

## PREFACE

PSE 2009 is the tenth in the triennial series of international symposia on process systems engineering, initiated in 1982. PSE 2009 was held in Salvador, Bahia, Brazil, in August 2009. The purpose of these triennial meetings is to gather round the worldwide community of PSE researchers and practitioners.

In the last 30-40 years, Process System Engineering has played an important role in developing and improving techniques for very specific kinds of processes: chemical processes, from the molecular to business level. However, in recent times, PSE techniques and methods, due to its large experience in dealing with nonlinear dynamics and complex systems, have been largely applied to new areas of knowledge: Environmental and Ecology, Bio and Pharmaceutical Processes, Food Processes, Safety Issues.

The main focus of the PSE 2009 meeting was Sustainability, Energy and Engineering, i.e. how PSE methods and tools can support sustainable resource systems and emerging technologies in the areas of green engineering: environmentally conscious design of industrial processes.

The conference had 365 registrants, 275 from academic area and 90 from the private sector, with 25 companies represented. International representation included 196 delegates from Brazil, 33 from the rest of Latin America, 76 from Europe, 26 from USA/Can, 36 from Asia and one from Africa. Students comprised 35% of attendees. The conference featured 114 oral presentations, including plenary, keynote and regular lectures and 226 posters.

Based on reviews and local evaluation, authors of 41 selected papers, just among the contributed ones, were invited to submit extended versions of their papers to the Brazilian Journal of Chemical Engineering. All extended papers were subject to a peer review process and, if successful, they were accepted for publication in this special issue. Thus, the BJCHe - PSE 2009 Special Issue comprises of 11 papers of those invited manuscripts.

The PSE 2009 conference was conducted under the auspices of the International Organization for Process Systems Engineering (IO/PSE) chaired by Professor Lorenz T. Biegler, of Carnegie-Mellon University. We would like to thank the members of the PSE 2009 Organizing and Scientific Committees and to all who worked and assisted the organizers of PSE 2009 in making this event a great success.

We gratefully acknowledge the authors of the selected papers whose expertise and contributions have made this special issue possible. Our special thanks go to the numerous reviewers for their comments and their valuable advice to the authors. We are very grateful for the outstanding job done by the editors of the Brazilian Journal of Chemical Engineering, in particular the Editor-in-Chief, Professor Reinaldo Giudici and the Editor of the section Process Systems Engineering, Professor Argimiro R. Secchi.

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We do hope that this Special Issue will be a valuable reference.

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