POSTER SESSIONS

EMBEDDED INTELLIGENCE

M. Villaverde & D.P. Daza — *Self-Learning Embedded System for Object Identification in Intelligent Sensor Networks*
D. Aledo — *Hardware implementation of Artificial Neural Networks for WSN*

HIGH EFFICIENCY RF AMPLIFIERS

V. Lazarević — *Comparative Analysis of Two Approaches in Envelope Tracking Power Supplies for Satellite Applications*
D. Tena — *INVISUM (INtelligent VIdeoSUrveillance SysteM)*
P. Diego & G. Mangado — *Wireless Power Transmission Rectenna*
D. Sanchez — *Antenna for energy transfer in the far field*

INGENIA PROJECTS: CREATIVITY IN ELECTRONICS

A. Morena, F. Villa & F. Sánchez — *: e-locker in the school of the future*
D. Arias, L. Melendo & I. Muñoz — *No-Line*
X. López, A. de Frutos & F.J. Nieto — *Turnomatic*
O. Cabrero, H. Chen & A. Corral — *Robot*
S. Olalde, R. Martínez, A. Sánchez & M. García — *Wheels*
M. Pedrero, L. Perea & Mª B. Morato — *Smart Audio*
D. Soto, B. de Vicente, M. de Vicente & C. Machado — *Real-time teachers availability system*

MODELING AND SIMULATION OF POWER CONVERTERS

R. Ramos & I. Zubitur — *Control Loop Design of the CEI@UPM inverter for the Google/IEEE "Little Box Challenge" competition*
A. Francés — *A nonlinear blackbox modelling approach for system level simulation of DC microgrids*
A. Naziris — *Bidirectional Battery Charger for Electric Vehicles. Large-signal and Multi Agent-based Modeling*
D. Cucak — *Physical modelling and optimization of a GaN HEMT with a field-plate sutructure for high frequency application*
D. Serrano — *Methodolgy for high level comparison of Hybrid Resonant Switch Capacitor architectures*
F.A. Holguín — *The future in Advanced modeling estrategies and magnetic components design using PExprt*
G. Guarderas — *Large-Signal Modeling of Electronic Power Converters In AC Micro-Grids*

POWER FACTOR CORRECTION

M. Silva — *Isolated Single Stage Three-Phase Swiss-Forward Rectifer*
S. Zhao — *Analysis and Design of an Isolated Single-Stage Three-Phase Full-Bridge with Current Injection Path PFC Rectifier for Aircraft Application*
U. Borović & N. Alonso — *Three-Phase Buck Rectifier for Aircraft Application with Variable Line Frequency*

POWER TOPOLOGIES

Y.E. Bouvier & N. Alonso — *Series Input-Parallel Output 10kW Converter based on Series Resonant Dual Active Bridge Topology for High Efficiency Aircraft Application*
G. Salinas & B. Stevanovic — *Power distribution systems for aerospace application*
V. Cordón & M. Silva — *High efficiency, high power density resonant boost converter for PV applications*

RECONFIGURABILITY

L. Suriano — *Artificial primary Visual Cortex design*
C. Castañares & A. Rodríguez — *Development of Hardware Accelerators Using OpenCL Methodologies for Single and Multiple FPGA Architectures*
A. Rodríguez, C. Castañares & L. Suriano — *Towards Safer and Predictable Hardware Acceleration in Distributed, Embedded and High Performance Systems*
J. Mora — *Development of tools for relocation-oriented partial reconfiguration on the Vivado suite*
R. Conejo, P. Iglesias & J. Mora — *Bioelectric signal acquisition and processing on an FPGA*

SPECIFIC APPLICATIONS

P. Camacho — *Study of Power Losses for 2 and 3 level driver of BLDC motor for different semiconductor technologies*
A. García — *Digital control circuit for high speed brushless de-excitation system (HSBDS)*
J.Mª Fernández — *Development of the production of 250 Power Supplies for the XFEL main linac Superconducting Magnets*
I. Potti, B. Lansac & S. Muñoz — *An embedded intelligent opto-electronic interface for real-time prediction of the chemical composition in oil wells*
J. Rojas, C. Terciado & D. Cabrera — *Wireless Power Transfer For Medical Application*
J.Mª Molina — *SP Control Technologies: platform demostration*

WIRELESS SENSOR NETWORKS

S. Muñoz — *Real-Time Computing on the Cookie Platform*
G. Cabrera — *Smart communication device for multi-FPGA high performance computing platform*

Final Program

UNIVERSIDAD POLITÉCNICA DE MADRID
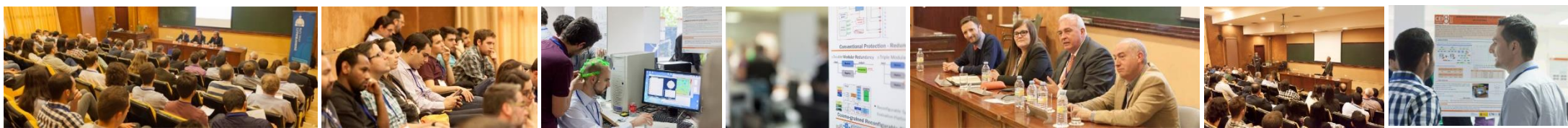E.T.S. Ingenieros Industriales

April 7th – 8th, 2016

April 7-8
9th
CEI-UPM

Special Session on
Wearables
for healthcare

Topics

Embedded intelligence
High Efficiency RF Amplifiers
INGENIA projects: creativity in electronics
Modeling and simulation of Power Converters
Power Factor Correction
Power Topologies
Reconfigurability
Specific Applications
Wireless Sensor Networks

POLITÉCNICA
"Ingeniamos el futuro"

CAMPUS DE EXCELENCIA INTERNACIONAL

CEI UPM | Centro de Electrónica Industrial

Thursday, April 7th Friday, April 8th

ETSII Room: TBD

Aula D

Short courses	9:00-13:00

On Thursday morning you are invited to attend a short course.

Two short courses are running in parallel, please indicate in your registration which one you would like to attend.

Design of high frequency magnetic components **Miroslav Vasić & Pedro Alou** (CEI-UPM)

Radio frequency power amplifiers **Javier Sebastián** (UO) **& Fco. Javier Ortega** (CEI-UPM)

Aula C

Registration at CEI Annual Meeting	15:30-16:00

Opening Session	16:00-16:30

Roberto Prieto (UPM)

Emilio Mínguez (ETSII, Director)

Javier Uceda (CEI, Director)

TECHNICAL SESSION: Oral Session (I)	16:30-18:45

SESSION CHAIR: PEDRO ALOU/EDUARDO DE LA TORRE

Comparison between traditional passive converters and new controlled converters for on-board critical applications **J. Carmena** (INDRA)

In-Flight Reconfiguration: Space Hardening Through Soft Means **A. Álvaro** (TAS-E)

Self-Learning Embedded System for Object Identification in Intelligent Sensor Networks **M. Villaverde** (CEI-UPM)

99% efficiency power converter **P. Grbovic** (Huawei)

A nonlinear blackbox modelling approach for system level simulation of DC microgrids **A. Francés** (CEI-UPM)

Visit CEI facilities. Poster Session	19:00-20:30

The poster session will be held in the main lab of Centro de Electrónica Industrial (CEI). You will have the opportunity to discuss with the researchers and to see the latest CEI outcomes. Beverages and food will be available during the session.

Find the list of the posters in the last page.

TECHNICAL SESSION: Oral Session (II)	9:00-11:15

SESSION CHAIR: FÉLIX MORENO/JESÚS A. OLIVER

Comparative Analysis of Two Approaches in Envelope Tracking Power Supplies for Satellite Applications **V. Lazarević** (CEI-UPM)

Antenna for energy transfer in the far field **F.J. Ortega** (CEI-UPM)

Control Loop Design of the CEI@UPM inverter for the Google/IEEE "Little Box Challenge" competition **R. Ramos** (CEI-UPM)

A new Processing Layer and Software Framework for Real-Time Data Acquisition and Communications for the Cookie Wireless Sensor Network Platform **S. Muñoz** (CEI-UPM)

Power Distribution System for Aerospace Application **G. Salinas & B. Stevanović** (CEI-UPM)

Artificial primary Visual Cortex design **L. Suriano** (CEI-UPM)

COFFEE BREAK	11:15-12:00

Panel debate	12:00-13:30

WEARABLES FOR HEALTHCARE
Session chair: J. Uceda (CEI)

*JAVIER COLÁS (*Medtronics*)*

NEUS SABATÉ (IMB CNM CSIC)

At 13:30 h. photo group at the ETSII Main entrance

COCKTAIL will be served in the Sala de la Máquina at 13:45 h.