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HEAT TRANSFER, THERMAL ENGINEERING and ENVIRONMENT

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Vouliagmeni, Athens, Greece
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Preface

The book you are currently holding contains the Proceedings of the 5th IASME / WSEAS International Conference on HEAT TRANSFER, THERMAL ENGINEERING AND ENVIRONMENT (HTE'07) which was held in Vouliagmeni, Athens, Greece, August 25-27, 2007.

Heat transfer, thermal engineering and environment are an integral part for the modern mankind. The synchronous industrial and building sector are based on heat transfer and thermal engineering, while environment determines the humanity life style. Mathematical modeling, simulation, numerical methods, experimental methodologies in heat and mass transfer, refrigeration, air-conditioning, trasport phenomena, diffusion convection, conduction problems, internal combustion engines, combustion steam generators, thermal installations, steam-turbines, steam-generators, natural and forced convection, phase change, metal casting, welding, forging and other processes, heat exchangers, bio-heat transfer problems, heat engineering and electroscience, micro and nano scale heat transfer, turbulent heat transfer, heat storage, electronic cooling, material properties, industrial applications, air pollution problems, environmental problems, waste management, environmental protection, management of living resources, mathematical models, management of rivers and lakes, underwater ecology, renewable energy systems, energy technology transfer, pollution, soil and agricultural issues, landscape design are some of the most important branches of modern heat transfer, thermal engineering and environment. Many papers from all these branches are published in this Volume.

The Plenary Speeches of BIO ‘07 were:

- *Heat Exchangers and the Environment*

by Prof. T Bott, The University of Birmingham, UK

- *Couette-Poiseuille Flow of Non-Newtonian Fluids in Concentric Annuli*

by Prof. Petr Filip, Institute of Hydrodynamics, Prague, Czech Republic.

- *Mathematical Modelling: the Interplay among Mathematics and Application Branches*

by Prof. Andris Buikis, University of Latvia, Latvia.

- *Energy Saving by Using Heat Pipes*

by Prof. Gheorghe Bacanu, University Transilvania of Brasov, Romania.

- *Characterization of Flows with Chemical Reactions in Energy Conversion Processes*

by Assc. Prof. T.-W. Lee, Arizona State University, AZ, USA.

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

5th IASME / WSEAS International Conference on HEAT TRANSFER, THERMAL ENGINEERING and ENVIRONMENT (HTE'07)

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