

June 2011

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The official Greece IEEE Section's Newsletter

Greece PES Chapter 2011 Outstanding Engineer Award to Prof. Athanasios Safacas

The IEEE Greece PES (Power & Energy Society) Chapter honored **Professor Emeritus Athanasios Safacas** of the University of Patras, Greece with the "Chapter Outstanding Engineer 2011 Award" to "*for his contribution to research and education in electromechanical energy conversion systems*".

The award ceremony was co-sponsored by the University

of Patras and took place in University's Ceremony Hall on April 13, 2011. The honoree topic of address was "Trends of Electromechanical Energy Conversion, Past-Present-Future".

In the photograph, from left to right: Prof. Tasos Bakirtzis, IEEE Greece PES Chapter Chair, Prof. Thanos Skodras, IEEE Greece Section Chair, Professor Emeritus

Athanasios Safacas, Award Recipient Prof. George Panayiotakis, Rector of University of Patras.



Job Fair — <http://www.job-fair.gr>

We are glad to announce that the students of National Technical University of Athens, as members of the student organizations IEEE S.B. (Institute of Electrical and Electronics Engineers Student Branch) and EESTEC (Electrical Engineering Students' European Association), have the honor to organize the first engineering Greek JobFair. This event will take place in a conference room of 750 square meters in Technopolis of Athens on July 8th. Thirty - five of the

biggest greek companies are going to participate while it is the first time that an event like that is held in Greece.

In a very crucial economic period for the Greek and European community, it is very important for young people, who confront an uncertain working future, to have a smoother transition from academic to working environment. This is the reason why we decided to organize the JobFair, an event that aims to bring companies and university students

closer than ever. Through JobFair, we invite companies to share their experiences of the actual everyday work and familiarize students with ways to become successful. JobFair aims mostly to undergraduate and graduate students of technical universities, but also to students of other technological schools, as it will be promoted through posters, radios, student magazines and any other possible way.



Best Paper Award @ IEEE ICC 2011

Eirini Stavrou and Adamantia Stamou alumni of UoWM and members of the IEEE Student Branch of Western Macedonia, achieve the prestigious Best Paper Award @ IEEE ICC 2011 together with their supervisors Pantelis Angelidis, Assistant Prof. at UoWM, Jesus Alonso and Christos Verikoukis from CTTC and Luis Alonso from UPC, at the IEEE International Conference on Communications (ICC) 2011 for their paper: "Energy-Efficiency Evaluation of a Medium Access Control Protocol for Cooperative ARQ" that was based on the work the two students contacted

during their Diploma Thesis on CTTC, Spain.

IEEE ICC is one of the flagship conferences of the IEEE Communications Society and typically receives more than 2500 paper submissions every year.

This paper presents the evaluation of the energy consumption of PRCSSMA, an 802.11-based medium access control protocol designed to coordinate the retransmissions from the relays in a wireless network implementing a Cooperative Automatic Retransmission Request (C-ARQ) scheme. A comparison

in terms of energy efficiency with non-cooperative ARQ schemes (retransmissions performed only from the source) and with ideal C-ARQ (with perfect scheduling among the relays) is included in this paper. The main results show the conditions under which a C-ARQ scheme with PRCSSMA outperforms, in terms of energy efficiency, non-cooperative ARQ schemes and also show that the overhead of the MAC layer cannot be neglected in order to accurately evaluate the performance of a C-ARQ scheme.

"Eirini Stavrou and Adamantia Stamou alumni of UoWM and members of the IEEE Student Branch of Western Macedonia, achieve the prestigious Best Paper Award @ IEEE ICC 2011 ..."

Embedded System Design - Embedded Systems Foundations of Cyber-Physical Systems

Author: Peter Marwedel

Publisher: Springer

ISBN: 978-94-007-0256-1

Year: 2011

Pages: 389

Book Review

by Nikolaos Papatheodoulou
e-mail: npapath@ieee.org

In this book, Dr. Peter Marwedel deals with the issue of Embedded and cy-phy systems, which are applied avionics, automotive electronics, railways, telecommunication, health, robotics, security and plenty of other areas. The author, as an expert in the area of embedded systems design, shares his knowledge with the readers in an very understandable way.

The content of the book is well organized and easy to read, without losing its scientific background.

The book is structured in 8 chapters. In chapters two and three, the author provides an overview of specification techniques, languages, models and key hardware compo-

nents of embedded systems. Chapters four and five deal with system software components, particularly embedded operating systems and contain the essentials of embedded system design evaluation and verification. Then, chapter six deals with one of the key steps in the design process of embedded systems: Mapping applications to execution platforms. Finally, the author provides a set of optimization techniques and a brief introduction to testing mixed hardware/software systems.

In Appendixes A the author provides a special analysis of Integer Linear Programming, a mathematical optimization technique applicable to a large number of optimization problems. Helpful examples are used in an explanatory analysis. In appendix B are presented the fundamentals of Kirchhoff's laws and operational amplifiers. This analysis is necessary for students of Informatics, and covers the most important

issues.

Embedded System Design - Embedded Systems Foundations of Cyber-Physical Systems, unlike the most other books on Embedded Systems design, is not focused only on explaining the use of micro-controllers, including their memory, I/O and interrupt structure. It covers many other areas in order to give a global understanding in a complete presentation to the readers.

The topic of the book is structured and explained in a helpful manner, fact that helps the reader to understand the issues of Embedded Systems. The figures and the diagrams of the book are representative and well designed. In references the readers can find a collection of both earlier and state-of-the-art works.

I strongly recommend this book both to students and researchers in Embedded Systems and other research areas of Informatics. .

*T.E.C.H.
magazine
(Technology
Enabled by
Creativity and
Hacking) is a
new publication*

T.E.C.H.—Technology Enabled by Creativity and Hacking

A new IEEE source of news will be available from June 1 to Greece Section , that mainly targets the student members of IEEE. The T.E.C.H. magazine (Technology Enabled by Creativity and Hacking) is a

new publication (hard copy) managed and edited by our fellows in the University of Thrace IEEE Student Branch. It is a noteworthy initiative from our students that is welcomed by the IEEE Greece Section and its officers and

we hope to receive the proper appreciation from all our members around the world. The S.B. chairmen are encouraged to contact Pavlina Kapetanou (chair of the Univ. of Thrace IEEE SB) to receive a copy.

... an
extraordinary
number of 215
participants!

Digital photo and Image processing seminar

The IEEE Student Branch of Thrace organized a seminar series for "Digital photo and image processing". The series started on 6 April 2011 and lasted until 25 May 2011! The seminar was embraced by the students, reaching an extraordinary number of 215 participants, who followed the seminar from the very first day along to its closing day.

The subjects of the seminar were about the art and the technique, the theory and the practice of the elegant and at the same time the most affordable form of art, digital photo. An historical review was also considered from the first day, in order to highlight the evolution of image capturing.



New IEEE Student Branches !

K. Karpouzis

It was just an issue ago that a special reference to the productive previous year, regarding Student Branches, was addressed by the editor.

It is my pleasure to announce the establishment of two new Student Branches, and wel-

The lectures that took place during the seminar were:

6 April 2011

Digital Image

13 April 2011

Photography and digital photo

4 May 2011

The golden rule

11 May

Introduction to image and photo processing

18 May 2011

Fundamental dexterities in image and photo processing

25 May 2011

Advanced dexterities in image and photo processing

The series of the lectures took place at the Electrical & Computer Engineering Department facilities, at the Kimmerion Campus.



come their members to the Greece IEEE Section. The two SBs are namely, the TEI of Mesolonghi IEEE SB and the TEI of Piraeus IEEE SB.

The new IEEE Student Branches will soon 'launch on air' their websites and you may get informed about their activities.

Also stay tuned to the Greece IEEE Section's website and seek for news regarding these new units of the Section.

If you want to get more actively involved and/or create your Student Branch, then contact Greece IEEE Section.

Greece CASS Chapter initiative: a blended-learning Digital Systems intensive course for IEEE student members

The IEEE Greece CAS Chapter has run for the second time the successful blended-learning Digital Systems intensive course. Fourteen IEEE student members from four Greek Universities participated. The IEEE CAS Society and the Hellenic Open Uni-

versity (HOU) financially supported this initiative. During the first 5 weeks of the course, each of the students attended virtual classes and completed a series of kit-based hardware exercises at home. In the last week students sat a final examination

in the Digital Systems Laboratory of the HOU in Patras, Greece. The scheme was based on material and methodologies developed by HOU and has proved very successful for introducing students to the nuts and bolts of digital systems at a distance.



Prof. Skodras with the tutor and the students that attended the intensive course

IEEE announced that by the end of 2010 surpassed the 400,000 member mark for the first time in history

IEEE Greece Section Annual Meeting and Keynote Lecture

The annual meeting of the IEEE Greece Section officers and members took place on 14 April 2011 in the Hellenic Technology Clusters Initiative (www.corallia.org) premises in Athens, Greece. The meeting was followed by the annual lecture, which was delivered by Dr Nikolaos

Mavridis, Asst. Professor at UAEU CIT and Director of the Interactive Robots and Media Laboratory. The title of the lecture was: "Glimpses to the future of Robotics: From Interactive Robots, Social Networks, and Telepresence Towards the Hybrid Human-Machine

Cloud". The speaker has presented some very interesting aspects of the history of the robotics and succeeded highlighting current and future applications. The event was well attended by engineers on-site and on-line in three different cities in Greece.

IEEE surpasses 400,000 members and issues a limited edition coin to celebrate

IEEE announced that by the end of 2010 surpassed the 400,000 member mark for the first time in history. Three IEEE Greece Section members who renewed their

membership for 2011 were among the 400 randomly drawn to receive a limited edition 400,000 member commemorative coin to celebrate the event. Congratulations to

Alexandros-Petros Gelasopoulos, Vasileios Karagiorgis, and Pavlos Miroftsalis!

AUTH students visit to HTSO Control Center and PPC Lavrio V 380MW CCGT Power Plant

A group of 40 power engineering students of the Aristotle University of Thessalo-

niki visited the HTSO Dispatch Center at Agios Stefanos and the PPC Lavrio 380

MW CCGT Power Plant. The travel was arranged for 7 April 2011.



PES Chapter: Cyber Security of the Power Grid

The Greek Chapter of the IEEE Power & Energy Society, invites you to the lecture of Dr. Chen-Ching Liu, Professor of Power Systems,

University College Dublin, titled "Cyber Security of the Power Grid"

The lecture will take place at the Multimedia Amphitheatron, at the library building of the NTUA, at the Zografou University Campus. The lecture will be given in the English language

Abstract

Electric power grids are increasingly dependent on information and communications technology for the op-

eration and control of physical facilities. Supervisory Control And Data Acquisition (SCADA) systems are used in power, energy, and transportation infrastructures. As the connectivity and dependency grow, so does the impact from potential cyber intrusions. Since society and economy rely heavily on the support and services provided by the power grids, the potential damage of a cyber attack can be enormous. As a result, the information and communication systems for the power grids must meet a higher level of requirements on the integrated system security and reliability. Although cyber security issues are well

known and new security technologies are available, research on the interdependency between cyber and physical systems for critical infrastructures is just emerging. Anomaly detection is an important step to infer malicious activities by constructing a representation of evidences and their spatial and temporal relations. The inference from critical alerts can be used for the development of mitigation strategies. With support from Science Foundation Ireland, a cyber security test bed has been established for evaluation of the cyber intrusion scenarios.

2nd International ICST Conference on Wireless Mobile Communication and Healthcare - MobiHealth 2011

Double Tree
by Hilton Resort
Helona – Kos Island, Greece
5-7 October 2011

www.mobihealth.name

The objectives of this conference are to advance medical diagnosis, treatment, and patient care through application of wireless communications, mobile computing and sensing technologies. It aims to provide an international forum to bring together researchers and experts from academia, healthcare organizations, research institutions, and industrial enterprises working in the field of wireless communication and health care to share ideas and discuss cutting-edge research, present experience with recent developments in healthcare delivery, and to provide practical guidance to policy makers and the setting of applicable standards.

Original unpublished contributions are solicited that can improve the knowledge, understanding and practice in the interdisciplinary design of efficient protocols and technologies to help implement and provide advanced mobile health care applications. The topics of interest include but not restricted to:

- * Emergency and disaster applications
- * Specialty and site specific applications

- * Wearable, outdoor and home based applications
 - * Sensing of vital signs and signatures
 - * Intra-body propagation and communication
 - * Mobile devices for patient monitoring
 - * Measurement and monitoring technologies
 - * Decision support algorithms for sensor analysis
 - * Transmission of patient data
 - * Ad hoc and sensor systems and networks
 - * Real-time transmission of multiple medical data
 - * Healthcare telemetry and telemedicine
 - * Secure and high quality networks
 - * Ad hoc wireless networks for enhanced monitoring
 - * Remote diagnosis and patient management
 - * Accuracy and reliability of diagnoses
 - * Home and rural environments
 - * Novel mobile encryption technologies
 - * Coding and communication standards
 - * Identity and privacy enhancing technologies
 - * Mobile data management and processing
 - * Wireless access in ubiquitous systems
 - * Wearable computing and communication
 - * Wireless and wearable devices for pervasive healthcare
 - * Mobile and wireless technologies for healthcare delivery
 - * Sensor networks for pervasive healthcare
 - * Patient monitoring in diverse environments (hospitals, nursing homes, assisted living)
 - * Medical Device Control Via Wireless Technology
 - * Radio-Frequency Wireless Technology in Medical Devices
 - * Safe, Effective, Secure and Reliable Use of Wireless Technology in healthcare
- Papers should be submitted by 15 May 2011. The preferred length for initial submission is 4 pages, however the length of final paper should not exceed 8 pages. Extra pages will incur additional charges. The papers must be submitted in PDF format. All submissions will be peer reviewed, and acceptances will be provided by 15 July 2011.
- The Proceedings of MobiHealth 2011 will be published in LNICST, appear in SpringerLink and will be referenced in ICST's digital library, the European Union Digital Library (EUDL). Extended versions of selected papers of the conference will be invited for publication in journal special issues (SCI Indexed).
- MobiHealth 2011 will be held in parallel with the: 10th International Workshop on Biomedical Engineering

*Send in due time
the Call for Papers
of your Symposia,
Conferences,
Workshops to be
included in the
Newsletter*

10th International Workshop on Biomedical Engineering

Call for Papers

Double Tree
by Hilton Resort
Helona – Kos Island, Greece
5-7 October 2011

<http://medlab.cc.uoi.gr/10thbioeng>

The 10th International Workshop on Biomedical Engineering will be held from October 5-7, 2011 at Double-Tree by Hilton Resort Kos-Helona, Kos Greece. The objective of the workshop is to cover the state of the art of Biomedical Engineering, targeting in the latest developments in the area. Papers covering a broad spectrum of themes are invited but not limited to the following topics:

- Modeling of Physiological systems
- Biomechanics
- Tissue Engineering and regenerative medicine
- Biosensors and Instrumentation
- Biomedical Signal and Image processing
- Medical Informatics

- Computational and systems biology

The 10th International Workshop on Biomedical Engineering will provide a unique opportunity to participants to gain knowledge in the latest development in Biomedical Engineering, through the envisioned technical program. Original papers in the aforementioned themes can be submitted from researchers and students.

All accepted papers will be included in the proceedings of the workshop and extended versions of selected papers will be invited for publication in journal special issues.

This year's 10th International Workshop on Biomedical Engineering is dedicated to Prof. Yannis Missirlis for his valuable contribution to the field.

Important Dates:

Paper submission deadline:
15 June 2011

Notification of acceptance:
15 July 2011

Final submission:
1 August 2011

Early registration:
1 August 2011

Final program available: 15
September 2011

Contact:

10bioeng@cc.uoi.gr

The workshop will be held parallel to **MobiHealth 2011** (<http://www.mobihealth.name/>).

Call for Participation - PCI 2011

**15th Pan-Hellenic Conference
on Informatics
with international participation**

**September 30 - October 2, 2011
Kastoria, Greece**

<http://pci2011.teiwm.gr>

The Greek Computer Society (EITY), the University of Western Macedonia, Department of Informatics and Telecommunications Engineering, and the Technological Educational Institute (TEI) of Western Macedonia, Department of Informatics and Computer Technology organize the 15th Pan-Hellenic Conference on Informatics (PCI 2011) in Kastoria, Greece, during September 30 - October 2, 2011.

The PCI is an event established by the Greek Computer Society. This year, PCI 2011 will take place in Kastoria.

PCI 2011 General co-Chairs

Yannis Manolopoulos, University of Western Macedonia, manolopo@csd.auth.gr
Nikos Asimopoulos, TEI of Western Macedonia, asi-mopou@teikozei.gr

PCI 2011 Program Committee co-Chairs

Pantelis Angelidis, University of Western Macedonia, pagge-lidis@uowm.gr
Angelos Michalakis, TEI of Western Macedonia, amichalakis@kastoria.teikozei.gr

PCI 2011 Organizing Committee
Christos Douligeris
Nikitas Karanikolas
Christos Koilias
Ioannis Voyiatzis

Important Dates (Main Track)

Paper submission deadline:

[May 15, 2011](#)

Notification of decision:

[June 15, 2011](#)

Camera-ready deadline:

[June 24, 2011](#)

Authors' registration deadline:

[June 24, 2011](#)

Topics of interest (Main Track)

The PCI 2011 Conference will run in parallel sessions, with invited talks, research and case study tracks. Topics of interest include, but are not limited to, the following:

Algorithms and Data Structures
Image and Video Processing
Artificial Intelligence
Information Retrieval
Bioinformatics
Information Society: Legal and Regulatory issues
Business Intelligence
Information Systems
Communication and Information Systems Security
Information Theory
Computational Science
Knowledge based Systems
Computer and Communication Networks
Numerical and Scientific Computation
CRM and ERP systems
Open Source Software
Cultural and Museum Information Systems
Operating Systems
Databases
Parallel and Distributed Systems
Data Mining
Privacy and Privacy Enhancing Technologies
Digital Libraries
Programming Languages
eCommerce, eBusiness, eGovernment, eHealth
Sensor Networks

Education Technologies
Signal Processing
Graphics, Visualization, Multimedia and Virtual Reality
Software Engineering
Grid, Cluster and P2P Computing
Telecommunication Systems and Policies
Hardware and Architecture
Wearable Computing
Human-Computer Interaction
Wireless and Mobile Computing

PCI 2011 Proceedings

The PCI 2011 proceedings will be published by IEEE Computer Society, Conference Publishing Services (CPS) and distributed at the conference. IEEE CPS arranges for indexing through Thomson ISI, IEE (INSPEC), EI (Compendex), and other indexing services and archives the publication to IEEE-Xplore and the IEEE Computer Society Digital Libraries (CSDL).

Since only selected papers will be published by CPS, the rest of the accepted papers will be included in the Local Proceedings, which will be handed out along with the CPS Proceedings.

Language of the PCI 2011 Conference

English will be the official language of the PCI Conference, including presentations and proceedings. Non Greek-speaking authors are strongly encouraged to submit papers and participate in the PCI 2011 Conference, as well.

*Send in due time
the Call for Papers
of your Symposia,
Conferences,
Workshops to be
included in the
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Comments

This month's issue is dedicated to the PES Chapter events and to our student members. Unfortunately, the issue was delayed four times due to demands of our mem-

bers, willing to add their content to the newsletter. Since this may cause also similar problems in the future, the material that has been received after the 1st

day of each month will be added automatically to the next issue's content.

Athanasios Kakarountas
Newsletter's Editor