

Curriculum Vitae

Education

Ph.D. in Advanced Automation and Robotics Universitat Politècnica de Catalunya	2008 Barcelona, Spain
D.E.A.* Advanced Automation and Robotics Universitat Politècnica de Catalunya <i>*D.E.A.: "Diploma de Estudios Avanzados" Spanish equivalent to a M.Sc.</i>	2005 Barcelona, Spain
M.Eng. in Embedded System Design Università della Svizzera italiana	2003 Lugano, Switzerland
Electronic Engineer Instituto Tecnológico de Costa Rica	2001 Cartago, Costa Rica

Research Experience

Post-doc Researcher Institute of Systems and Applied Electronics DTI-SUPSI <i>Modeling and analysis of power converters for photovoltaic systems. Design of laboratory experiments for advanced control courses. Coordination of the HeDiSC Network.</i>	07/2008–12/2009 Manno, Switzerland
Research Assistant Insitute of Industrial and Control Engineering Universitat Politècnica de Catalunya <i>Design and implementation of non-linear control techniques for power converters in hardwired devices (FPGA). Developing and studying control techniques applied to grid-connected photovoltaic systems.</i>	02/2004–04/2008 Barcelona, Spain
Visiting Researcher Delft University of Technolgoey / University of Groningen <i>Analysis and design of passive control techniques applied to grid-connected photovoltaic inverters.</i>	2007 Delft and Groningen, The Netherlands

Industry Experience

Smartech S.A. Project Designer <i>Design of embedded controllers for commercial refrigerators</i>	San Jose, Costa Rica 2001–2002
Plastibar S.A. Project Designer <i>Design and implementation of an electronic controller for an industrial foam cutting machine.</i>	Cartago, Costa Rica 2000–2001

Scientific Societies and Research Groups

- *Institute of Electric and Electronic Engineers (IEEE): Member of the Education and the Industrial Electronics Society.*
- *HeDiSC: Latin American Network for the Use and Development of Open Source Software for Control Systems .*
- *Society for Industrial and Applied Mathematics (SIAM)*

Publications

- C. Meza, D. Biel, D. Jeltsema, J. Scherpen, “Diseño de un Esquema de Control Pasivo Proporcional con Accion Adaptativa para un Inversor Fotovoltaico Conectado a la Red Electrica” *XIII Congreso Latinoamericano de Control Automatico*, Merida, Venezuela, 2008.
- C. Meza, D. Biel, J.J. Negroni, F. Guinjoan, “Modelado de balance energético y control discreto de un inversor monofásico para aplicaciones fotovoltaicas conectadas a red,” *Seminario Anual de Electrónica, Automática e Instrumentación*, Cartagena, Spain, 2008.
- J.J. Negroni, F. Guinjoan, C. Meza, D. Biel, H. Valderrama, L. Marroyo, “Control de inversores multinivel en cascada para sistemas fotovoltaicos conectados a red mediante modulaciòn PD-PWM con asignación temporal de secuencias,” *Seminario Anual de Electrónica, Automática e Instrumentación*, Cartagena, Spain, 2008.
- C. Meza, D. Biel, D. Jeltsema, J. Scherpen, “Diseño de un control basado en la dinámica del error de un inversor monofásico conectado a red,” *Seminario Anual de Electrónica, Automática e Instrumentación*, Cartagena, Spain, 2008.
- C. Meza, D. Jeltsema, J. Scherpen, D. Biel, “Globally Stable Passive P-Control of a Grid-Connected Photovoltaic Inverter,” *17th World Congress of International Federation of Automatic Control*, Seoul, Korea, 2008.
- C. Meza, J.J. Negroni, D. Biel, F. Guinjoan, “Energy-Balance Modeling and Discrete Control for Single-Phase Grid-Connected PV Central Inverters,” *IEEE Transaction on Industrial Electronics*.
- J.J. Negroni, F. Guinjoan, C. Meza, D. Biel, “Modelado y control de un convertidor en cascada multinivel con modulaciòn PD-PWM para sistemas fotovoltaicos conectados a red,” *Seminario Anual de Electrónica, Automática e Instrumentación*, Puebla, Mexico, Sept. 2007.
- C. Meza, D. Biel, J.J. Negroni, F. Guinjoan, “Inverter Configurations Comparative for Residential PV-Grid Connected Systems,” *IEEE International Conference on Industrial Applications*, Paris, France, Nov. 2006.
- C. Meza, D. Biel, J.J. Negroni, F. Guinjoan, “Modelado y control discreto basado en el balance energético de sistemas fotovoltaicos conectados a red,” *Seminario Anual de Electrónica, Automática e Instrumentación*, Gijon, Spain, Sept. 2006.
- J.J. Negroni, C. Meza, D. Biel, F. Guinjoan, P. Sanchis, “Energy-Sampled Data Modelling of a Cascade H-Bridge Multilevel Converter for Grid-connected PV Systems,” *IEEE CIEP-International Power Electronics Congress*, Puebla, Mexico, June 2006.
- C. Meza, D. Biel, J.J. Negroni, F. Guinjoan, “Considerations on the Control Design of DC-link Based Inverters in Grid-Connected Photovoltaic Systems,” *IEEE International Symposium on Circuit and Systems*, Kos, Greece, May 2006.

- C. Meza, D. Biel, J. Martinez, F. Guinjoan, "Control de un inversor Boost-Buck para sistemas fotovoltaicos conectados a red," *Seminario Anual de Electrónica, Automática e Instrumentación*, Santander, Spain, Sept. 2005.
- G. Velasco, J. J. Negroni, C. Meza, R. Pique, "Maximum Available Power in PV Generators for Grid-connected PV Systems: a comparative," *20th European Photovoltaic Solar Energy Conference*, Barcelona, 2005.
- D. Biel, R. Ramos, F. Guinjoan, J. J. Negroni, C. Meza, "Sliding-mode control design of parallel-connected switching converters for modular transformerless DC-AC step-up conversion," *IEEE International Symposium on Circuit and Systems*, Japan, May 2005.
- C. Meza, D. Biel, J. Martinez, F. Guinjoan, "Boost-buck Inverter Variable Structure Control for Grid-connected Photovoltaic Systems," *IEEE International Symposium on Circuit and Systems*, Japan, May 2005
- J.J. Negroni, C. Meza, D. Biel, F. Guinjoan, "Control of a Buck Inverter for Grid-connected PV systems: a Digital and Sliding Mode Control Approach," *IEEE International Symposium on Industrial Electronics*, Croatia, June 2005.
- C. Meza, D. Biel, J.J. Negroni, F. Guinjoan, "Boost-Buck Inverter Variable Structure Control for Grid-connected Photovoltaic Systems with Sensorless MPPT," *IEEE International Symposium on Industrial Electronics*, Croatia, June 2005.