



Editorial

Dedicated to ECOS 2009 conference

This Special Issue of *Energy* is composed of papers selected from those presented at the ECOS 2009 (22nd International Conference on Efficiency, Cost, Optimization and Simulation and Environmental Impact of Energy Systems).

This conference, for the first time in South America, was held in Foz do Iguaçu, Brazil, next to one of the UNESCO World Natural Heritages, at Iguaçu Falls. The place was carefully selected due to its geographic position between three Frontiers: Argentina, Brazil and Paraguay.

The conference was organized by the ABCM – Brazilian Society of Mechanical Sciences and Engineering and by three Brazilian universities: University of Campinas, University of São Paulo and Federal University of Santa Catarina. It was also sponsored by ASME – American Society of Mechanical Engineers and ICAT – International Centre of Applied, Thermodynamics. BNDES, PETROBRAS and the Brazilian Research Foundations: CNPq and CAPES, contributed to support the event.

Thirteen different sessions of scientific and technological relevancy took place during the event including: basic and applied thermodynamics, applied heat transfer, simulation, improvement and optimization of energy conversion systems, CCHP, heat pumps, refrigeration and air conditioning, renewable energy, environmental impact and sustainability of energy systems, CCS, process design, analysis and integration of thermal and chemical systems, hydrogen and fuel cells, combustion and gasification, gas turbines, ICE and conventional and advanced power plants.

The opening lecture was about Energy Efficiency in PETROBRAS, and during the conference, special sessions, such as the World Energy Panel and the Brazilian Biofuels Production Panel, were organized. The aim of the selected lecture and panels was

to show a view of the Brazilian and World Energy Sectors. Some papers referring to these events were selected to be included in this special issue.

The 33 papers included in this special issue were carefully selected from a total of 230 presented at the conference. These selections take into consideration the opinion of the conference reviewers and also the session chairs. The selected papers are also meant to represent a range of participating research groups by choosing one paper from each group.

We would like to thank the previous and present Editors-in-Chief, Professor Noam Lior and Henrik Lund for their invitation to produce this Special Issue of ECOS 2009 and also the *Energy* staff, who worked hard to prepare and publish this issue.

Finally, we are deeply grateful to all the people who contributed to this event: the participants, session chairs, lecturers and particularly the reviewers.

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