

## **Short Curriculum Vitae and summary of scientific activities**

### **Rafael Peña Gallardo**

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**Born:** December 20, 1979     **Nationality:** Mexican

### **Academic Degrees**

2010: Ph.D. in Electric Power Systems, Universidad Michoacana de San Nicolas de Hidalgo, Mexico.

2006: M.Sc. in Electric Power Systems, Universidad Michoacana de San Nicolas de Hidalgo, Mexico.

2004: B. Eng. in Electrical Engineering, Universidad Michoacana de San Nicolas de Hidalgo, Mexico.

### **Career and Appointments**

Since 2012: Full Time Teacher-Researcher, Universidad Autonoma de San Luis Potosi, Mexico.

2011-2012: Full Time Teacher-Researcher, Universidad de La Cienega del Estado de Michoacan de Ocampo, Mexico.

2007-2008: Teaching Assistant, Department of Electronic and Electrical Engineering, Glasgow, UK.

### **Fields of Competence**

Modeling, control and analysis of distributed generation systems based on renewable energy.

### **Executive summary of scientific production**

Total number of publications: 56

Book chapters: 2

Journals: 14

International conferences: 27

National conferences: 18

Participation in research projects: 7

Technical reports: 2

### **Thesis director**

Total number of thesis supervised: 9

B.Eng.: 4

MSc.: 4

Ph.D.: 1

### **Distinctions**

2018 Member of the National Research System (SNI), level 1.

2015 Member of the National Research System (SNI), level 1.

2012 Member of the National Research System (SNI), level C.

## Key publications

- **Rafael Peña**, Aurelio Medina, Olimpo Anaya-Lara and James R. McDonald. "Capacity Estimation of a MiniHydro Plant Based on Time Series Forecasting". ELSEVIER - Renewable Energy, vol. 34, no. 5, pp. 1204-1209, May 2009.
- **Rafael Peña**, Aurelio Medina and Olimpo Anaya-Lara. "Steady-State Solution of Fixed-Speed Wind Turbines Following Fault Conditions Through Extrapolation to the Limit Cycle". IETE - Journal of Research, vol. 57, no. 1, pp. 12-19, January 2011.
- **Rafael Peña**, Aurelio Medina, Olimpo Anaya-Lara and Graeme M. Burt. "DGIS: Interactive Simulator for Distributed Generation Systems". Wiley - Computer Applications in Engineering Education, vol. 20, no. 4, pp. 594-603, December 2012.
- **Rafael Peña**, Aurelio Medina and Olimpo Anaya-Lara. "A Methodology for the Efficient Computer Representation of Dynamic Power Systems: Application to Wind Parks". Wiley - Wind Energy, vol. 16, no. 1, pp. 109-121, January 2013.
- **Rafael Peña**, José Núñez and Aurelio Medina. "Using a Newton method and LAPACK libraries to initialize electromagnetic transient simulations in power systems". ELSEVIER - Simulation Modelling Practice and Theory, vol. 42, pp. 12-18, March 2014.
- Ma. Claudia Roldán, Manuel Martínez and **Rafael Peña**. "Scenarios for Hierarchical Assessment of the Global Sustainability of Electric Power Plants in México". Renewable & Sustainable Energy Reviews, vol. 33, pp. 154-160, May 2014.
- Mario Graff, **Rafael Peña**, Aurelio Medina and Hugo J. Escalante. "Wind Speed Forecasting using a Portfolio of Forecasters". ELSEVIER - Renewable Energy, vol. 68, pp. 550-559, August 2014.
- Juan Segundo-Ramírez, **Rafael Peña-Gallardo**, Aurelio Medina-Ríos, Ciro Núñez-Gutiérrez and Nancy Visairo-Cruz. "A Comprehensive Modeling of a Three-Phase Voltage Source PWM Converter". Mathematical Problems in Engineering, vol. 2015, pp. 11, May 2015.
- Gibran Agundis-Tinajero, Juan Segundo, **Rafael Peña**, Ciro Nuñez, Nancy Visairo, Josep Guerrero and Mehdi Savaghebi. "Harmonic Issues Assessment on PWM VSC-Based Controlled Microgrids using Newton Methods". IEEE Transactions on Smart Grid, vol. PP, no. 99, pp. 1-10, May 2016.
- Rodrigo Loera-Palomo, Jorge Alberto Morales-Saldaña, **Rafael Peña-Gallardo** and Carmen Patricia Delgado-Antillón. "Switching regulator using a DC-DC step-down non-cascading converter". IET Power Electronics, vol. 10, no. 4, pp. 413-420, March 2017.