

DAVID POZO

<https://faculty.skoltech.ru/people/davidpozo>

Skolkovo Institute of Science and Technology ◊ Bolshoy Bulvar, 30, Moscow, 143026

Tel: +7 (495) 280-14-81 ◊ Email : d.pozo@skoltech.ru

(*January 2, 2021*)

RESEARCH DIRECTIONS

My research interests include power systems, smart grids, electricity markets, energy storage, electromobility and applications of mathematical tools (optimization, equilibrium and complementarity problems, uncertainty modeling techniques, and decomposition methods) to answer economic and technical questions about energy systems.

EXPERIENCE

Skolkovo Institute of Science and Technology (Skoltech)

Assistant Professor

Moscow, Russia

Apr 2017 – Present

- Center for Energy Science and Technology
- Head of the research group **Power Markets Analytics, Computer Science and Optimization**

Pontifical Catholic University of Rio de Janeiro

Research fellowship

Rio de Janeiro, Brazil

Mar 2015 – Mar 2017

- Department of Electrical Engineering
- Research topic: Robust and probabilistic models for electricity power systems operation and planning with significant renewable energy integration

Pontifical Catholic University of Chile

Postdoctoral fellowship

Santiago, Chile

Mar 2013 – Nov 2016

- Department of Industrial and Systems Engineering
- Research topic: Design, formulation and analysis of proactive models for the transmission and generation expansion in deregulated electric markets.

EDUCATION

Ph.D. in Electrical Engineering (Power Systems)

University of Castilla-La Mancha

January 2013

UCLM, Spain

Title: Stochastic Bilevel Games Applications in Electricity Markets.

Advisor: Javier Contreras

B.Sc. in Electrical Engineering

University of Castilla-La Mancha

July 2006

UCLM, Spain

Refereed Journal Papers (31)

*(Q1) and (Q2) are [SJR quartile indicator](#) for each journal in its category.

2021 (1)

1. (Q1) A. Alahyari and D. Pozo, "Electric end-user consumer profit maximization: An online approach," *International Journal of Electrical Power and Energy Systems*, vol. 125, p. 106502, Feb. 2021, doi: [10.1016/j.ijepes.2020.106502](https://doi.org/10.1016/j.ijepes.2020.106502) [[arXiv](#)]

2020 (10)

2. (Q1) A. Batista, D. Pozo, and J. Vera, "Managing the unknown: a distributionally robust model for the admission planning problem under uncertain length of stay," *Computers & Industrial Engineering*, p. 107041, 2020, Available online, doi: [10.1016/j.cie.2020.107041](https://doi.org/10.1016/j.cie.2020.107041)
3. (Q1) A. Alahyari, M. Ehsan, D. Pozo, and M. Farrokhifar, "Hybrid uncertainty-based offering strategy for virtual power plants," *IET Renewable Power Generation*, vol. 14, no. 13, pp. 2359–2366, Oct. 2020, doi: [10.1049/iet-rpg.2020.0249](https://doi.org/10.1049/iet-rpg.2020.0249)
4. (Q1) A. Velloso, D. Pozo, and A. Street, "Distributionally robust transmission expansion planning: a multi-scale uncertainty approach," *IEEE Transactions on Power Systems*, vol. 35, no. 5, pp. 3353–3365, Sept. 2020, doi: [10.1109/TPWRS.2020.2979118](https://doi.org/10.1109/TPWRS.2020.2979118) [[arXiv](#)]
5. (Q1) B. Fanzeres, A. Street, and D. Pozo, "A column-and-constraint generation algorithm to find Nash equilibrium in pool-based electricity markets," *Electric Power Systems Research*, vol. 189, p. 106806, Jun. 2020, doi: [10.1016/j.epsr.2020.106806](https://doi.org/10.1016/j.epsr.2020.106806) [[pdf](#)]
6. (Q1) S. A. E. Mousavi, R. M. Chabanloo, M. Farrokhifar, and D. Pozo, "Wide area backup protection scheme for distance relays considering the uncertainty of network protection," *Electric Power Systems Research*, vol. 189, p. 106651, Jun. 2020, doi: [10.1016/j.epsr.2020.106651](https://doi.org/10.1016/j.epsr.2020.106651)
7. (Q1) A. Velloso, A. Street, D. Pozo, J. M. Arroyo, and N. G. Cobos, "Two-stage robust unit commitment for co-optimized electricity markets: An adaptive data-driven approach for scenario-based uncertainty sets," *IEEE Transactions on Sustainable Energy*, vol. 11, no. 2, pp. 958–969, Apr. 2020, doi: [10.1109/TSTE.2019.2915049](https://doi.org/10.1109/TSTE.2019.2915049) [[arXiv](#)]
8. (Q1) M. Farrokhifar, Y. Nie, and D. Pozo, "Energy systems planning: A survey on models for integrated power and natural gas networks coordination," *Applied Energy*, vol. 262, p. 114567, Mar. 2020, doi: [10.1016/j.apenergy.2020.114567](https://doi.org/10.1016/j.apenergy.2020.114567)
9. (Q1) A. Gonzalez-Castellanos, D. Pozo, and A. Bischi, "Detailed Li-ion battery characterization model for economic operation," *International Journal of Electrical Power and Energy Systems*, vol. 116, p. 105561, Mar. 2020, doi: [10.1016/j.ijepes.2019.105561](https://doi.org/10.1016/j.ijepes.2019.105561)
10. (Q1) A. J. Gonzalez-Castellanos, D. Pozo, and A. Bischi, "Non-ideal linear operation model for Li-ion batteries," *IEEE Transactions on Power Systems*, vol. 35, no. 1, pp. 672–682, Jan. 2020, doi: [10.1109/TPWRS.2019.2930450](https://doi.org/10.1109/TPWRS.2019.2930450) [[arXiv](#)]
11. (Q1) A. Batista, D. Pozo, and J. Vera, "Stochastic time-of-use-type constraints for uninterruptible services," *IEEE Transactions on Smart Grid*, vol. 11, no. 1, pp. 229–232, Jan. 2020, doi: [10.1109/TSG.2019.2920529](https://doi.org/10.1109/TSG.2019.2920529) [[arXiv](#)]

2019 (3)

12. (Q1) A. Churkin, D. Pozo, J. Bialek, N. Korgin, and E. Sauma, “Can cross-border transmission expansion lead to fair and stable cooperation? Northeast Asia case analysis,” *Energy Economics*, vol. 84, p. 104498, Oct. 2019, doi: [10.1016/j.eneco.2019.104498](https://doi.org/10.1016/j.eneco.2019.104498)
13. (Q1) D. Quiroga, E. Sauma, and D. Pozo, “Power system expansion planning under global and local emission mitigation policies,” *Applied Energy*, vol. 239, pp. 1250–1264, Apr. 2019, doi: [10.1016/j.apenergy.2019.02.001](https://doi.org/10.1016/j.apenergy.2019.02.001)
14. (Q1) A. Batista, J. Vera, and D. Pozo, “Multi-objective admission planning problem: a two-stage stochastic approach,” *Health Care Management Science*, Jan. 2019, doi: [10.1007/s10729-018-9464-4](https://doi.org/10.1007/s10729-018-9464-4)

Previous to 2019 (17)

15. (Q1) C. Bustos, E. Sauma, S. de la Torre, J. Aguado, J. Contreras, and D. Pozo, “Energy storage and transmission expansion planning: Substitutes or complements?” *IET Generation, Transmission and Distribution*, vol. 12, no. 8, pp. 1738–1746, 2018, doi: [10.1049/jet-gtd.2017.0997](https://doi.org/10.1049/jet-gtd.2017.0997)
16. (Q1) D. Pozo, E. Sauma, and J. Contreras, “Basic theoretical foundations and insights on bilevel models and their applications to power systems,” *Annals of Operations Research*, vol. 254, no. 1-2, pp. 303–334, 2017, doi: [10.1007/s10479-017-2453-z](https://doi.org/10.1007/s10479-017-2453-z)
17. (Q1) A. Moreira, D. Pozo, A. Street, and E. Sauma, “Reliable renewable generation and transmission expansion planning: Co-optimizing system’s resources for meeting renewable targets,” *IEEE Transactions on Power Systems*, vol. 32, no. 4, pp. 3246–3257, 2017, doi: [10.1109/TPWRS.2016.2631450](https://doi.org/10.1109/TPWRS.2016.2631450) [**Best publication award in energy in the INFORMS ENRE 2020**] [[video](#)]
18. (Q1) J. Lopez, D. Pozo, J. Contreras, and J. Mantovani, “A multiobjective minimax regret robust VAR planning model,” *IEEE Transactions on Power Systems*, vol. 32, no. 3, pp. 1761–1771, 2017, doi: [10.1109/TPWRS.2016.2613544](https://doi.org/10.1109/TPWRS.2016.2613544)
19. (Q1) D. Pozo, E. Sauma, and J. Contreras, “When doing nothing may be the best investment action: Pessimistic anticipative power transmission planning,” *Applied Energy*, vol. 200, pp. 383–398, 2017, doi: [10.1016/j.apenergy.2017.05.030](https://doi.org/10.1016/j.apenergy.2017.05.030)
20. (Q2) A. Gourtani, H. Xu, D. Pozo, and T.-D. Nguyen, “Robust unit commitment with n-1 security criteria,” *Mathematical Methods of Operations Research*, vol. 83, no. 3, pp. 373–408, 2016, doi: [10.1007/s00186-016-0532-6](https://doi.org/10.1007/s00186-016-0532-6)
21. (Q1) D. Bravo, E. Sauma, J. Contreras, S. de la Torre, J. Aguado, and D. Pozo, “Impact of network payment schemes on transmission expansion planning with variable renewable generation,” *Energy Economics*, vol. 56, pp. 410–421, 2016, doi: [10.1016/j.eneco.2016.04.006](https://doi.org/10.1016/j.eneco.2016.04.006)
22. (Q1) J. López, D. Pozo, J. Contreras, and J. Mantovani, “A convex chance-constrained model for reactive power planning,” *International Journal of Electrical Power and Energy Systems*, vol. 71, pp. 403–411, 2015, doi: [10.1016/j.ijepes.2015.03.021](https://doi.org/10.1016/j.ijepes.2015.03.021)
23. (Q1) D. Pozo, J. Contreras, and E. Sauma, “Unit commitment with ideal and generic energy storage units,” *IEEE Transactions on Power Systems*, vol. 29, no. 6, pp. 2974–2984, 2014, doi: [10.1109/TPWRS.2014.2313513](https://doi.org/10.1109/TPWRS.2014.2313513)
24. (Q1) V. González, D. Pozo, and J. Contreras, “Risk-constrained dynamic energy allocation for a wind power producer,” *Electric Power Systems Research*, vol. 116, pp. 338–346, 2014, doi: [10.1016/j.epsr.2014.07.003](https://doi.org/10.1016/j.epsr.2014.07.003)
25. (Q2) A. Gourtani, D. Pozo, M. Vespucci, and H. Xu, “Medium-term trading strategy of a dominant electricity producer,” *Energy Systems*, vol. 5, no. 2, pp. 323–347, 2014, doi: [10.1007/s12667-013-0105-1](https://doi.org/10.1007/s12667-013-0105-1)
26. (Q1) D. Pozo, J. Contreras, and E. Sauma, “If you build it, he will come: Anticipative power transmission planning,” *Energy Economics*, vol. 36, pp. 135–146, 2013, doi: [10.1016/j.eneco.2012.08.001](https://doi.org/10.1016/j.eneco.2012.08.001)

27. (Q1) D. Pozo and J. Contreras, “A chance-constrained unit commitment with an n-k security criterion and significant wind generation,” *IEEE Transactions on Power Systems*, vol. 28, no. 3, pp. 2842–2851, 2013, doi: [10.1109/TPWRS.2012.2227841](https://doi.org/10.1109/TPWRS.2012.2227841)
28. (Q1) D. Pozo, E. Sauma, and J. Contreras, “A three-level static MILP model for generation and transmission expansion planning,” *IEEE Transactions on Power Systems*, vol. 28, no. 1, pp. 202–210, 2013, doi: [10.1109/TPWRS.2012.2204073](https://doi.org/10.1109/TPWRS.2012.2204073)
29. (Q1) D. Pozo and J. Contreras, “Finding multiple Nash equilibria in pool-based markets: A stochastic EPEC approach,” *IEEE Transactions on Power Systems*, vol. 26, no. 3, pp. 1744–1752, 2011, doi: [10.1109/TPWRS.2010.2098425](https://doi.org/10.1109/TPWRS.2010.2098425)
30. (Q1) F. Díaz, J. Contreras, J. Muñoz, and D. Pozo, “Optimal scheduling of a price-taker cascaded reservoir system in a pool-based electricity market,” *IEEE Transactions on Power Systems*, vol. 26, no. 2, pp. 604–615, 2011, doi: [10.1109/TPWRS.2010.2063042](https://doi.org/10.1109/TPWRS.2010.2063042)
31. (Q1) D. Pozo, J. Contreras, A. Caballero, and A. De Andrés, “Long-term Nash equilibria in electricity markets,” *Electric Power Systems Research*, vol. 81, no. 2, pp. 329–339, 2011, doi: [10.1016/j.epsr.2010.09.008](https://doi.org/10.1016/j.epsr.2010.09.008)

Refereed Conference Papers (30)

 2020 (13)

32. A. Alahyari, A. Hinneck, R. Tariverdi, and D. Pozo, “Segmentation and defect classification of the power line insulators: A deep learning-based approach,” in *International Conference on Smart Grids and Energy Systems (SGES 2020)*, Perth, Australia, 23–26 Nov. 2020, pp. 1–6, To Appear [\[arXiv\]](#)
33. L. Ageeva, M. Majidi, and D. Pozo, “Coordination between TSOs and DSOs: Flexibility domain identification,” in *Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2020)*, Paphos, Cyprus, 9–12 Nov. 2020, pp. 1–6, To Appear [\[arXiv\]](#)
34. A. Gonzalez-Castellanos, D. Pozo, and A. Bischi, “Pricing in integrated heat and power markets,” in *Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2020)*, Paphos, Cyprus, 9–12 Nov. 2020, pp. 1–6, To Appear [\[arXiv\]](#)
35. A. Gonzalez-Castellanos, D. Pozo, S. Martínez, L. López, and I. Oliveros, “Economic impact of wind generation penetration in the Colombian electricity market,” in *Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2020)*, Paphos, Cyprus, 9–12 Nov. 2020, pp. 1–6, To Appear [\[arXiv\]](#)
36. A. Samadi, R. M. Chabanloo, M. Farrokhifar, and D. Pozo, “Adaptive coordination of overcurrent relays considering setting changes minimization to improve protection system’s reliability,” in *2020 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe)*, The Hague, Netherlands, 25–28 Oct. 2020, pp. 414–418, doi: [10.1109/ISGT-Europe47291.2020.9248974](https://doi.org/10.1109/ISGT-Europe47291.2020.9248974)
37. D. Vankov, I. Zorin, and D. Pozo, “Clustering time series over electrical networks,” in *2020 International Conference on Smart Energy Systems and Technologies (SEST)*, Istanbul, Turkey, 9–7 Sep. 2020, pp. 1–6, doi: [10.1109/SEST48500.2020.9203491](https://doi.org/10.1109/SEST48500.2020.9203491)
38. A. Alahyari, D. Pozo, and M. A. Sadri, “Online energy management of electric vehicle parking-lots,” in *2020 International Conference on Smart Energy Systems and Technologies (SEST)*, Istanbul, Turkey, 9–7 Sep. 2020, pp. 1–6, doi: [10.1109/SEST48500.2020.9203421](https://doi.org/10.1109/SEST48500.2020.9203421)

39. S. Ghimire, A. Gonzalez-Castellanos, I. Lukicheva, and D. Pozo, "State estimation with identification of erroneous network parameters," in *2020 International Conference on Smart Energy Systems and Technologies (SEST)*, Istanbul, Turkey, 9–7 Sep. 2020, pp. 1–6, doi: [10.1109/SEST48500.2020.9203501](https://doi.org/10.1109/SEST48500.2020.9203501)
40. L. Lopez, I. Oliveros, A. Gonzalez-Castellanos, and D. Pozo, "Distributed generation allocation under uncertainty," in *2020 IEEE Power & Energy Society General Meeting (PESGM)*, Montreal, Canada, 2–6 Aug. 2020, pp. 1–5, doi: [10.1109/PESGM41954.2020.9281997](https://doi.org/10.1109/PESGM41954.2020.9281997)
41. K. Bubenchikov, A. Gonzalez-Castellanos, and D. Pozo, "Benefits of dynamic line rating for the Russian power corridor between the European and Siberian zones," in *2020 International Youth Conference on Radio Electronics, Electrical and Power Engineering (REEPE)*, Moscow, Russia, 12–14 Mar. 2020, pp. 1–6, doi: [10.1109/REEPE49198.2020.9059177](https://doi.org/10.1109/REEPE49198.2020.9059177)
42. A. Sangadiev, A. Poddubny, D. Pozo, and A. Gonzalez-Castellanos, "Quasi-newton methods for power flow calculation," in *2020 International Youth Conference on Radio Electronics, Electrical and Power Engineering (REEPE)*, Moscow, Russia, 12–14 Mar. 2020, pp. 1–6, doi: [10.1109/REEPE49198.2020.9059230](https://doi.org/10.1109/REEPE49198.2020.9059230)
43. S. Ghimire, M. Ali, and D. Pozo, "Modal analysis for voltage-stable regime determination: The nepalese power system case," in *2020 International Youth Conference on Radio Electronics, Electrical and Power Engineering (REEPE)*, Moscow, Russia, 12–14 Mar. 2020, pp. 1–6, doi: [10.1109/REEPE49198.2020.9059220](https://doi.org/10.1109/REEPE49198.2020.9059220)
44. B. Morsy, M. AlSadat, and D. Pozo, "State estimation with exogenous information for grids with large renewable penetration," in *2020 International Youth Conference on Radio Electronics, Electrical and Power Engineering (REEPE)*, Moscow, Russia, 12–14 Mar. 2020, pp. 1–6, doi: [10.1109/REEPE49198.2020.9059144](https://doi.org/10.1109/REEPE49198.2020.9059144)

2019 (12)

45. B. Singh and D. Pozo, "A guide to solar power forecasting using ARMA models," in *2019 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe)*, Sep. 2019, pp. 1–4, doi: [10.1109/ISGTEurope.2019.8905430](https://doi.org/10.1109/ISGTEurope.2019.8905430) [[arXiv](#)]
46. B. Faridpak, H. F. Gharibeh, M. Farrokhifar, and D. Pozo, "Two-step LP approach for optimal placement and operation of EV charging stations," in *2019 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe)*, Sep. 2019, pp. 1–5, doi: [10.1109/ISGTEurope.2019.8905469](https://doi.org/10.1109/ISGTEurope.2019.8905469)
47. H. F. Gharibeh, L. M. Khiavi, M. Farrokhifar, and D. Pozo, "Life cycle cost analysis of electric vehicles based on critical price and critical distance," in *2019 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe)*, Sep. 2019, pp. 1–5, doi: [10.1109/ISGTEurope.2019.8905527](https://doi.org/10.1109/ISGTEurope.2019.8905527)
48. A. Gonzalez-Castellanos, D. Pozo, and A. Bischi, "Stochastic unit commitment of a distribution network with non-ideal energy storage," in *2019 International Conference on Smart Energy Systems and Technologies (SEST)*, Sep. 2019, pp. 1–6, doi: [10.1109/SEST.2019.8849057](https://doi.org/10.1109/SEST.2019.8849057)
49. A. Alahyari and D. Pozo, "Online demand response for end-user loads," in *2019 IEEE Milan PowerTech*, June 2019, pp. 1–6, doi: [10.1109/PTC.2019.8810837](https://doi.org/10.1109/PTC.2019.8810837) [[pdf](#)]
50. Y. Nie, M. Farrokhifar, and D. Pozo, "Electricity and gas network expansion planning: An ADMM-based decomposition approach," in *2019 IEEE Milan PowerTech*, June 2019, pp. 1–6, doi: [10.1109/PTC.2019.8810948](https://doi.org/10.1109/PTC.2019.8810948) [[pdf](#)]
51. M. Majidi, A. Nazeri, F. Ibanez, and D. Pozo, "A guideline for modeling voltage and frequency controls in ac microgrids: The influence of line impedance on transient time," in *2019 IEEE Milan PowerTech*, June 2019, pp. 1–6, doi: [10.1109/PTC.2019.8810619](https://doi.org/10.1109/PTC.2019.8810619) [[pdf](#)]

52. M. Parshin, M. Majidi, F. Ibanez, and D. Pozo, "On the use of thermostatically controlled loads for frequency control," in *2019 IEEE Milan PowerTech*, June 2019, pp. 1–6, doi: [10.1109/PTC.2019.8810985](https://doi.org/10.1109/PTC.2019.8810985) [pdf]
53. H. Gharibeh, L. Khiavi, M. Farrokhifar, A. Alahyari, and D. Pozo, "Capacity value of variable-speed wind turbines," in *2019 IEEE Milan PowerTech*, June 2019, pp. 1–6, doi: [10.1109/PTC.2019.8810839](https://doi.org/10.1109/PTC.2019.8810839)
54. A. Churkin, D. Pozo, J. Bialek, N. Korgin, and E. Sauma, "Manipulability of cost and benefit allocation in cross-border electrical interconnection projects," in *2019 IEEE Milan PowerTech*, June 2019, pp. 1–6, doi: [10.1109/PTC.2019.8810685](https://doi.org/10.1109/PTC.2019.8810685)
55. L. Ageeva, M. Majidi, and D. Pozo, "Analysis of feasibility region of active distribution networks," in *2019 International Youth Conference on Radio Electronics, Electrical and Power Engineering (REEPE)*, March 2019, pp. 1–5, doi: [10.1109/REEPE.2019.8708766](https://doi.org/10.1109/REEPE.2019.8708766)
56. H. Gharibeh, L. Mokhtari Khiavi, M. Farrokhifar, A. Alahyari, and D. Pozo, "Power management of electric vehicle equipped with battery and supercapacitor considering irregular terrain," in *2019 International Youth Conference on Radio Electronics, Electrical and Power Engineering (REEPE)*, March 2019, pp. 1–6, doi: [10.1109/REEPE.2019.8708770](https://doi.org/10.1109/REEPE.2019.8708770)

Previous to 2019 (5)

57. J. López and D. Pozo, "Robust microgrid operation under renewable generation," in *2018 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe)*, Oct 2018, pp. 1–6, doi: [10.1109/ISGTEurope.2018.8571884](https://doi.org/10.1109/ISGTEurope.2018.8571884)
58. I. Lukicheva, D. Pozo, and A. Kulikov, "Cyberattack detection in intelligent grids using non-linear filtering," in *2018 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe)*, Oct 2018, pp. 1–6, doi: [10.1109/ISGTEurope.2018.8571457](https://doi.org/10.1109/ISGTEurope.2018.8571457)
59. D. Pozo, A. Street, and A. Velloso, "An ambiguity-averse model for planning the transmission grid under uncertainty on renewable distributed generation," in *2018 Power Systems Computation Conference (PSCC)*, June 2018, pp. 1–7, doi: [10.23919/PSCC.2018.8442871](https://doi.org/10.23919/PSCC.2018.8442871)
60. D. Pozo, E. Sauma, and J. Contreras, "Impacts of network expansion on generation capacity expansion," in *2014 Power Systems Computation Conference*, Aug 2014, pp. 1–7, doi: [10.1109/PSCC.2014.7038320](https://doi.org/10.1109/PSCC.2014.7038320)
61. J. Contreras and D. Pozo, "Short- and long-term Nash equilibria in electricity markets," in *2009 IEEE Power Energy Society General Meeting*, July 2009, pp. 1–10, doi: [10.1109/PES.2009.5275951](https://doi.org/10.1109/PES.2009.5275951)

Books Chapters (2)

62. A. González-Castellanos, D. Pozo, and A. Bischi, *Distribution System Operation with Energy Storage and Renewable Generation Uncertainty*. Cham: Springer International Publishing, 2020, pp. 183–218, doi: [10.1007/978-3-030-36115-0_6](https://doi.org/10.1007/978-3-030-36115-0_6)
63. J. López, D. Pozo, and J. Contreras, *Static and Dynamic Convex Distribution Network Expansion Planning*. Singapore: Springer Singapore, 2018, pp. 41–63, doi: [10.1007/978-981-10-7056-3_2](https://doi.org/10.1007/978-981-10-7056-3_2)

Ph.D. Dissertation (1)

64. D. Pozo, "Stochastic bilevel games applications in electricity markets," Ph.D. dissertation, Universidad de Castilla-La Mancha, 2013

TEACHING

Principal Lecture

Center for Energy Science and Technology
Skolkovo Institute of Science and Technology

- *Fundamentals of Power Systems*
Taught 4 bimesters

Master level, 6 ECTS
Feb-Mar 2018, Nov-Dec 2018, 2019, 2020

- *Power Markets and Regulations*
Taught 3 bimesters

PhD level, 6 ECTS
Apr-May 2018, 2019, 2020

Lecture

Industrial and Systems Engineering Department,
Pontifical Catholic University of Chile

- *Optimization*
Taught 2 semesters

Undergrad level, 10 ECTS
Mar-Jul 2015, Aug-Dec 2015

PROJECTS & FUNDINGS

1 MIT Skoltech Next Generation Program

Jul 2020 — Jun 2023

Principal Investigator and Project Coordinator

- Market Design for Electromobility: New Formulations, Models and Algorithms [\[link\]](#)

2 MIT Skoltech Next Generation Program

Dec 2017 — Dec 2019

Principal Investigator and Project Coordinator

- Energy Systems Planning for Government Regulations: New Formulations, Models and Algorithms [\[link\]](#)

3 Peruvian General Directorate for Energy Efficiency, Peruvian Ministry of Energy and Mines, and EU Energy Initiative Partnership Dialogue Facility

Sep 2016 – Jan 2017

Principal Investigator

- Support to the General Directorate for Energy Efficiency for capacity development on energy planning of key stakeholders in the energy sector in Peru.

4 International Network Cooperation (Chile-Brazil)

Aug 2016 — Nov 2017

Principal Investigator

- Reliable integration of renewable energy to support climate mitigation
- PCI – Program of International Cooperation from CONICYT, Chile

5 Chilean Ministry of Energy and Inter-American Development Bank

Aug 2016 – Mar 2017

Key Researcher

- Selection methodology of robust energy scenarios in a long-term energy planning under the new law of electricity transmission
- The outcome of this project was partially implemented in the energy planning process of the Chilean Ministry of Energy [\[link\]](#)

6 Comisión Nacional de la Energía (Chilean Energy Regulator)

Sep 2015 – Dec 2015

Principal Investigator

- Social benefits' evaluation for an optimal transmission expansion planning of the Chilean power system

- 7 Red Eléctrica de España (Spanish electricity transmission owner)** Dec 2013 – Aug 2014
Principal Investigator
- Unit Commitment model with reliability constraints and n-K security criteria. Application to the Canary Islands' power system operation.

- 8 Ministry of Economy and Competitiveness (Spain)** Jan 2013 – Dec 2015
Key Researcher
- Design and Analysis of Alternative Market-Clearing Procedures for Electricity Markets.

- 9 Regional Government of Castilla-La Mancha** Jan 2012 – Dec 2014
Key Researcher
- Integration of Wind Energy in Electric Energy Systems.

- 10 Gas Natural Fenosa (Large Spanish Generating Company)** Dec 2008 – Dec 2009
Principal Investigator
- Game Theory Modeling of the Spanish Electricity Market: CESUR Auctions.

- 11 Gas Natural Fenosa (Large Spanish Generating Company)** Dec 2005 – Dec 2006
Key Researcher
- Game Theory Modeling for the Spanish Electricity Market.

RESEARCH VISITS

- Massachusetts Institute of Technology (MIT)** Aug 2018 – Sep 2018
Sloan School of Management
(6 weeks)
- Visiting scholar. Host: Prof. Juan Pablo Vielma

- Pontifical Catholic University of Rio de Janeiro (PUC-Rio)** Oct 2014 – Mar 2015
Department of Electrical Engineering
(20 weeks)
- Visiting scholar. Host: Prof. Alexandre Street

- University of Southampton** Sep 2011 – Dec 2011
School of Mathematics
(12 weeks)
- Visiting Ph.D. scholar. Host: Prof. Huifu Xu

- University of Hong Kong (HKU)** Sep 2010 – Mar 2011
Department of Electrical and Electronic Engineering
(24 weeks)
- Visiting Ph.D. scholar. Host: Prof. Felix F. Wu

- University of Hong Kong (HKU)** Sep 2009 – Dec 2009
Department of Electrical and Electronic Engineering
(12 weeks)
- Visiting Ph.D. scholar. Host: Prof. Felix F. Wu

SUPERVISION

I am head of the research group **Power Market Analytics, Computer Science, and Optimization**. Details can be found below.

MSc Students

ongoing (3)

- Andrey Poddubny, (main advisor), June 2021: Demand response mechanisms in Russia.
- Kirill Bubenchikov, (main advisor), June 2021: Non-wire solutions for long-term capacity adequacy.
- Aiusha Sangadiev, (main advisor), June 2021: Data-driven power system modeling.

graduated (5)

- Soodanbek Kasymaliev, (main advisor), June 2020: Detection of nontechnical losses in electric distribution networks.
- Oluwaseun Oladimeji, (main advisor), June 2020: Electromobility: the value of EV fleet coordination. [[Awarded as the Best Research Thesis of the Energy System program](#)]
- Daniil Vankov, (main advisor), June 2020: Data analytics using low-dimensional models for power system optimization.
- Liliia Ageeva, (main advisor), June 2019: Identification of feasible regimes for active distribution networks.
- Maksim Parshin, (co-advised with F. Ibanez), June 2019: Demand response based on droop control for the grid frequency control.

PhD Students

ongoing (5)

- Luis Lopez, (main advisor), 2020 – ongoing: Marketplace design for ancillary services in electromobility sector.
- Anton Hinneck, (main advisor), 2018 – ongoing: Acceleration techniques for solving non-convex optimization in power systems.
- Arman Alayari, (main advisor), 2018 – ongoing. Online decision-making for demand response.
- Ivan Zorin, (main advisor), 2017 – ongoing: Machine-learning-based algorithms for long-term decision making.
- Alvaro Gonzalez, (co-advised with Prof. Aldo Bischi), 2017 – ongoing: Power system flexibility harnessing: new mathematical models and solution algorithms.

graduated (4)

- Irina Lukicheva, (main advisor), 2016 – Oct 2020: Forecast-aided state estimation and cybersecurity in power systems. [Aspirantura]
- Andrey Churkin, (co-advised with Prof. Janusz Bialek), 2016 – Nov 2020: Stability analysis in coalitional games for cross-border power interconnection planning.
- Ana Batista, (co-advised with Prof. Jorge Vera) 2014 – Dec 2020: Admission Planning in Healthcare: Stochastic and hierarchical approaches.

- Alexandre Velloso, (co-advised with Prof. Alexandre Street) 2016 – Aug 2020: Essays on Two-stage Robust Models for Power Systems: Modeling Contributions and Applications of the Column-and-Constraint-Generation Algorithm.

Postdoctoral Researchers (2)

- Victoria Erofeeva (Dec 2020 – ongoing). Distributed optimization methods.
- Meisam FarrokhiFar (Jul 2018 – Dec 2019). Energy systems planning.

Research Interns (5)

- Ana Batista (Dec 2017 – June 2020): Stochastic optimization modelling for scheduling with time-dependant constraints.
- Daniil Vankov (July 2018 – May 2019): Power system data clustering.
- Yinghui Nie (May 2018 – Apr 2019): Integrated energy planning models.
- Ilgiz Murzakhanov (Jul 2018 – May 2019): On the solution of large scale of security constrained AC-OPF.
- Maryam Majidi (Jul 2018 – Feb 2019): Feed-Forward control in AC microgrids.

Visiting Students (2)

- Luis Lopez, from *Universidad del Norte, Colombia*, Sep 2019 – Dec 2019 (13 weeks): Optimal siting and sizing of distributed resources in microgrids.
- Arman Alayari, from *Sharif University of Technology, Iran*, June 2018 – October 2018 (20 weeks): Strategic offer construction for virtual power plans.

PhD jury member (5)

- Oleg Khamisov: *Optimization of frequency control in power systems*, Skolkovo Institute of Science and Technology, April 2020.
- Timur Saifutdinov: *Optimal sitting, sizing and technology selection of storage systems for power systems applications*, Skolkovo Institute of Science and Technology, March 2020.
- Noemi González Cobos: *Robust generation scheduling in electricity markets*, University of Castilla-La Mancha, Dec 2018.
- Sebastian Martin: *Stochastic-based models for electricity market analysis with high wind energy penetration*, University of Málaga, May 2014, (in the figure of an external referee).
- Miriam Bueno Lorenzo: *Economic effects of high share of renewable energies on power systems*, Universidad Carlos III. January 2014, (in the figure of an external referee).

Member of PhD student Individual Committee (13).

At Skoltech (10): Andrey Churkin, Alvaro Gonzalez, Tatiana Chernova, Arsenii Grinchenko, Rahim Samanbakhsh, Aleksandra Burashnikova, Mikhail Krechetov, Maria Victoria Gasca, Fernando Davalos, Nikolay Ivanov

Others (3): Juliana Restrepo Trujillo (U. Autonoma de Occidente), Maryam Majidi (University of Kassel), Frank Alarcón (Pontifical Catholic University of Chile)

Jury member of (16) final BSc thesis defenses.

INVITED PRESENTATIONS, CONFERENCE TALKS, AND MINI-COURSES

Invited Talks/Seminars (25)

1. V congreso de Ingeniería Eléctrica, Ingeniería e Innovación, Universidad Tecnológica de Panamá (UTE) , Panama, *Sistemas Eléctricos del Futuro: Retos y Oportunidades*, Nov 19, 2020. [\[video\]](#)
2. IEEE Skoltech Student Branch, Skolkovo Institute of Science and Technology (Skoltech), Russia, *A vision of the Future of Energy Systems.*, Oct 2, 2020.
3. Keynote Speaker at the 2st IEEE 2019 International Youth Conference on Radio Electronics, Electrical, and Power Engineering, MPEI, Moscow, *E-mobility. New challenges and opportunities for the electric sector*, March 12, 2021.
4. Universidad Autónoma de Occidente, Colombia, *Electrical Systems of the Future: Challenges and Opportunities* (in Spanish) Aug 27, 2019. [\[link\]](#)
5. IEEE Uninorte Student Branch, Universidad del Norte, Colombia, *Electrical Systems of the Future: Challenges and Opportunities*, (in Spanish) Aug 24, 2019.
6. Keynote Speaker at the 1st IEEE 2019 International Youth Conference on Radio Electronics, Electrical, and Power Engineering, MPEI, Moscow, *Challenges of the future energy systems*, March 14, 2019.
7. Skoltech-MIT conference, *Energy Systems Planning for Government Regulations: New Formulations, Models and Algorithms*, Oct 16, 2018.
8. Keynote Speaker at the VII Jornadas de Economía de la Energía, Chile, *Reliable Integration of Renewable Energy to Support Climate Mitigation*, Nov 9, 2017.
9. 3rd International Conference "Science for Energy Systems Regulation" , Skoltech, Moscow, Russia, *A probability-free model for planning power systems under deep uncertainty*, Oct. 2017
10. Pontifical Catholic University of Rio de Janeiro, Brazil, *A Probability-Free Model for Planning Power Systems under Deep Uncertainty*, August 10, 2017.
11. Los Alamos National Laboratory, USA, *Planning power systems with n-k security criteria and large penetration of renewable energy*, July 2017,
12. Pontifical Catholic University of Rio de Janeiro, Brazil, *Reliable Renewable Generation and Transmission Expansion Planning: Co-Optimizing System's Resources for Meeting Renewable Targets*, Nov 2016.
13. Skoltech, Moscow, Russia, *Hierarchical Optimization and Equilibrium in Energy Systems Planning*, Oct 2016.
14. IIIO Seminar, Universidad Adolfo Ibáñez. Santiago, Chile, *Hierarchical Optimization and Equilibrium in Energy Systems Planning* (in Spanish), Oct 2016.
15. Keynote at XXIII Congreso y Exposición Internacional de Ingeniería Mecánica, Mecatrónica, Eléctrica, Electrónica y Ramas Afines, CONEIMERA, Piura, Perú, *Planificación de infraestructura de sistemas eléctricos con energía renovables* (in Spanish), Sep 2016.
16. Keynote at XXIII Congreso y Exposición Internacional de Ingeniería Mecánica, Mecatrónica, Eléctrica, Electrónica y Ramas Afines, CONEIMERA, Piura, Perú, *Sistemas eléctricos de potencia modernos: menos contaminantes y más inteligentes* (in Spanish), Sep 2016.
17. Tsinghua University, China, Department of Electrical Engineering, *Robust transmission expansion planning under compound n-K security criteria and high renewable potential*, Mar 2016.
18. Sichuan University, China, School of Electrical Engineering Information, *Robust transmission expansion planning under compound n-K security criteria and high renewable potential*, Mar 2016.

19. The University of Hong Kong, *Robust transmission and generation expansion planning*, 5 May 2015. [\[link\]](#)
20. Pontifical Catholic University of Rio de Janeiro, Brazil, *Definitions on decision-making models for two or more classes of decisions*, Dec 2014.
21. The University of Hong Kong, *A three-level MILP model for generation and transmission expansion planning*, Aug 2011.
22. The University of Hong Kong, *Modeling and Optimizations with GAMS*, 5 Nov 2010. [\[link\]](#)
23. Instituto de Investigación Tecnológica, University of Comillas, Spain, *Finding multiple Nash equilibria in a spot market: an EPEC approach*, Feb 2010.
24. The University of Hong Kong, *Understanding the Equilibrium Problem with Step-wise Offers*, Nov 2009.
25. The University of Hong Kong, *Finding Nash Equilibrium Using Bilevel Games*, Oct 2009.

Mini-courses (2)

1. *Advanced Topics in Mathematical Modeling for Power Systems* PhD level, Aug–Oct 2019
Universidad del Norte, Barranquilla, Colombia.
2. *Energy Planning Modeling* PhD level, Sep 2019
Universidad de Occidente, Cali, Colombia.

Conference Talks (73)

* (PB) Peer-reviewed paper-based presentation, (TB) Peer-reviewed transaction-based presentation, (IN) Invited presentation

2020 (15)

1. (PB) A. Alahyari, A. Hinneck, R. Tariverdi, and D. Pozo, “Segmentation and defect classification of the power line insulators: A deep learning-based approach,” in *International Conference on Smart Grids and Energy Systems (SGES 2020)*, Perth, Australia, Nov. 23–26, 2020
2. (PB) L. Ageeva, M. Majidi, and D. Pozo, “Coordination between TSOs and DSOs: Flexibility domain identification,” in *Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2020)*, Paphos, Cyprus, Nov. 9–12, 2020
3. (PB) A. Gonzalez-Castellanos, D. Pozo, and A. Bischi, “Pricing in integrated heat and power markets,” in *Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2020)*, Paphos, Cyprus, Nov. 9–12, 2020
4. (PB) A. Gonzalez-Castellanos, D. Pozo, S. Martínez, L. López, and I. Oliveros, “Economic impact of wind generation penetration in the Colombian electricity market,” in *Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2020)*, Paphos, Cyprus, Nov. 9–12, 2020
5. (PB) A. Samadi, R. M. Chabanloo, M. Farrokhifar, and D. Pozo, “Adaptive coordination of over-current relays considering setting changes minimization to improve protection system’s reliability,” in *IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2020)*, The Hague, Netherlands, Oct. 25–28, 2020
6. (PB) D. Vankov, I. Zorin, and D. Pozo, “Clustering time series over electrical networks,” in *2020 International Conference on Smart Energy Systems and Technologies (SEST 2020)*, Istanbul, Turkey, Sep. 9–7, 2020

7. (PB) A. Alahyari, D. Pozo, and M. A. Sadri, "Online energy management of electric vehicle parking-lots," in *2020 International Conference on Smart Energy Systems and Technologies (SEST 2020)*, Istanbul, Turkey, Sep. 9–7, 2020
8. (PB) S. Ghimire, A. Gonzalez-Castellanos, I. Lukicheva, and D. Pozo, "State estimation with identification of erroneous network parameters," in *2020 International Conference on Smart Energy Systems and Technologies (SEST 2020)*, Istanbul, Turkey, Sep. 9–7, 2020
9. (PB) L. Lopez, I. Oliveros, A. Gonzalez-Castellanos, and D. Pozo, "Distributed generation allocation under uncertainty," in *IEEE Power Energy Society General Meeting (IEEE PES GM 2020)*, Montreal, Canada, August 2–6, 2020
10. (PB) B. Fanzeres, A. Street, and D. Pozo, "A column-and-constraint generation algorithm to find Nash equilibrium in pool-based electricity markets," in *Power Systems Computation Conference (PSCC 2020)*, Porto, Portugal, June 29 – July 3, 2020
11. (PB) R. M. Chabanloo, S. A. E. Musavi, M. Farrokhifar, and D. Pozo, "Wide area backup protection scheme for distance relays considering the uncertainty of network protection," in *Power Systems Computation Conference (PSCC 2020)*, Porto, Portugal, June 29 – July 3, 2020
12. (PB) K. Bubenchikov, A. Gonzalez-Castellanos, and D. Pozo, "Benefits of dynamic line rating for the Russian power corridor between the European and Siberian zones," in *2nd IEEE International Youth Conference on Radio Electronics, Electrical and Power Engineering (IEEE REEPE 2020)*, MPEI, Moscow, Russia, March 5–6, 2020
13. (PB) A. Sangadiev, A. Poddubny, and D. Pozo, "Quasi-Newton methods for power flow calculation," in *2nd IEEE International Youth Conference on Radio Electronics, Electrical and Power Engineering (IEEE REEPE 2020)*, MPEI, Moscow, Russia, March 5–6, 2020
14. (PB) S. Ghimire, M. Ali, and D. Pozo, "Modal analysis for voltage-stable regime determination: The Nepalese power system case," in *2nd IEEE International Youth Conference on Radio Electronics, Electrical and Power Engineering (IEEE REEPE 2020)*, MPEI, Moscow, Russia, March 5–6, 2020
15. (PB) B. Morsy, M. AlSadat, and D. Pozo, "State estimation with exogenous information for grids with large renewable penetration," in *2nd IEEE International Youth Conference on Radio Electronics, Electrical and Power Engineering (IEEE REEPE 2020)*, MPEI, Moscow, Russia, Mar. 5–6, 2020

2019 (19)

16. (IN) D. Pozo, "Long-term planning models on steroids: Representation of short-term operation for long-term decision making," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2019) Annual Meeting*, Seattle, Washington, U.S.A, Oct. 22–23, 2019
17. (IN) D. Pozo, A. Velloso, and A. Street, "Distributionally robust optimization with conditional ambiguity sets for power system planning," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2019) Annual Meeting*, Seattle, Washington, U.S.A, Oct. 22–23, 2019
18. (IN) A. Churkin, D. Pozo, E. E. Sauma, J. Bialek, and N. Korgin, "Incorporating cooperative game theory principles into cross-border transmission expansion planning algorithms," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2019) Annual Meeting*, Seattle, Washington, U.S.A, Oct. 22–23, 2019
19. (IN) A. Batista, D. Pozo, and J. Vera, "On the solution of scheduling uninterruptible services with stochastic duration: A distributionally robust optimization approach," in *Proceedings of the*

Institute for Operations Research and the Management Science (INFORMS 2019) Annual Meeting, Seattle, Washington, U.S.A, Oct. 22–23, 2019

20. (PB) B. Singh and D. Pozo, “A guide to solar power forecasting using ARMA models,” in *IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2019)*, Bucharest, Rumania, Sep. 29 – Oct. 2, 2019
21. (PB) B. Faridpa, H. Farhadi, M. Farrokhifar, and D. Pozo, “Two-step LP approach for optimal placement and operation of EV charging stations,” in *IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2019)*, Bucharest, Rumania, Sep. 29 – Oct. 2, 2019
22. (PB) H. Farhadi, L. Mokhtari, M. Farrokhifar, and D. Pozo, “Life cycle cost analysis of electric vehicles based on critical price and critical distance,” in *IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2019)*, Bucharest, Rumania, Sep. 29 – Oct. 2, 2019
23. (PB) A. Gonzalez-Castellanos, D. Pozo, and A. Bischi, “Stochastic unit commitment of a distribution network with non-ideal energy storage,” in *International Conference on Smart Energy Systems and Technologies (SEST 2019)*, Porto, Portugal, Sep. 9–11, 2019
24. (IN) D. Pozo, A. Velloso, and A. Street, “Conditional ambiguity sets in distributionally robust optimization for power system planning,” in *XV International Conference on Stochastic Programming (ICSP XV)*, Trondheim, Norway, Jul. 29 – Aug. 2, 2019
25. (IN) A. Moreira, D. Pozo, A. Street, E. Sauma, and G. Strbac, “Generation and transmission expansion planning under climate variability,” in *XV International Conference on Stochastic Programming (ICSP XV)*, Trondheim, Norway, Jul. 29 – Aug. 2, 2019
26. (TB) A. Moreira, D. Pozo, A. Street, and E. Sauma, “Reliable renewable generation and transmission expansion planning: Co-optimizing system’s resources for meeting renewable targets,” in *IEEE PES PowerTech 2019 Conference*, Milan, Italy, Jun. 23–27, 2019
27. (PB) A. Churkin, D. Pozo, J. Bialek, N. Korgin, and E. Sauma, “Manipulability of cost and benefit allocation in cross-border electrical interconnection projects,” in *IEEE PES PowerTech 2019 Conference*, Milan, Italy, Jun. 23–27, 2019
28. (PB) M. Parshin, M. Majidi, F. Ibanez, and D. Pozo, “On the use of thermostatically controlled loads for frequency control,” in *IEEE PES PowerTech 2019 Conference*, Milan, Italy, Jun. 23–27, 2019
29. (PB) H. Farhadi, L. Mokhtari, M. Farrokhifar, A. Alahyari, and D. Pozo, “Capacity value of variable-speed wind turbines,” in *IEEE PES PowerTech 2019 Conference*, Milan, Italy, Jun. 23–27, 2019
30. (PB) M. Majidi, F. Ibanez, D. Pozo, and A. A. Nazeri, “A guideline for modeling voltage and frequency controls in ac microgrids: The influence of line impedance on transient time,” in *IEEE PES PowerTech 2019 Conference*, Milan, Italy, Jun. 23–27, 2019
31. (PB) Y. Nie, M. Farrokhifar, and D. Pozo, “Electricity and gas network expansion planning: an ADMM-based decomposition approach,” in *IEEE PES PowerTech 2019 Conference*, Milan, Italy, Jun. 23–27, 2019
32. (PB) A. Alahyari and D. Pozo, “Online demand response for end-user loads,” in *IEEE PES PowerTech 2019 Conference*, Milan, Italy, Jun. 23–27, 2019
33. (PB) H. Farhadi, L. Mokhtari, M. Farrokhifar, A. Alahyari, and D. Pozo, “Power management of electric vehicle equipped with battery and supercapacitor considering irregular terrain,” in *Proceedings of the 1st IEEE International Youth Conference on Radio Electronics, Electrical and Power Engineering (IEEE REEPE 2019)*, Moscow, Russia, Mar. 14–15, 2019

34. (PB) L. Ageeva, M. Majidi, and D. Pozo, "Analysis of feasibility region of active distribution networks," in *Proceedings of the 1st IEEE International Youth Conference on Radio Electronics, Electrical and Power Engineering (IEEE REEPE 2019)*, Moscow, Russia, Mar. 14–15, 2019

35. (PB) A. Gonzalez-Castellanos, D. Pozo, and A. Bischi, "A detailed li-ion battery operation model for day-ahead economic dispatch," in *Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2018)*, Dubrovnik, Croatia, Nov. 12–15, 2018 [[Awarded with the best paper recognition \(third position\)](#)]
36. (IN) D. Pozo and I. Zorin, "Graphical models for transmission expansion planning," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2018) Annual Meeting*, Phoenix, Arizona, U.S.A, Nov. 4–7, 2018
37. (IN) E. Sauma, D. Pozo, and J. Contreras, "Impacts of proactive expansion planning under multiple equilibria on generation expansion decisions," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2018) Annual Meeting*, Phoenix, Arizona, U.S.A, Nov. 4–7, 2018
38. (IN) A. Batista, D. Pozo, and J. Vera, "Admission planning problem with stochastic length of stay," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2018) Annual Meeting*, Phoenix, Arizona, U.S.A, Nov. 4–7, 2018
39. (PB) J. Lopez and D. Pozo, "Robust microgrid operation under renewable generation," in *IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2018)*, Sarajevo, Bosnia and Herzegovina, Oct. 21–25 2019
40. (PB) I. Lukicheva, D. Pozo, and A. Kulikov, "Cyberattack detection in intelligent grids using non-linear filtering," in *IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2018)*, Sarajevo, Bosnia and Herzegovina, Oct. 21–25 2019
41. (IN) D. Pozo, "A column-and-constraint decomposition approach for solving epec problems," in *Modeling and Optimization: Theory and Applications (MOPTA) Conference*, Lehigh University, Bethlehem, PA, USA, Aug. 15–17, 2018
42. (IN) C. Bustos, E. Sauma, S. de la Torre, J. C. J. Aguado, and D. Pozo, "Energy storage systems as provider of flexibility services that complements and/or substitutes transmission expansion," in *IEEE Power Energy Society General Meeting (IEEE PES GM 2018)*, Portland, Oregon, USA, Aug. 5–9, 2018
43. (IN) E. Sauma, A. Moreira, D. Pozo, and A. Street, "Power generation and transmission expansion planning under climate variability," in *IEEE Power Energy Society General Meeting (IEEE PES GM 2018)*, Portland, Oregon, USA, Aug. 5–9, 2018
44. (TB) D. Pozo, A. Moreira, A. Street, and E. Sauma, "Reliable renewable generation and transmission expansion planning: Co-optimizing system's resources for meeting renewable targets," in *IEEE Power Energy Society General Meeting (IEEE PES GM 2018)*, Portland, Oregon, USA, Aug. 5–9, 2018
45. (PB) D. Pozo, A. Street, and A. Velloso, "An ambiguity-averse model for planning the transmission grid under uncertainty on renewable distributed generation," in *Power Systems Computation Conference (PSCC 2018)*, Dublin, Ireland, Jun. 11–15, 2018
46. (PB) D. Pozo, A. Street, and A. Velloso, "An ambiguity-averse model for planning the transmission grid under uncertainty on renewable distributed generation," in *Power Systems Computation Conference (PSCC 2018)*, Dublin, Ireland, Jun. 11–15, 2018

47. (IN) E. Sauma, D. Quiroga, and D. Pozo, "Impact of global and local emission mitigation policies on the chilean power system expansion planning," in *Transforming Energy Markets, 41st IAEE International Conference, 2018. International Association for Energy Economics*, Groningen, Netherlands, Jun. 10–13, 2018
48. (IN) I. Zorin and D. Pozo, "Graphical models for transmission expansion planning," in *5th International Conference on Energy, Sustainability and Climate Change*, Mykonos, Greece, Jun. 4–8, 2018
49. (IN) D. Pozo, E. Sauma, and J. Contreras, "To build or not to build. a game-theory-based model for generation and transmission capacity planning," in *XV Conference on Computational Management Science (CMS 2018)*, Trondheim, Norway, May. 29–31, 2018

2017 (4)

50. (IN) D. Quiroga, E. Sauma, and D. Pozo, "Interrelationship between the impending major energy transitions and pollutant emissions," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2017) Annual Meeting*, Houston, Texas, U.S.A, Oct. 22–25, 2017
51. (IN) D. Pozo, A. Street, and A. Velloso, "Transmission expansion planning: A distributionally robust optimization approach," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2017) Annual Meeting*, Houston, Texas, U.S.A, Oct. 22–25, 2017
52. (IN) D. Pozo, "Robust optimization under decision-dependent uncertainty sets," in *Proceedings of the XXI Conference of the International Federation of Operational Research Societies (IFORS)*, Quebec city, Canada, Jul. 17–21, 2017
53. (PB) D. Pozo, A. Street, and A. Velloso, "Transmission expansion planning: A distributionally robust optimization approach," in *Proceedings of the International Conference WindFarms2017*, Universidad Pontificia Comillas, Madrid, Spain, May. 31 – Jun. 2, 2017

before 2017 (20)

54. (IN) D. Pozo, A. Moreira, A. Street, and E. Sauma, "Reliable renewable generation and transmission expansion planning: Co-optimizing system's resources for meeting renewable targets," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2016) Annual Meeting*, Nashville, Tennessee, U.S.A., Nov. 13–16, 2016
55. (IN) E. Sauma, D. Bravo, J. Contreras, S. D. L. Torre, J. Aguado, and D. Pozo, "Power capacity expansion planning and the influence of network payment schemes," in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS 2016) Annual Meeting*, Nashville, Tennessee, U.S.A, Nov. 13–16, 2016
56. (IN) D. Pozo, A. Gourtani, H. Xu, and T. Nguyen, "Distributionally robust unit commitment with $n - 1$ security criteria," in *XVIII Latin-Iberoamerican Conference on Operations Research (CLAIO)*, Santiago, Chile, Oct. 2–6, 2016
57. (TB) D. Pozo, J. Contreras, and E. Sauma, "Unit commitment with ideal and generic energy storage units," in *IEEE Power Energy Society General Meeting (IEEE PES GM 2018)*, Boston, Massachusetts, U.S.A, Jul. 17–21, 2016
58. (IN) D. Pozo and J. Contreras and E. Sauma, "Co-optimization transmission and generation capacity expansion," in *XIV International Conference on Stochastic Programming (ICSP2016)*, Buzios, Brazil, Jun. 25 – Jul. 1, 2016
59. (IN) D. Pozo, A. Moreira, A. Street, and E. Sauma, "Reliable transmission expansion planning for large renewable energy penetration," in *Proceedings of the Institute for Operations Research*

and the Management Science (INFORMS) Annual Meeting, Philadelphia, Pennsylvania, U.S.A., Nov. 1–4, 2015

60. (IN) E. Sauma, C. Bustos, J. Contreras, S. D. L. Torre, J. Aguado, and D. Pozo, “Interrelationship between power transmission and storage elements of the power network,” in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS) Annual Meeting*, Philadelphia, Pennsylvania, U.S.A., Nov. 1–4, 2015
61. (IN) E. Sauma, D. Pozo, and J. Contreras, “How proactive transmission investments can incentivize social welfare improving gencos investments?” in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS) Annual Meeting*, Philadelphia, Pennsylvania, U.S.A., Nov. 1–4, 2015
62. (IN) D. Pozo, E. Sauma, and J. Contreras, “Solving EPEC problems with multiple Nash equilibria: Application to energy-based models,” in *Proceedings of the 27th European Conference on Operational Research (EURO)*, Glasgow, U.K., Jul. 12–14, 2015
63. (IN) D. Pozo, E. Sauma and J. Contreras, “Robust transmission and generation expansion planning,” in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS) Annual Meeting*, San Francisco, California, U.S.A., Nov. 9–12, 2014
64. (PB) D. Pozo, E. Sauma and J. Contreras, “Impacts of network expansion on generation capacity expansion,” in *Proceedings of the XVIII Power System Computation Conference (PSCC 2014)*, Wroclaw, Poland, Aug. 18–22, 2014
65. (IN) D. Pozo, E. Sauma and J. Contreras, “A three-level static MILP model for generation and transmission expansion planning,” in *Proceedings of the IEEE PES Transmission & Distribution Conference & Exposition (T&D) 2014*, Chicago, Illinois, U.S.A., Apr. 14–17, 2014
66. (IN) D. Pozo and J. Contreras, “Probabilistic $n - k$ security criterion with significant renewable energy generation,” in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS) Annual Meeting*, Minneapolis, Minnesota, U.S.A., Oct. 6–9, 2013
67. (IN) J. Contreras, D. Pozo, and E. Sauma, “A three-level model for generation and transmission expansion planning,” in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS) Annual Meeting*, Phoenix, Arizona, U.S.A., Oct. 14–17, 2012
68. (IN) E. Sauma, J. Contreras, and D. Pozo, “Transmission planning and generation response for integrating renewable,” in *Proceedings of the 21st International Symposium on Mathematical Programming (ISMP 2012)*, Berlin, Germany, Aug. 19–24, 2012
69. (IN) A. Gourtani, D. Pozo, M. T. Vespucci, and H. Xu, “Medium-term trading strategy of a dominant electricity producer,” in *The OR Society 54th Annual Conference (OR54)*, Edinburgh, U.K., Sep. 4–6, 2012
70. (IN) D. P. E. Sauma and J. Contreras, “Co-optimization model for choosing the optimal plan for simultaneously expanding both power transmission and power generation,” in *Proceedings of the 19th Triennial Conference of the International Federation of Operational Research Societies (IFORS)*, Melbourne, Australia, Jul. 10–15, 2011
71. (PB) K. Liu, J. Zhong, D. Pozo, and Y. Hou, “An investigation of strategic behavior by a reserve provider in the joint energy and reserve market,” in *IASTED conference on Power and Energy System*, Greece, Crete, Jun. 22–24, 2011
72. (IN) E. Sauma, J. Contreras, and D. Pozo, “Integrating transmission planning, generation investment, and market operation decisions in a model,” in *Proceedings of the Institute for Operations Research and the Management Science (INFORMS) Annual Meeting*, Austin, Texas, U.S.A., Nov. 7–10, 2010

73. (PB) J. Contreras and D. Pozo, “Short- and long-term Nash equilibria in electricity market,” in *IEEE Power Energy Society General Meeting (IEEE PES GM 2009)*, Calgary, Alberta, Canada, Jul. 26–30, 2009

AWARDS, PRIZES AND RECOGNITION

Awards/Fellowships

- **Research Fellowship grant** Brazil, 2015
Young Talent Attraction. Program Science without Borders Fellowships, 3 years
 - In the top best 25% of the selected proposals
- **Postdoctoral Fellowship grant** Chile, 2013
CONICYT-FONDECYT. Government of Chile, 2 years
 - Proposal graded as “Excellent” (5 points out of 5)
- **Ph.D. Scholarship** Spain, 2009
Government of Castilla-La Mancha, 4 years
 - During 3 years of my Ph.D., I was awarded with the “Jose Castillejo” grant for international mobility

Prizes and recognition

- **Best publication Award in Energy** in the INFORMS ENRE, 2020
for the paper: *A. Moreira, D. Pozo, A. Street, and E. Sauma, “Reliable Renewable Generation and Transmission Expansion Planning: Co-Optimizing System’s Resources for Meeting Renewable Targets,” IEEE Transactions on Power Systems, vol. 32, pp. 3246-3257, Jul 2017*
- **Recognition as the Best Paper** in MEDPOWER (third position), 2018
for the work: *A. Gonzalez-Castellanos, D. Pozo, and A. Bischi, “A Detailed Li-ion Battery Operation Model for Day-ahead Economic Dispatch,” Proceedings of the 11th Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion, Dubrovnik, Croatia, November 12-15, 2018*
- On the list of outstanding reviewers of the *IEEE Transactions on Smart Grid* journal during 2016, 2018
- On the list of outstanding reviewers of the *IEEE Transactions on Sustainable Energy* journal during 2016, 2018
- Outstanding reviewer recognition for the *Energy* journal in 2018
- Awarded with the best undergraduate academic record
University of Castilla-La Mancha, Spain, 2006
- Awarded with the best undergraduate thesis project,
University of Castilla-La Mancha, Spain, 2006

COMMUNITY SERVICE

Community Membership

- **IEEE Senior Member** (S'06–M'13–SM'18)
Power Engineering Society of the Institute of Electrical and Electronics Engineers
- **INFORMS Member**
Institute for Operations Research and the Management Sciences. Since 2013
- Member of the Energy, Natural Resources, and the Environment Section

Working Groups and Task Force Participation

- **CIGRE Working Group C1.44.** 2019–2022
Global interconnected and sustainable electricity system: effects of storage, demand response and trading rules
- **IEEE Task Force on Cross-Border Energy Integration in Latin America** 2020–2023
Energy Development and Power Generation Committee. International Practices Sub Committee

Referee and Editorial Participation

- **Journal Referee**
Since 2012 to date for the journals: IEEE Transactions on Power Systems; IEEE Transactions on Smart Grid; IEEE Transactions on Sustainable Energy; IEEE Transactions on Industrial Informatics; IEEE PES Letters; Journal of Energy Engineering; International Journal of Electrical Power and Energy Systems; IET Generation, Transmission & Distribution; Sustainable Energy Technologies and Assessments; Energy; Applied Energy; Energy Systems; Sustainable Energy, Grids and Networks; and European Journal of Operation Research.
- **Conference Referee**
Since 2014 to date for the conferences PSCC, IEEE PES General Meeting, ISGT Asia, PowerTech, SEST, and REEPE.
- **Guest Editor**
Special Issue on “Engineering Techniques and Technologies to Enhance Power System Resilience” in the IET Journal of Engineering, 2020.
- **Reviewer of national-level research proposals**
 - Chile (3): FONDECYT Regular Competition 2019 and 2020; FONDECYT Iniciacion Competition 2021.
- **Skoltech selection and evaluation panels member**
 - Energy Systems MSc and PhD programs since 2017.

Conference Committee Participation

- **Steering Committee Member**
 - *3rd International Conference of Skoltech Center for Energy Systems, “Science for Energy Systems Regulation”, 2017. Moscow.*
 - *3rd International Conference on Smart Energy Systems and Technologies (SEST 2020), 2020, Istanbul, Turkey.*

- *4th International Conference on Smart Energy Systems and Technologies (SEST 2021)*, 2021, Vaasa, Finland.

- **Technical Committee Member**

2017

- *3rd International Conference of Skoltech Center for Energy Systems, “Science for Energy Systems Regulation”*, 2017. Moscow.

2018

- *1st International Conference on Smart Energy Systems and Technologies (SEST 2018)*, 2018, Seville, Spain.

2019

- *2nd International Conference on Smart Energy Systems and Technologies (SEST 2019)*, 2019, Porto, Portugal.
- *1st IEEE 2019 International Youth Conference on Radio Electronics, Electrical, and Power Engineering, (IEEE REEPE 2019)*, Moscow, Russia.
- *9th International Conference on Power and Energy Systems, (ICEPES 2019)*, Perth, Australia.

2020

- *2st IEEE 2020 International Youth Conference on Radio Electronics, Electrical, and Power Engineering, (IEEE REEPE 2020)*, Moscow, Russia.
- *3rd International Conference on Smart Energy Systems and Technologies (SEST 2020)*, 2020, Istanbul, Turkey.
- *International Conference on Smart Grids and Energy Systems, (SGES 2020)*, Perth, Australia.

2021

- *3st IEEE 2021 International Youth Conference on Radio Electronics, Electrical, and Power Engineering, (IEEE REEPE 2021)*, 2021, Moscow, Russia.
- *4rd International Conference on Smart Energy Systems and Technologies (SEST 2021)*, 2021, Vaasa, Finland.
- *14th IEEE PowerTech Conference (PowerTech 2021)*, 2021, Madrid, Spain.