)* Tenerife, Spain 5-6 June 2017.

61. S. Pineda, J.M. Morales, "Capacity Expansion of Stochastic Power Generation under Two-Stage Electricity Markets", *Symposium on Mathematical Techniques Applied to Data Analysis and Processing (SMATAD)*, Fuengirola, Spain, 18-21 May 2017.

62. H. Bylling, S. Pineda, T. K. Boomsma, "Impact Of Short-term Variability And Uncertainty On Long-term Planning Problems", *INFORMS Annual Meeting*, Nashville, USA, 13-16 Nov. 2016.

63. D. M. Heide-Jorgensen, S. Pineda, T. K. Boomsma, "An equilibrium model for two-stage electricity markets", emphComputational Management Science Conference, Salamanca, Spain, 31May-2Jun, 2016.

64. J.M. Morales, S. Pineda, M. Zugno "On the Inefficiency of the Merit Order in Forward Electricity Markets with Uncertain Supply", *INFORMS Annual Meeting*, Philadelphia, USA, 1-4 Nov. 2015.

65. S. Pineda, A. Bock "Renewable-based generation expansion under a green certificate market", *INFORMS Annual Meeting*, Philadelphia, USA, 1-4 Nov. 2015.

66. S. Pineda, A. Bock, "Renewable-based generation expansion under a green certificate market", *Nordic Environmental Social Science Conference (NESS)*, Trondheim (Norway), 9-11 Jun. 2015.

67. S. Pineda, J.M. Morales, T. Boomsma, "Impact of Forecast Errors on Expansion Planning of Power Systems with a Renewables Target," *INFORMS Annual Meeting*, San Francisco, USA, 9-12 Nov. 2014.

68. S. Pineda, J.M. Morales, T. Boomsma, "Impact of Forecast errors on Generation and Transmission Expansion Planning", *Workshop on Mathematical Models and Methods for Energy Optimization* within COST Action TD1207, Budapest, Hungary, 25-26 Sept. 2014.

69. S. Pineda, J.M. Morales, "Modeling the impact of imbalance costs and market design on generating expansion of stochastic units," *20th Conference of the International Federation of Operational Research Societies*, IFORS 2014, Barcelona, Spain, 13-18 July 2014.

70. S. Pineda, J.M. Morales, "Impact of imbalance costs on stochastic unit investments," *Workshop on Modelling Investment in Power Systems*, Copenhagen, 27 March 2014.

71. P. Nyeng, K. Kok, S. Pineda, O. Grande, J. Sprooten, B. Hebb, F. Nieuwenhout, "Enabling demand response by extending the European electricity markets with a real-time market," *Innovative Smart Grid Technologies Europe (ISGT EUROPE),* 6-9 Oct. 2013.

72. S. Pineda "Electricity Markets and Stochastic Producers", tutorial in *Innovative Smart Grid Technologies Conference, ISGT*, Copenhagen, Denmark, 6–9 October 2013.

73. S. Pineda, J. M. Morales, M. Zugno, P. Pinson, "Electricity Market Clearing With Improved Scheduling of Stochastic Production", *International Conference in Stochastic Programming*, Bergamo, Italy, 8–12 July 2013.

74. J. M. Morales, M. Zugno, S. Pineda, P. Pinson, "Clearing Forward Markets Based on Forecasts of Stochastic Production", *EURO-INFORMS 2013*, Rome, Italy, 1–4 July 2013.

75. Y. Ding, P. Nyeng, J. Ostergaard, M. Dang, S. Pineda, K. Kok, G. Huitema, O. Grande, "Ecogrid EU - a large scale smart grids demonstration of real time market-based integration of numerous small DER and DR", *Innovative Smart Grid Technologies* (ISGT Europe), Berlin, 14–17 Oct. 2012.

76. S. Pineda and J. M. Morales, "Optimal Location of Wind Power Capacity: A Point-estimate Solution Approach", *INFORMS Annual Meeting 2012*, Phoenix, Arizona, USA, 14–17 October 2012.

77. Y. Ding, Y. Li, S. Pineda, J. Østergaard and T. Jin, "The Impact of Dynamic Electricity Tariff on Long-run Incremental Cost", *IEEE PES 2012 General Meeting*, San Diego, California, USA, 22–26 July 2012.

78. S. Pineda, J. M. Morales, A. J. Conejo and M. Carrión, "Scenario reduction for futures market trading in electricity market", *Conference on Management Science 2011*, Neuchâtel, Switzerland, 28–30 April 2011.

79. S. Pineda and A. J. Conejo, "Options to hedge against producer risks in electricity markets", *INFORMS Annual Meeting 2010*, Austin, Texas, USA, 7–10 November 2010.

80. S. Pineda, A. J. Conejo and M. Carrión, "Insuring unit failures in electricity markets", *INFORMS Annual Meeting 2009*, San Diego, California, USA, 11–14 October 2009.

81. J. M. Morales, S. Pineda, A. J. Conejo and M. Carrión, "Scenario reduction for futures market trading in electricity market", *23rd European Conference on Operational Research*, Bonn, Germany, 5–8 July 2009.

82. J. M. Morales, S. Pineda, A. J. Conejo and M. Carrión, "Scenario reduction for futures market trading in electricity market", *INFORMS Annual Meeting 2008*, Washington D.C., USA, 12–15 October 2008.

83. S. Pineda, A. J. Conejo and M. Carrión, "Impact of unit failure on forward contracting", *INFORMS Annual Meeting 2007*, Seattle, Washington, USA, 4–7 November 2007.

PROJECTS

European projects
- *EcoGrid EU* (http://www.eu-ecogrid.net/), 2011-2015 (48 months).

Danish projects
- *IPower* (http://www.ipower-net.dk/), 2011-2015 (48 months).
- *Ensymora* (http://www.ensymora.dk/), 2011-2014 (48 months).
- *FEMs* (http://www.futureelmarket.dk/), 2013-2017 (60 months).
- *SAVE-E* (http://www.save-e.dk/), 2015-2018 (48 months).

Spanish projects
- *MSOpt – Mathematical Methods for the Opti- mization of Decision-making Processes based on Multi-source Data*, Reference PID2023-148291NB-I00, 2024-2028 (48 months).
- *DYCON - Data-driven Optimization Under a Dynamic Context*, Reference PID2020-115460GB-I00, 2021-2024 (36 months).
- *Mathematical Optimization Methods for Decision Making Using Contextual Information*, Reference P20_00153, 2021-2022 (24 months).
- *Prescriptive Analytics Techniques Applied to the Operation and Planning of Electric Power Systems*, Reference B1-2019_11, 2021-2022 (12 months).
- *Modelos para la Gestión de Sistemas de Almacenamiento de Energía basados en Baterías, con Aplicaciones Domésticas e Industriales*, Reference UMA18-FEDERJA-150, 2020-2021 (24 months).
- *Mathematical Methods for Data-driven Power Systems*, Reference ENE2017-83775-P, 2018-2020 (36 months).
- *Electric Energy Storage: Optimization Models for SmartGrid Integration*, Reference ENE2016-80638-R, 2017-2019 (36 months).
- *Distribution expansion planning considering renewable energies, storage, electric vehicles and demand response*, Reference ENE2015-63879-R, 2015-2017 (36 months).
- *Optimal investment in renewable non-dispatchable sources, transmission network, and regulation sources*, 2011 (12 months).
- *Risk Management in Electricity Markets*, 2010-2012 (36 months). Reference DPI2009-09573.
- *Integration of Renewable Electric Energy Sources in a Power System: Technical and Economical Assessment.*, 2008-2010 (36 months). Reference: PCI08-0102.

- *Production, Procurement and Trading Strategies in Electricity Markets Via Stochastic Programming*, 2007-2009 (36 months). Reference DPI2006-08001.
- *Setting up a Research and Development Knowhow for the Power System of Castilla-La Mancha*, 2007 (12 months). Reference: PCI06-0155.

SCIENTIFIC VISITS

Graz University of Technology , **Institute of Electricity Economics and Energy Innovation**, Graz, Austria (May 2022) with Prof. Sonja Wogrin.

New York University, **Department of Electrical and Computer Engineering**, New York, United States (March 2020) with Prof. Yury Dvorkin.

University of Zagreb, **Faculty of Electrical Engineering and Computing**, Zagreb, Croatia (June 2018) with Prof. Hrvoje Pandzic.

Nowegian University of Science and Technology, **Dept. of Industrial Economic and Technology Management**, Trondheim, Norway (February-April 2010) with Prof. Stein-Erik Fleten.

University of Texas, **Dept. of Electrical and Computer Engineering**, Austin, Texas, US (February-April 2009) with Prof. Ross Baldick.

GRANTS

- Four Research Grants awarded by the University of Castilla-La Mancha (2008, 2009, 2010, and 2011).
- Grant awarded by the Spanish Ministry of Education and Science for visiting the University of Science, Trondheim, Norway. February-April 2010 (3 months).
- Grant awarded by the Spanish Ministry of Science for visiting the University of Texas at Austin, Austin, Texas, United States. February-April 2009 (3 months).
- PhD Grant awarded by the Spanish Ministry of Science, July 2007 - June 2011 (48 months).
- Undergraduate Grant awarded by the Spanish Ministry of Science to research into the Department of Electrical Engineering at the University of Málaga, Málaga, Spain. 2005/2006 (9 months).

AWARDS

- Best paper award at 2nd International Conference on Smart Energy Systems and Technologies (SEST2019) for "Day-ahead Operation of an Aggregator of Electric Vehicles via Optimization under Uncertainty", September 2019 to A. Porras, R. Fernandez-Blanco, J.M. Morales and S. Pineda.
- X Research Awards prize for "Chronological Time-Period Clustering for Optimal Capacity Expansion Planning With Storage" by S. Pineda and J.M. Morales in the field of Engineering and Architecture - Young Researcher Award - FGUMA, May 2020.
- Best Contribution to Operational Research awarded by The Spanish Statistics and Operational Research Society (SEIO) - BBVA Foundation Awards for "Chronological Time-Period Clustering for Optimal Capacity Expansion Planning With Storage" by S. Pineda and J.M. Morales, July 2020.

OTHER INFORMATION

Journal referee of the following journals indexes in the SCI:
- IEEE Transactions on Power Systems
- IEEE Transactions on Smart Grids
- IEEE Transactions on Sustainable Energy
- IET Generation Transmission and Distribution
- Applied Energy
- European Journal of Operations Research
- Electric Power System Research
- Energy Economics
- Computers and Operations Research

Languages: Spanish (mother tongue), English (fluent), and Danish (basic).
Programming: Matlab, GAMS, LaTeX 2_ε, R, Python.