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FACULTY AUTOMATION



DEPARTMENT THEORETICAL ELECTRICAL ENGINEERING

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ADVANCED ASPECTS OF THEORETICAL
ELECTRICAL ENGINEERING -
SOZOPOL'14

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in the framework of

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PREFACE

These Proceedings contains the plenary lectures and the regular papers presented at the *10th Summer School Sozopol'14*, which took place in Sozopol, Bulgaria, between *19 and 22 Sept. 2014* in the framework of the “Days of the Science of the Technical University of Sofia”. The Summer School covers the advanced aspects of Theoretical Electrical Engineering and it is a platform for postgraduate training of Ph.D. students and young scientists. During the Summer School well-known experts presented some advanced aspects of circuits and systems theory, electromagnetic field theory and their applications. Apart from the educational part of the Summer School a presentation of original authors’ papers took place.

The main topics of the Summer School *Sozopol'14* include Circuits and Systems Theory and Applications, Signal Processing and Identification Aspects, Electromagnetic Fields, Theoretical Concepts, Applications and New Approaches in Educating Theoretical Electrical Engineering. The Summer School *Sozopol'14* has been organized by the Department of Theoretical Electrical Engineering of the Technical University of Sofia with the main sponsorship of the Research and Development Sector of the Technical University of Sofia.

This has been the tenth edition of the event, after the Summer Schools in 1986, 1988, 2001, 2002, 2005, 2007, 2009, 2010 and 2012. The Summer School is under the patronage of the International Symposium on Theoretical Electrical Engineering (ISTET) and it is a regular ISTET event. There were 35 participants at the Summer School this year. There were 6 plenary lectures and 23 regular papers that are published in these Proceedings. Providing the recent advances in Theoretical Electrical Engineering the Proceedings will be of interest to all researchers, educators and Ph.D students in the area of Electrical Engineering.

Special thanks are due to the Research and Development Sector, Faculty of Automation and the Section of Social Services of the Technical University of Sofia about the overall support of the event. We also would like to thank to the IEEE Bulgaria CAS Chapter and the World Scientific and Engineering Academy and Society (WSEAS), which also partially sponsored the event. We hope to meet again in the following edition of the Summer School to continue the good tradition and collaboration in the field of Theoretical Electrical Engineering.

Organizing Committee
Sofia, October 2014

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