Editorial

This dedicated issue contains selected papers from the 2nd Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction (PRES’99) held on 31 May–3 June, 1999 in Budapest, Hungary.

The conference focused on planning, design and operation of continuous and batch processes for the processing industries, including oil refining, chemical, petrochemicals, pharmaceuticals, pulp and paper, food and drink, as well as the power generation industries.

The aims of the conference were to improve communications between experts in the field, to offer a forum for the latest research developments, and to help set future research directions. PRES’99 achieved most of these aims. The International Scientific Committee, on the basis of originality and scientific contribution, chose a total of 116 papers representing 38 countries for presentation at the meeting. From these contributions seventeen have been selected for this dedicated issue, representing European, Asian and both North and South America authors.

The first group of papers provides a current state-of-the-art overview of energy saving technologies using different approaches. The European Commission view and review of funded research is also included. The second group is dedicated to new developments of the methodology — HEN and furnaces retrofit design, HEN debottlenecking, exergy load distribution, HEN synthesis featuring a minimum number of shells, dealing with flowrate disturbances, simultaneous optimisation of capital and operating cost, paradigm of technology integration. The third group demonstrates several successful industrial case studies — a fluidised-bed coal gasification unit, crude oil distillation unit, ammonia plant, sugar plants, and a hydrogenation plant.

We would like to express our appreciation to all authors of papers in this Special Issue of Applied Thermal Engineering for their contributions. We believe that the selected papers will be of interest and relevance to the readers of this Journal, and that we will be able to prepare a similar issue dedicated to selected papers from PRES’2000.

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