

# JAIME PANDO ACEDO

Badajoz, Spain

[jpandoac.xyz/cv\\_en](https://jpandoac.xyz/cv_en) [jaime@jpandoac.xyz](mailto:jaime@jpandoac.xyz) [linkedin.com/in/jpandoac](https://linkedin.com/in/jpandoac) [gitlab.com/detoxify92](https://gitlab.com/detoxify92)

## EDUCATION

<b>Universidad Nacional de Educación a Distancia</b> <i>Bachelor of Science Degree in Software Engineering</i>	<b>Sep. 2017 – Jun 2022</b> Badajoz, Spain
<b>Universidad de Extremadura</b> <i>Doctor of Philosophy Degree in Electrical Engineering</i>	<b>Jun. 2017 – Jul 2021</b> Badajoz, Spain
<b>Universidad de Extremadura</b> <i>Master of Science Degree in Research in Engineering Science</i>	<b>Sep. 2014 – Jun 2015</b> Badajoz, Spain
<b>Universidad de Extremadura</b> <i>Bachelor of Science Degree in Electrical Engineering</i>	<b>Sep. 2010 – Sep 2014</b> Badajoz, Spain

## GRANTS AND AWARDS

<b>DoRa Plus</b> <i>Research visitor at Tallinn University of Technology</i>	<b>Sep. 2018</b> Tallinn, Estonia
<b>Best Final Project in Electrical Engineering Award</b> <i>Best final project in the academic course 2014/2015</i>	<b>Oct. 2015</b> Badajoz, Spain
<b>Americampus</b> <i>Exchange student at the University of New Mexico</i>	<b>Oct. 2013</b> Albuquerque, USA

## OTHER COURSES AND CERTIFICATES

<b>Microcontrollers programming using C language</b> <i>Universidad de Extremadura</i>	<b>May. 2017</b> Badajoz, Spain
<b>Android applications programming course</b> <i>Universidad de Extremadura</i>	<b>Dic. 2016</b> Badajoz, Spain
<b>Certificate in Advanced English</b> <i>ESOL by Cambridge University</i>	<b>May. 2013</b> Badajoz, Spain

## EXPERIENCE

<b>Universidad de Extremadura</b> <i>Backend Developer</i> <ul style="list-style-type: none"><li>• Development of Moodle plugins using PHP</li><li>• System administration of virtual servers</li><li>• Administration of dynamic webpages using Drupal as CMS</li></ul>	<b>Mar 2022 – ongoing</b> Cáceres, Spain
<b>Universidad de Extremadura</b> <i>PhD. Candidate</i> <ul style="list-style-type: none"><li>• Development of advanced motor control techniques: sensorless control</li><li>• Merging of the propulsion and charging systems of the vehicle</li><li>• Passive elements reduction by using the motor windings as grid filters</li><li>• Development of active damping control strategies to mitigate the vibrations observed</li></ul>	<b>Jun 2017 – Jul 2021</b> Badajoz, Spain
<b>Universidad de Extremadura</b> <i>Lab technician</i>	<b>Apr 2016 – Apr 2017</b> Badajoz, Spain

- Design and simulation of AC/DC converters connected to grid
- Design and simulation of DC/DC converter for energy storage management
- Prototype design and construction for a bidirectional charger using rapid prototyping tools
- Development of power flow management and harmonic current correction
- Hybridization of the energy storage system: batteries and supercapacitors

## SOFTWARE SKILLS

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### Containerization

- Containerization of applications using Docker containers
- Networking using Docker containers
- Basic orchestration using minikube

### Java programming

- Data structures: trees, heaps, lists, hashmaps, hashtables
- Algorithms: quicksort, heapsort, dynamic programming, greedy algorithms, graph sweeping
- Distributed programming using JAVA RMI

### Shell

- POSIX compliant shell scripting, use of UNIX tools like awk, sed, etc
- Remote administration using SSH of systemd based systems, task planification using crontab
- Configuration of web servers based in apache or nginx, mail servers based on devcot and postfix

### Web

- Responsive webpages developing using HTML, CSS and frameworks like Bootstrap
- Developing of dynamic webpages using ASP
- Connection to data bases using ASP

### C programming

- Interprocess comunication using IPC mechanisms: semaphores, message queues, shared memory
- C programming of microcontrollers: PWM, interruptions, comunication using I2C, ISP, etc

### Other software

- |   |   |
|---|---|
| • Version control with Git                            | • Graphics editing with Inkscape                |
| • Programming IDEs: IntelliJ, Eclipse, Android Studio | • Basic knowledge of Python, Haskell, Prolog    |
| • Typesetting with $\LaTeX$                           | • Scripting and simulating with MATLAB Simulink |
| • Office software: LibreOffice, MS Office             | • Digital circuit design with VHDL              |

### Other software

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## OTHER SKILLS

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### Languages

- Spanish, native
- English, C1 certificate
- French, second language in high school

### Soft skills

- Used to work in international environments
- Good at teamwork, always willing to help
- Logical thinking, curious by nature

### Research skills

- Self-sufficiency, even in tasks with no prior experience
- Consulting of scientific and technical documentation
- Information organizing and synthesis, presenting and exposition
- Redacting clear and well-organized documents, including scientific reports

## PUBLICATIONS

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- J. Pando-Acedo, M. I. Milanés Montero, E. Romero Cadaval, F. Briz, and F. Barrero-González, "Improved Three-Phase Integrated Charger Converter Connected to Single-Phase Grid with Torque Cancellation," *IEEE Access*, vol. 9, pp. 108266-108275, 2021, doi: 10.1109/ACCESS.2021.3101942
- M.-I. Milanes-Montero, F. Barrero-Gonzalez, J. Pando-Acedo, E. Gonzalez-Romera, E. Romero-Cadaval, and A. Moreno-Munoz, "Active, Reactive and Harmonic Control for Distributed Energy Micro-Storage Systems in Smart Communities Homes," *Energies*, vol. 10, no. 4, Art. no. 4, Apr. 2017, doi: 10.3390/en10040448
- J. Pando-Acedo, E. Romero-Cadaval, M. I. Milanes-Montero, and 15 F. Barrero-Gonzalez, "Improvements on a Sensorless Scheme for a Surface-Mounted 16 Permanent Magnet Synchronous Motor Using Very Low Voltage Injection," *Energies*, 17 vol. 13, no. 11, Art. no. 11, Jan. 2020, doi: 10.3390/en13112732
- M. I. Milanés-Montero, F. Barrero-González, J. Pando-Acedo, 9 E. González-Romera, E. Romero-Cadaval, and A. Moreno-Munoz, "Smart Community 10 Electric Energy Micro-Storage Systems With Active Functions," *IEEE Transactions 11 on Industry Applications*, vol. 54, no. 3, pp. 1975-1982, May 2018, doi: 12 10.1109/TIA.2018.2799547
- J. Pando-Acedo, M. I. Milanés-Montero, E. Romero-Cadaval, M. A. Guerrero-Martínez, F. Barrero-González, and E. González-Romera, "Active power flow strategies for bidirectional Energy Storage Units in smart communities," in 2017 11th IEEE International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG), Apr. 2017, pp. 614-619. doi: 10.1109/CPE.2017.7915243
- A. Rassolkin, H. Heidari, A. Kallaste, T. Vaimann, J. P. Acedo, and E. Romero-Cadaval, "Efficiency Map Comparison of Induction and Synchronous Reluctance Motors," in 2019 26th International Workshop on Electric Drives: Improvement in Efficiency of Electric Drives (IWED), Jan. 2019, pp. 1-4. doi: 10.1109/IWED.2019.8664334
- J. Pando-Acedo et al., "Hybrid FEA-Simulink Modelling of Permanent Magnet Assisted Synchronous Reluctance Motor with Unbalanced Magnet Flux," in 2019 IEEE 12th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED), Aug. 2019, pp. 174-180. doi: 10.1109/DEMPED.2019.8864925

- J. Pando-Acedo, E. Romero-Cadaval, C. Gragera-Peña, and M. I. Milanés-Montero, "Noise, Vibration and Harshness on a Permanent Magnet Synchronous Motor for a Remote Laboratory," in *Technological Innovation for Smart Systems*, Cham, 2017, pp. 382–389. doi: 10.1007/978-3-319-56077-9\_37