



“Gheorghe Asachi” Technical University of Iasi, Romania



A SPECIAL ISSUE DEDICATED TO
THE 7th INTERNATIONAL CONFERENCE ON ENVIRONMENTAL
ENGINEERING AND MANAGEMENT, ICEEM07, 2013
19-20 September 2013, Vienna, Austria

Integration Challenges for Sustainability

The *International Conference on Environmental Engineering and Management (ICEEM)* was initiated and organized every 2 years, since 2002, by the **Department of Environmental Engineering and Management**, Faculty of Chemical Engineering and Environmental Protection from the “Gheorghe Asachi” Technical University of Iasi (TUIASI), Romania. The declared objectives of all ICEEM conference editions were to bring together international researchers, academics, professionals and students, active in the fields of environmental engineering and management and to support knowledge exchange and dissemination of specific research and educational programmes.

The ICEEM conferences have grown in importance, quality and number of participants in time, the first conferences being held in Iasi, Romania in: **2002 (ICEEM 01)**, **2004 (ICEEM 02)**, **2006 (ICEEM 03)**, **2007 (ICEEM 04)**, while in **2009, ICEEM05** was organized in Tulcea and Danube Delta, Romania (www.iceem.eu). From **2011**, these international conferences have been organized **outside Romania** through the direct collaboration with prestigious European universities as follows:

- **ICEEM06** organized through the direct collaboration of Department of Environmental Engineering and Management from the “Gheorghe Asachi” Technical University of Iasi, and the *University of Pannonia Veszprém*, Hungary, on the beautiful shores of Lake Balaton, Hungary,

- **ICEEM07** was organized through the direct collaboration of the *Department of Environmental Engineering and Management* from the “Gheorghe Asachi” Technical University of Iasi, and the *Institute of Chemical Engineering*, from Vienna University of Technology (TUWIEN), one of the most successful technical universities in Europe.

The 7th edition of ICEEM had as major headline *Integration Challenges for Sustainability* and was held on September 19-20, 2013 in Vienna, a city of a great cultural diversity. The two organizing universities received support from three partners: a) *Environmental Biotechnology Section* of the European Federation of Biotechnology (EFB), b) *InterMEDIU Information, Consultancy&ODL Centre* (Romania), c) *Academic Organization for Environmental Engineering and Sustainable Development* (Romania).

The conference chairpersons were **Prof.Dr., dr.h.c. Carmen Teodosiu** (Romania) and **Prof. Dr., dr.h.c. Anton Friedl** (Austria), their work being supported by the International Scientific Committee (ISC) whose 32 members came from 15 countries. The ICEEM07 conference format preserved the particular “*brand aspects*” of previous conferences, such as: peer-review process of extended abstracts by the International Scientific Committee members, selection of the most important contributions for presentation in the conference sessions, invitation of well known scientific personalities for the plenary opening key-note lectures, post-publication of selected/invited full papers after a peer review process organized according to each journal specific requirements.

The conference major sessions reflect the international research priorities and correspond to the organizing institutions strategic agenda and major conference headline. Thus, the current edition is addressed mainly to a new trend on promoting new solutions for *integrating challenges in order to assure a global sustainability*. This approach requires strategic thinking, focus on research and innovation and interdisciplinary international and national collaboration, all of these being supported by the current edition of ICEEM. Considering also the needs for a knowledge-based society, a special attention is given to

the high level applications of the concepts, models and to their contribution to sustainable development solutions. Thus, the main topics covered by ICEEM07 were:

- *Environmental pollution and monitoring*
- *Water supply and wastewater treatment*
- *Environmental friendly materials*
- *Sustainable processes and production*
- *Modeling, simulation and optimization*
- *Environmental biotechnology*
- *Waste management for resources and energy recovery*
- *Environmental integrated management and policy issues.*

ICEEM07 conference had **171 registered participants** from **33** countries (Algeria, Austria, Belgium, Brazil, Bulgaria, China, Croatia, Czech Republic, Estonia, France, Germany, Greece, Hungary, Italy, Libya, Lithuania, Malaysia, Mexico, The Netherlands, Pakistan, Poland, Portugal, Romania, Russian Federation, Saudi Arabia, Serbia, Slovenia, Spain, Switzerland, Turkey, United Kingdom, United States of America, Vietnam), from all continents, providing thus a global character to this edition. The biggest delegation was from Romania (**66** participants).

The 7th edition of ICEEM had **171** accepted papers, but more than 250 extended abstracts were submitted. From the total number of accepted contributions there were **5** keynote plenary conferences, **82** oral presentation and **84** poster presentations, all these contributions being included in the ICEEM07 Conference Abstracts Book, published by the *Politehniem Publishing House* of the “*Gheorghe Asachi*” Technical University of Iasi (TUIASI). A complete set of extended abstracts of the conference papers on a flash disk was made available to each conference participant.

The ICEEM07 opening ceremony was held on September 19, 2013 in the “*Prechtlsaal*” Hall of the Vienna University of Technology by: **Prof. dr. Johannes Fröhlich**, Vice-Rector with research at TUWIEN, **Prof. dr. Carmen Teodosiu** (Vice-Rector with research at TUIASI, ICEEM07 conference chair-person), **Prof. dr. Anton Friedl** (ICEEM07 conference chair-person), **Prof. dr. Spiros Agathos** (vice-president of the Environmental Section of the European Federation of Biotechnology), the ceremony being moderated by **Dipl. Eng. Sabine Neff** from TUWIEN.

The plenary section included **5 keynote conferences** as follows:

- *Sustainable Production and Consumption: Integrating Environmental, Economic and Social Aspects of Sustainability*, presented by **Prof. dr. Adisa Azapagic**, University of Manchester, United Kingdom;
- *Sustainable Innovation through Design-Entrepreneurial & Policy Effectuation*, presented by **Prof. dr. Han Brezet**, Delft University of Technology, The Netherlands;

- *Bioprocesses in the Fight against Emerging Pollutants*, presented by **Prof. dr. Spiros N. Agathos** of the Catholic University Leuven, Belgium;
- *Rethinking Waste Management within the Resource-Efficient Concept*, presented by **Prof. dr. Andjelka Mihajlov**, University of Novi Sad, Serbia.
- *Environmental Management Potential of Developing Sustainable Bioeconomy Solutions*, presented by **Prof. dr. Emmanuel G. Koukios** of the National Technical University of Athens, Greece.

ICEEM07 Oral presentations and Poster sessions presented recent research results in the fields of: water, air and soil pollution and monitoring; water supply and wastewater treatment processes; environmental friendly materials development, characterization and applications; sustainable processes and production; environmental biotechnology; mathematical modeling, simulation and optimization; environmental impact, risk and life-cycle assessment; environmental, integrated management and policy making; waste treatment and management.

Current research in these areas combines techniques and processes that consider the sustainable development concept, thus enabling the simultaneous evaluation of functionality and sustainability of the production systems and their impact on the environment. This international event focused on the future of environmental engineering technologies and management practices and it was open to contributions from researchers that approach environmental problems in a multidisciplinary manner. Also, it encouraged practitioners and specialists active in various environmental fields to add a more practical-oriented approach to the conference sessions. The parallel oral and poster sessions were chaired by the members of the International Scientific Committee members as well as by other recognized personalities.

The authors presenting their contributions within ICEEM 07 events were invited to submit full papers for publication (after the conference) following the recommendations and selection of conference organizers and of the International Scientific Committee. The following international journals supported the ICEEM07 selected papers publication after a specific peer-review process: *Environmental Engineering and Management Journal* (ISI ranked), *New Biotechnology* (ISI ranked), *International Journal of Nonlinear Sciences and Numerical Simulation* (ISI ranked), *Energy, Sustainability and Society* (Springer open access journal). Following an additional agreement reached after the conference, the Journal of Cleaner Production (ISI ranked) published the ICEEM07 Conference report and invited the authors to submit their work for peer-review and possible publication (Teodosiu et al., 2014).

The ICEEM07 event facilitated the interactions of researchers and professionals from different countries, with different backgrounds, experiences and

research directions (all of environmental concern) demonstrating thus an interest for **present** and **future** in the perspective of the sustainability dimensions.

Looking back at the previous ICEEM conferences, we hope that these events were not only the place for disseminating excellent scientific results, but also the starting points for other research cooperation or educational projects, while maintaining an internationally recognized standard for the ICEEM communications and international peer-reviewed publications. Considering this frame, ICEEM07 represented a stage for preparing further international events and projects, as it gathered the researchers in the fields of sustainable development and environmental protection, known for their involvement in the development of novel concepts and environmental applications. The overall organization of such an international conference was a major challenge for both organizers (TUIASI and TUWIEN) and the support of

the conference secretariats from both universities is highly acknowledged.

We hope very much to continue this tradition and we are looking forward to receive new contributions for the 8th edition of the **International Conference on Environmental Engineering and Management, ICEEM08** which will be held between **9th and 12th of September 2015** in Iasi, Romania. This event will be organized by the Department of Environmental Engineering and Management of the Faculty of Chemical Engineering and Environmental Protection, at the **“Gheorghe Asachi” Technical University of Iasi, Romania**.

References

- Teodosiu, C., Friedl A, Urbaniec K. (2014), Conference report 7th International Conference on Environmental Engineering and Management ICEEM07, *Journal of Cleaner Production*, **67**, 291-292, <http://dx.doi.org/10.1016/j.jclepro.2013.12.015>
*** ICEEM official website: www.iceem.eu

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Carmen Teodosiu is professor in the Department of Environmental Engineering and Management, Faculty of Chemical Engineering and Environmental Protection of the „Gheorghe Asachi” Technical University of Iasi, Romania (TUIasi). She obtained her chemical engineering degree at TU Iasi (1981), post-graduate diploma with distinction (1995) and *Master of Science* with distinction in Environmental Science & Technology (1996), at the International Institute of Hydraulics and Environmental Engineering, *UNESCO-IHE* Delft, The Netherlands, and her Ph.D. in Chemical Engineering at TUIasi, in 1998. Since 2008, Prof. Teodosiu is the Vice-Rector for Research and coordinating Editor of the sections of the *Buletinul Institutului Politehnic Iasi* journal. Prof. Teodosiu’s research and teaching experience is in the fields of water and wastewater treatment processes, environmental management/integrated water resources management. Prof. Teodosiu has published more than 145 scientific papers in international peer-reviewed journals and conference proceedings, 20 books, 6 patents, 102 key note lectures/presentations in international/ national conferences and has been involved as director/ researcher in 24 international grants and 38 national grants. Prof. Carmen Teodosiu is PhD supervisor in the fields of *Chemical Engineering* (since 2005) and *Environmental Engineering* (since 2009). In 2011 she received the *Doctor honoris causa* award from the Pannonia University, Hungary. Prof. Teodosiu is the initiator and president of the *International Conference on Environmental Engineering and Management (ICEEM)* with 7 editions organized so far.



Anton Friedl is professor in the Institute of Chemical Engineering at the Vienna University of Technology, Austria (TU-Wien). He obtained his chemical engineering degree at TU Wien (1984) and his PhD in Chemical Engineering at TU Wien, in 1990. Prof. Friedl got PostDoc experience at Massey University - Biotechnology and Environmental Department, in Palmerston North New Zealand (1989-1990) and University of California Berkeley, USA (1991). Industrial experience was acquired in the field of power plant engineering (Austrian Energy & Environment, 1996-1999). Since 2014, Prof. Friedl is the Director of the Institute of Chemical Engineering, Vienna University of Technology.

Prof. Friedl’s research and teaching experience is in the fields of Thermal Process Engineering, Separation Science and Process Simulation.

Prof. Friedl has published more than 200 scientific papers in international peer-reviewed journals and conference proceedings, 6 patents, 80 key note lectures/presentations in international/national conferences.



Maria Gavrilescu is professor at the Department of Environmental Engineering and Management, Faculty of Chemical Engineering and Environmental Protection - *Gheorghe Asachi* Technical University of Iasi, Romania. Her research interest includes: chemical and biological process engineering, biotechnology/ environmental biotechnology, environmental risk assessment and management, ecological risks, industrial safety, integrated pollution prevention and control, sustainable industrial production, eco-design, eco-technologies, cleaner production, environmental evaluations. She is author or co-author of more than 450 titles, including 44 books and chapters, 135 papers published in ISI ranked journals and ISI Proceedings (6) etc. Prof. Gavrilescu is founder of the *National Society of Environmental Science and Engineering*, being also member of: the Editorial Advisory Board of six international journals; Romanian Society of Chemistry; European Federation of Biotechnology-member of *Experts Board* of the Environmental Biotechnology. Professor Gavrilescu is PhD Supervisor in *Chemical Engineering* (since 2002) and *Environmental Engineering* (since 2009). She is involved as project manager/member in research grants: research themes with industrial companies, national grants, international grants (30), original technologies (8). The scientific visibility is illustrated by *over 1800 citations* (WOS h-index 20, Scopus h-index 21).

