Álvaro Porras Cabrera

Personal Information

Date of Birth *February 19th, 1996*
Address Málaga, Spain
Phone +34 677837387
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Education

Oct 2020 – Oct 2024 **Ph.D. Student on Power Systems** *University of Málaga*
Ehancing Power Systems Operation through Learning

Nov 2018 – Jul 2020 **M.Sc. in Industrial Engineering** *University of Málaga*
Average mark 8,31/10.

Sep 2014 – Jul 2018 **B.Sc. in Industrial Technologies Engineering** *University of Málaga*
Average mark 8,16/10. Specialisation in electricity

Training

Oct 2020 **Autumn School on Bilevel Optimization** *University of Trier (virtual attendance)*
Presented an Elevator Pitch with the title "An Efficient Robust Approach to the Day-ahead Operation of an Aggregator of Electric Vehicles"

Apr 2018 **Python** *University of Málaga*
25 hours Python course based on solving optimization problems of engineering

Apr 2016 **MATLAB/Simulink** *University of Málaga*
20 hours MATLAB/Simulink course based on wind energy applications

Jul 2013 **Scientific Summer Campus** *University of Valencia*
Based on cryptography

Work Experience

Oct 2020 – Oct 2024 **Ph.D. Student** – *OASYS Group, University of Málaga - Financially supported by the Spanish Ministry of Science, Innovation and Universities through the university teacher training program with fellowship number FPU19/03053*

Oct 2018 – Oct 2020 **Research Assistant** – *OASYS Group, University of Málaga - Iberdrola Foundation (Oct 2018 - Oct 2019) - European Research Council (Oct 2019 - Oct 2020)* – oasys.uma.es

- o Learned about decision-making problems under uncertainty
- o Put forward a planning and operation problem for an aggregator of electric vehicles
- o Devised a hierarchical optimization approach

Nov 2017 – Oct 2018 **Research Assistant** – *Collaboration Grant with the Departament of Electrical Engineering, University of Málaga*

- o Developed control strategies for multiphase electric drives

Journal Papers

Oct 2021 **Á. Porras**, S. Pineda, J. M. Morales and A. Jiménez-Cordero, "Cost-driven Screening of Network Constraints for the Unit Commitment Problem," submitted to IEEE Transactions on Smart Grid, 2021.

Oct 2021 R. Fernández-Blanco, J. M. Morales, S. Pineda, and **Á. Porras**, "Inverse Optimization with Kernel Regression: Application to the Power Forecasting and Bidding of a Fleet of Electric Vehicles," Computers & Operations Research, vol. 134, p. 105405, 2021.

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

Conference Papers

Sep 2019 **Á. Porras**, R. Fernández-Blanco, J. M. Morales and S. Pineda, "Day-ahead Operation of an Aggregator of Electric Vehicles via Optimization under Uncertainty," 2019 International Conference on Smart Energy Systems and Technologies (SEST), pp. 1-6, 2019.

- **Best Paper Award**

Conference Contributions

Oct 2021 **INFORMS 2021** *INFORMS Annual Meeting — 24th - 27th October, Anaheim, United States (virtual attendance)* – http://meetings2.informs.org/wordpress/anaheim2021/

- **Á. Porras**, S. Pineda, J. M. Morales and A. Jiménez-Cordero, "Cost-driven Screening of Network Constraints for the Unit Commitment Problem"

Jul 2021 **EURO 2021** *31st European Conference on Operational Research — 11th - 14th July, Athens, Greece (virtual attendance)* – https://euro2021athens.com/

- **Á. Porras**, S. Pineda, J. M. Morales and A. Jiménez-Cordero, "Cost-aware Screening of Network Constraints for the Unit Commitment Problem"

Jun-Jul 2021 **PowerTech 2021** *EEE Madrid PowerTech conference — 28th June - 2nd July, Madrid, Spain (virtual attendance)* – https://www.powertech2021.com/

- **Á. Porras**, R. Fernández-Blanco, J. M. Morales and S. Pineda, "An Efficient Robust Approach to the Day-ahead Operation of an Aggregator of Electric Vehicles"

Nov 2020 **INFORMS 2020** *INFORMS Annual Meeting — 8th - 11th November (virtual attendance)* – http://meetings2.informs.org/wordpress/annual2020/

- **Á. Porras**, R. Fernández-Blanco, J. M. Morales and S. Pineda, "An Efficient Robust Approach to the Day-ahead Operation of an Aggregator of Electric Vehicles"

Sep 2019 **SEST 2019** *2nd International Conference on Smart Energy Systems and Technologies — 9th - 11th Septembre, Oporto, Portugal* – https://web.fe.up.pt/ sest2019/

- **Á. Porras**, R. Fernández-Blanco, S. Pineda and J. M. Morales, "Day-ahead Operation of an Aggregator of Electric Vehicles via Optimization under Uncertainty"

Jun 2019 **EURO 2019** *30th European Conference on Operational Research — 23rd - 26th June, Dublin, Ireland* – https://www.euro2019dublin.com/

- **Á. Porras**, R. Fernández-Blanco, S. Pineda and J. M. Morales, "Day-ahead Operation of an Aggregator of Electric Vehicles via Optimization under Uncertainty"

Skills & Background Knowledge

Python, *Advanced*

MATLAB, *Advanced*

LaTex, *Advanced*

Office (Word, Excel and Powerpoint), *Advanced*

AutoCAD, *Intermediate*

C++, *Intermediate*

GAMS, *Intermediate*

Languages

Spanish, *Native*

English, *Fluent*

German, *Basic*