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SYSTEMS THEORY AND SCIENTIFIC COMPUTATION

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Vouliagmeni, Athens, Greece, August 24-26, 2007

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Preface

The book you are currently holding contains the Proceedings of the 7th WSEAS International Conference on SYSTEMS THEORY and SCIENTIFIC COMPUTATION (ISTASC'07), which was held in Vouliagmeni, Athens, Greece, August 24-26, 2007.

Systems theory and scientific computation deal with problems of all branches of science and engineering (automatic control, robotics, mechatronics, electronics, spaces science, chemistry, applied physics, acoustics, nanotechnology, biomedicine etc.). Differential geometry finite elements, boundary elements, applied optimization, pattern recognition, computational intelligence (neural networks, fuzzy systems, genetic algorithms, etc.) are some of the most important branches of modern systems theory and scientific computation. Many papers from all these branches are published in this Volume.

The Plenary Speeches of ISTASC '07 were:

- *Software Tests for Model Based Applications in the Automotive Industry*

by Prof. Andrzej Ordys, Kingston University, UK.

- *An Exact Calculation Method of Nonlinear Optimal Controls and Applications in Aerospace Fields*

by Prof. Fumiaki Imado, Shinshu University, Japan.

- *Semiconductor Devices and their use in Power Electronic Applications*

by Professor Noel Y. A. Shammas, Staffordshire University, UK.

- *On System Representation Based on a New Concept of Abstract State Space Energy*

by Prof. Milan Stork, University of West Bohemia, Czech Republic.

- *Applications of the Malliavin Calculus of Bismut type without probability*

by Prof. Remi Leandre, Universite de Bourgogne, France.

- *Reflective Simulation for On-Line Staff Scheduling: An Innovative Methodology in Distribution Logistics Industry Application*

by Prof. Ing. Roberto Revetria, Docente di Impianti Industriali e Meccanici, Italy.

- *Numerical Modeling of Staggered Tube Bundle in Duct*

by Prof. Hassan Shirvani, Anglia Ruskin University, UK.

- *A Mathematical Theory of the Asynchronous Systems*

by Prof. Serban E. Vlad, Oradea City Hall, Romania.

We would like to thank all members of the organizing laboratories for their contribution to the organization of the conference.

The contents of this Book are also published in the CD-ROM Proceedings of the Conference. Both will be sent to the WSEAS collaborating indices after the conference: www.worldses.org/indexes.

In addition, the papers of this book are permanently available to all the scientific community via the WSEAS E-Library.

Expanded and enhanced versions of papers published in these conference proceedings are also going to be considered for possible publication in one of the WSEAS journals that participate in the major International Scientific Indices (Elsevier, Scopus, EI, Compendex, INSPEC, CSA .... see: www.worldses.org/indexes) these papers must be of high-quality (break-through work) and a new round of a very strict review will follow. (No additional fee will be required for the publication of the extended version in a journal).

We cordially thank all the people of WSEAS for their efforts to maintain the high scientific level of conferences, proceedings and journals.

The Editors

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