

*“Any effort becomes light with ongoing and steady work”* **Tito Livio**

CEI is full, and we like it.

A large room full of young people, researching in different fields around electronics. It is challenging and appealing. It attracts more people. There are many causes for this. Some are major, some minor, but all count. It is the sum of everyday efforts and decisions, by all of us.

We know there are many possible indicators. We are used to external quantification, parametrization and rankings: number of projects, master & doctoral dissertations, publications in indexed journals, papers presented at conferences, etc. Easy to calculate. However, the indicator that integrates all the other, and it is the reason why we are productive is the "atmosphere in the lab". Many people working, every day, in research, that is what we value, and what we care and protect.

This year for the first time in two decades, our speciality has been the most demanded by the undergraduate students. The reason might be that now we teach "Fundamental electronics" before they take the decision. We opened the lab for them, our faculty, researchers and students dedicated extra time to teach and initiate them in electronics, and they liked it. When you dedicate time and effort to people, it flourishes.

We like thinking out of the box. Electronics applied to whatever may benefit: Industry, Energy, Communications, Mobility, Health,... wherever we may help, we try, and we are supportive. Count on us!

On the personal side, we wish the very best to Roberto Prieto. His new role as VicePresident for Research at UPM is not only a recognition for his continued hard work, but an opportunity to push further research initiatives at University level. We are confident his background at CEI will be very helpful, and he will have our continuous support. Congratulations, and good luck

The editorial board



**MARCH 14<sup>th</sup>-15<sup>th</sup>, 2013**

The sixth Annual Meeting of the CEI-UPM will take place in the ETSII-UPM on **March 14<sup>th</sup> and 15<sup>th</sup>, 2013**. As usual, the main objective this year is to show the activities at CEI and its partners.

Our Annual Meeting is an interesting networking space, a place to learn and to meet your colleagues and partners. This year we expect to continue discussions on the ever-challenging future..

**Thursday afternoon (March 16<sup>th</sup>)**

**Opening session** Overview of CEI and Strategic Research  
**Conversational Discussion** Cutting-edge technologies for the 2020 horizon  
**Visiting the CEI Lab and POSTER SESSION**

**Friday morning (March 15<sup>th</sup>)**

**Technical Sessions** CEI Session Industry Session **Wrap-up Cocktail**

## Monday Seminars

be aware  
 of CEI-UPM results

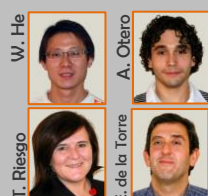
- More information: [www.cei.upm.es/](http://www.cei.upm.es/)
- NOV, 5** Application parameters update for Collection Tree Protocol based WSN applications **V. Roselló**
  - DEC, 3** Dependability in FPGA-Based WSNs for High Performance Applications **J. Valverde**
  - DEC, 17** Energy Control Method for Three-Phase Buck-Type Rectifier with very demanding dynamic loads **S. Zao**
  - Coming next....**
  - FEB, 11** Multiphase Current Controlled Buck Converter with Energy Recycling Output Impedance Correction Circuit (OICC) **V. Sviković**
  - MARCH, 11** Methodology for Dynamic Stability and Robustness Analysis of Commercial-Power-Module-Based DC-Distributed Systems **S. Vesti**

## NEWS BRIEFS

- The paper "Embedded Runtime Reconfigurable Nodes for Wireless Sensor Networks Applications", *IEEE Sensors Journal*, Vol. 11, No. 9, September 2011 by Y. Esteves, J. Portilla, E. de la Torre and T. Riesgo was one of the 25 most downloaded Sensors Journal papers in the month of July, 2012
- Kick-off meeting of the UBICITEC associaion. UBICITEC is an association whose mission is to create synergies for the development of technology for smart cities. UPM is a founding member of the association. Duisburg, October 2012.
- The CEI-UPM has been selected as a **CUDA Teaching Center** based on your demonstrated commitment to advancing the state of parallel education using CUDA C/C++ (October, 2012)



- W. He, A. Otero, E. de la Torre, T. Riesgo received the Best Paper Award at the International Conference on ReConfigurable Computing and FPGAs (ReConFig), Cancún (Mexico), December 2012



### Next appointment

The Seminario Anual de Automática, Electrónica Industrial e Instrumentación 2013 (SAAEI'13) will be held, in this twentieth edition, at CEI-UPM / ETSII.



More information:  
<http://www.saaei.org/edicion13/>



## Theses

- Aircraft power management unit software test bench**  
**Author:** Guillermo Ferreiro **Thesis Supervisor:** F. Moreno **Date:** 26/9/2012

### Master Thesis

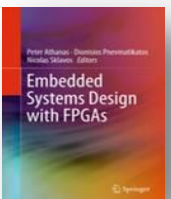
### Doctoral Dissertation

- Novel Inductor-less conversion strategy based on multiphase transformer-coupled converters: analysis, design and applications** by **Carmen González**  
**Thesis Supervisors:** J.A. Cobos & P. Alou **Date:** 28/9/2012



## Book Chapter

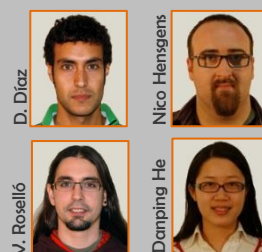
- A. Otero, T. Cervero, E. de la Torre, S. López, G.M. Callicó, T. Riesgo and R. Sarmiento *Run-time Scalable Architecture for Deblocking Filtering in H.264/AVC and SVC Video Codecs*. in the Book: "Embedded Systems Design with FPGAs", Edited by P. Athanas, D. Pnevmatikatos and N. Sklavos, Springer, ISBN: 978-1-4614-1361-5, 2012



## Journals

- D. He, G. Liang, J. Portilla, T. Riesgo *A Novel Method for Radio Propagation Simulation Based on Automatic 3D Environment Reconstruction*, **Radioengineering journal**, vol. 24, nº 4, pp. 985-992, December
- R. Prieto, O. García, J.A. Cobos, F.D. Gerez *Optimizing three-phase planar transformer construction*, **Bodo's Power Systems. Electronics in Motion and Conversion**, pp. 48-51, September
- D. Díaz, M. Vasic, O. García, J.A. Oliver, P. Alou, R. Prieto, J.A. Cobos, *Three-Level Cell Topology for a Multilevel Power Supply to Achieve High Efficiency Envelope Amplifier*, **IEEE Transactions on Circuits and Systems I: Regular Papers**, vol. 59, nº 9, pp. 2147-2160, September

### Outgoing visiting researchers during this period



- Daniel Díaz** and **Nico Hensgens**, have been doing a three-month research stay at Center of Power Electronics Systems (CPES), Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, Virginia, USA
- Víctor Roselló** has been doing a three-month research stay at Tyndall National Institute, University College, Cork, Ireland.
- Danping He** has been doing a three-month research stay at Inria FUN Research Group, Centre de Recherche Lille, Villeneuve d'Ascq, France.

### Congratulations to our colleagues,

- Dr. Jesús A. Oliver**, who became Associate Professor in September, 2012, and
- Dr. Roberto Prieto** who has been promoted to Vice-president for Research of the UPM since January 1st, 2013, after being Deputy Vice-President for Research during the last six years.



- Farewell...** to Giuseppe Catalanotto, he is now working at the ESA The Netherlands.

- Welcome...** to the new CEI-UPM members who joined us during this period: **Filip Velković** from University of Belgrade (Serbia) and **Álvaro Hernández** from Instituto Tecnológico de Celaya (México); **Julio Camarero**, **Jorge Cortés**, **Airán Francés**, **Ángel Gallego**, **David Pérez**, **Alfonso Rodríguez** and **Mónica Villaverde** from Spain as full-time researchers and Master students.





