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Recent Researches in Electrical Engineering

- *Proceedings of the 14th International Conference on Electric Power Systems, High Voltages, Electric Machines (POWER '14)*
- *Proceedings of the 13th International Conference on Circuits, Systems, Electronics, Control & Signal Processing (CSECS '14)*
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Preface

This year the 14th International Conference on Electric Power Systems, High Voltages, Electric Machines (POWER '14), the 13th International Conference on Circuits, Systems, Electronics, Control & Signal Processing (CSECS '14) and the 2nd International Conference on Wireless and Mobile Communication Systems (WMCS '14) were held in Lisbon, Portugal, October 30 - November 1, 2014. The conferences provided a platform to discuss power system planning and management, electric machines, electric vehicles, batteries, high voltage engineering, renewable energy sources and technology, transmission and distribution, network modeling, optical fibers, mobile communications, solid state electronics for communication, circuits, systems, electronics, control etc. with participants from all over the world, both from academia and from industry.

Their success is reflected in the papers received, with participants coming from several countries, allowing a real multinational multicultural exchange of experiences and ideas.

The accepted papers of these conferences are published in this Book that will be sent to international indexes. They will be also available in the E-Library of the WSEAS. Extended versions of the best papers will be promoted to many Journals for further evaluation.

Conferences such as these can only succeed as a team effort, so the Editors want to thank the International Scientific Committee and the Reviewers for their excellent work in reviewing the papers as well as their invaluable input and advice.

The Editors

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Plenary Lecture 1

A Perspective of the Networks of the Future and Smart Cities

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Abstract: A parallel in the evolution between mobile and wireless communications and other areas (computers and cars) will be presented, in an attempt to identify possible directions for systems future evolution. A look into already existing technologies will enable to establish a perspective for future user interface devices and services (e.g., information access, Internet of Things, and geo-location). Then, potential services are identified, after which research challenges for mobile and wireless communications networks are addressed (e.g., network virtualisation, cloud networking, and networks of information). Smart Cities are taken as an integration example, as well as a perspective of application to other key sectors (e.g., health, transport, and energy). The link with other areas, and impact on regulation, standardisation, and policy matters are presented at the end.

Brief Biography of the Speaker: Luis M. Correia was born in Portugal, on 1958. He received the Ph.D. in Electrical and Computer Engineering from IST (University of Lisbon) in 1991, where he is currently a Professor in Telecommunications, with his work focused in Wireless/Mobile Communications in the areas of propagation, channel characterisation, radio networks, traffic, and applications, with the research activities developed in the INOV-INESC institute. He has acted as a consultant for Portuguese mobile communications operators and the telecommunications regulator, besides other public and private entities, and he is in the board of a telecommunications company. Besides being responsible for research projects at the national level, he has participated in 28 ones within the European frameworks of RACE, ACTS, IST, ICT and COST, where he also served as evaluator and auditor, having coordinated 3 of them and taken leadership responsibilities at various levels in many others. He has supervised more than 160 M.Sc. and Ph.D. students, having edited 6 books and authored more than 380 papers in international and national journals and conferences, for which he has served also as a reviewer, editor, and board member. At the international level, he has been part of 26 Ph.D. juries, and evaluated research projects and institutions for funding agencies in 8 countries. He has been the Chairman of the Technical Programme Committee and a member and chair of the Steering Committees of several major conferences. He was a National Delegate to the COST Domain Committee on ICT. He has been active in the European Net!Works platform, by being a member of its Expert Advisory Group, and was a member of its Steering Board and the Chairman of its Working Group on Applications. He has been elected for the European 5G PPP Association.

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