CURRICULUM VITAE

Dr. Yann E. Bouvier

Affiliation: Post-Doctoral Researcher
University of Innsbruck,
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PERSONAL DATA

Date of birth: 24, March, 1986
Place of birth: Madrid, Spain

EDUCATION

- Ph.D. (September 2014–November 2019)
  - **Dissertation**: "**Contributions in the design and optimization of unregulated LLC converters with high conversión ratio and high output current**", Centro de Electrónica Industrial, Universidad Politécnica de Madrid, Spain.
- M. Sc. (1-year program, September 2014)
  - **Master thesis**: "**Title,**" Centro de Electrónica Industrial, Universidad Politécnica de Madrid, Spain.
- Dipl. Ing. (5 years program, November 2012)
  - **Diploma thesis: "Title,"** Centro de Electrónica Industrial, Universidad Politécnica de Madrid, Spain.

EMPLOYMENT & PROFESIONAL ACTIVITES

April 2020 - Present

Post-doctoral researcher
i-PEL, Institute of Mechatronics, University of Innsbruck

December 2011- September 2019

Researcher
Centro de Electrónica Industrial (CEI), Universidad Politecnica de Madrid (UPM)

ON-GOING R&D PROJECTS

[PR 1] 1669 Robot Project

- Regenerative breaking for robots

COMPLETED R&D PROJECTS

University Research Projects:

[PR 2] "Dispositivos semiconductores avanzados de gap ancho para el uso racional de la energía"- CSD2009-00046

- Founded by the Spanish Ministry of Science and Innovation.
- Advanced wide band gap semiconductor devices for rational use of energy.

Industrial/Academia Research Projects:

[PR 3] AIR Project – Cleansky -E13 0505C 366

- Collaboration research project with Universidad Politecnica de Madrid – Indra - Airbus
- Active and Isolated Rectifier unit for more electric aircraft: Design and Manufacturing of a 10KW AC-DC Converter Unit (AIR).

[PR 4] Consulting services for developing IC power module components for Simplorer – P11 0505C 179

- Collaboration research project with Universidad Politecnica de Madrid – Ansys
- Creation of an IC power module component library of black box models for the software Simplorer (current Twin Builder from Ansys).

[PR 5] 45kW Converter

- Collaboration research project with Universidad Politecnica de Madrid – Indra - Airbus
- Design of a 45kW isolated rectifier unit for military aircraft application.

RESEARCH INTEREST

- Power Electronics: Topology, design and optimization
- Magnetic component design and optimization
- Thermal management in Power Electronic devices

Rewards and Publications

Transactions and Journals:

[J 1] Yann E. Bouvier, Diego Serrano, Uros Borovic, Gonzalo Moreno, Miroslav Vasic, Jesus A. Oliver, Pedro Alou, Jose A. Cobos, Jorge Carmena, " ZVS Auxiliary Circuit for a 10 kW Unregulated LLC Full-Bridge Operating at Resonant Frequency for Aircraft Application", Energies, Vol. 23, No. 10, 1850, May 2019.

International Conferences:

[C 1] Y. E. Bouvier, U. Borovic, M. Vasic, J. A. Oliver, P. Alou, J. A. Cobos, F. Arevalo, J. C. Garcia-Tembleque, J. Carmena, " DC/DC Fixed Frequency Resonant LLC Full-Bridge Converter with Series-Parallel Transformers for 10kW High Efficiency Aircraft Application", 2017 IEEE Energy Conversion Congress and Exposition (ECCE), Cincinnati, Ohio, USA, ISBN 978-1-5090-2998-3. pp. 3788-3795, October 2017

[C 2] Yann E. Bouvier, Miroslav Vasic, Pedro Alou, Jesus A. Oliver, Oscar Garcia, Jose A. Cobos, "45kW Full Bridge Converter with Discontinuous Primary Current for High Efficiency Airborne Application." Seminario Anual de Automática, Electrónica Industrial e Instrumentación (SAAEI'14), Tanger, Morocco, June, 2014.

[C 3] C. Li, Y. E. Bouvier, A. Berrios, P. Alou, J. A. Oliver and J. A. Cobos, "Revisiting "Partial Power Architectures" from the "Differential Power" Perspective," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-8, 2019.

[C 4] U. Borovic, S. Zhao, M. Silva, Y. E. Bouvier, M. Vasic, J. A. Oliver, P. Alou, J. A. Cobos, F. Arevalo, J. C. Garcia-Tembleque, J. Carmena. C. Garcia, P. Pejovic, "Comparison of three-phase active rectifier solutions for avionic applications: Impact of the avionic standard DO-160 F and failure modes" 2016 IEEE Energy Conversion Congress and Exposition (ECCE), Milwaukee, WI, USA, pp. 1-8, 2016.

[C 5] D. Cucak, M. Vasic, O. Garcia, Y. Bouvier, J. Oliver, P. Alou, J. A. Cobos, A. Wang, S. Martin-Horcajo, F. Romero, F. Calle, "Physical modeling and optimization of a GaN HEMT design with a field plate structure for high frequency application", 2014 IEEE Energy Conversion Congress and Exposition (ECCE), Pittsburgh, PA, USA, pp. 2857-2864, 2014.

[C 6] D. Cucak, M. Vasic, O. Garcia, Y. Bouvier, J. Oliver, P. Alou, J. A. Cobos, A. Wang, S. Martin-Horcajo, F. Romero, F. Calle, "Physical model for GaN HEMT design optimization in high frequency switching applications," 2014 44th European Solid State Device Research Conference (ESSDERC), Venice Lido, Italy, pp. 393-396, 2014.

Academic and Teaching Activities

[L 1] "Digital Control of Power Converters", 2016-2017, Industrial Electronics Master.
[L 2] "Diseño de Sistemas Electronicos", 2016-2017, Industrial Engineering (Master).
[L 3] "Fundamentos de Electrónica", 2016-2017, Industrial Engineering (bachelor).

Tutorials: (20)

[T 1] **Yann E. Bouvier** "Magnetic Component Design Pexprt/Pemag/Maxwell Tutorial," Half day tutorial, Q-nnect Workshop, University of Innsbruck, March, 9, 2021.

[T 2] **Yann E. Bouvier** "Pexprt/Pemag Tutorial" DTU – Elektro, November, 6, 2017.

LANGUAGES

Spanish-Native, **French-**Native, **English**-Fluent.