



“Gheorghe Asachi” Technical University of Iasi, Romania



EDITORIAL

A SPECIAL ISSUE DEDICATED TO

THE 8th INTERNATIONAL CONFERENCE ON ENVIRONMENTAL ENGINEERING AND MANAGEMENT, *ICEEM08*

9- 12 September 2015, Iasi, Romania

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, activating in the fields of environmental engineering and management and to support knowledge exchange and dissemination of specific research and educational programmes.

Department of Environmental Engineering and Management from “Gheorghe Asachi” Technical University of Iasi is leading at national level the *Environmental Engineering* programmes since its foundation in 1990. In 2011, the programmes (BSc, MSc, PhD and post-docs) in this domain were evaluated and ranked on the 1st place in Romania, considering their performances in education, research activities and national/international visibility.

The **ICEEM conferences** have grown in importance, quality and number of participants in time, the first conferences being held in Iasi, Romania in: **2002 (ICEEM01)**, **2004 (ICEEM02)**, **2006 (ICEEM03)**, **2007 (ICEEM04)**, while in **2009, ICEEM05** was organized in Tulcea and Danube Delta, Romania (www.iceem.ro). From **2011**, these international conferences have been organized **outside Romania** through the direct collaboration of Department of Environmental Engineering and Management from “Gheorghe Asachi” Technical University of Iasi with two prestigious European universities as follows:

- **ICEEM06** organized in Hungary (Lake Ballaton) together with *University of Pannonia Veszprém*,

- **ICEEM07** organized in Austria (Vienna) together with Vienna University of Technology (*Thermal Process Engineering and Simulation Research Division*).

The 8th edition of ICEEM returned in Romania in 2015 and it was held on September 9-12, 2015 in Iasi, a city of a great cultural tradition. ICEEM08 edition was organized traditionally, by the Department of Environmental Engineering and Management of “Gheorghe Asachi” Technical University of Iasi (TUIASI), Romania, having as official 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 president was Prof. Dr., dr.h.c. Carmen Teodosiu (Romania), ICEEM08 being supported by the International Scientific Committee (ISC) whose 32 members came from 12 countries. The ICEEM08 conference format preserved the specificity of previous conferences, such as: invitation of well-known scientific personalities for the plenary opening or key-note lectures, peer-review process of the extended abstracts by the International Scientific Committee members and other well-known specialists, selection of the most important contributions for presentation in the conference oral or poster sessions, post-publication of selected/invited full papers after a peer review process organized according to each supporting journal specific requirements.

The conference major sessions reflect the international priorities that require focus on research and

innovation and interdisciplinary international and national collaboration. Considering also the needs for a knowledge-based society, a special attention was given to the high level applications of the concepts, models and to the contribution to sustainable development solutions. Thus, the main themes covered by ICEEM08 were:

- *Environmental pollution and monitoring*
- *Water supply and wastewater treatment and management*
- *Environmental biotechnology*
- *Air pollution, prevention and treatment*
- *Environmental management and sustainability assessments*
- *Sustainable production and consumption*
- *Waste management for resources and energy recovery*
- *Environmental education, Workshops and Exhibitions.*

ICEEM08 conference received more than **268** extended abstracts, in response to the ICEEM08 1st Call for Papers, all of these manuscripts being reviewed by the ICEEM08 International Scientific Committee.

Finally, **209** participants' contributions were accepted at ICEEM08, thus 22 countries being represented (Algeria, Austria, France, Greece, Hungary, Italy, Israel, Iran, Lithuania, Malaysia, Mexico, The Netherlands, Pakistan, Poland, Portugal, Republic of Moldova, Romania, Serbia, Spain, Switzerland, Sweden, United Kingdom). This large number of participants was a premiere for the ICEEM Conference series.

The majority of participants are top specialists in the environmental field, coming from a total of 51 Universities (28 international), 12 RD&I Institutes (1 international), 2 NGO's and 6 industry representatives (2 international). The accepted contributions were published by ECOZONE Publishing House (OAIMDD) in the ICEEM08 Conference Abstracts Book that was made available to each conference participant on a flash disk in the conference folder.

From the total number of accepted contributions there were **8** keynote plenary conferences, **12** oral parallel sessions and **10** poster sessions, all grouped under the conference major themes.

The ICEEM08 opening ceremony was held on September 10, 2015 in "Ilie Matei" Amphitheatre of the Faculty of Chemical Engineering and Environmental Protection and was chaired by: **Prof. dr. Carmen Teodosiu** (Vice-Rector with research at TUIASI, ICEEM08 conference president), **Prof. dr. Dan Cascaval** (Dean of the Faculty of Chemical Engineering and Environmental Protection), **Acad. Prof. dr. Bogdan C. Simionescu** (Vice-President of the Romanian Academy), **Prof. dr. Philippe Corvini** (Chair of the Environmental Section of the European Federation of Biotechnology) and **Dr. Francisc Toba** (Councilor, Ministry of Environment, Waters and Forests).

The plenary sections included **8 keynote conferences** as follows:

- *Sustainable Production and Consumption: Sustainability Issues in the Energy-Food-Water Nexus*, presented by **Prof. dr. Adisa Azapagic**, University of Manchester, United Kingdom;
- *Water Reclamation in WWTP as Source of Industrial Process Water: An LCA Case Study*, presented by **Prof. dr. Francisc Castells**, Universita Rovira i Virgili, Spain;
- *25 years of Extended Producer Responsibility – What Is It Today and Where Are We Heading?*, presented by **Prof. dr. Thomas Thomas Lindqvist**, IIIIEE, Lund University, Sweden;
- *Minotaurus – An European Initiative on the Application of Environmental Biotechnology for Groundwater and Sewage Treatment* presented by **Prof. dr. Philippe Corvini**, University of Applied Sciences and Arts, Northwestern, Switzerland;
- *Designing an Integrated Technological Platform to Recover Organic Waste and Obtain Multiple Bioproducts – What Could Be Learned from the Concept of "Circular Economy"* presented by **Prof. dr. Massimo Monteleone**, University of Foggia, Italy;
- *Production of Hydrogen Using Solar Energy*, presented by **Prof. dr. Joop Schoonman**, Delft University of Technology, The Netherlands;
- *Lignocellulose Biorefineries – Production of Materials, Chemicals and Energy*, presented by **Prof. dr. Anton Friedl**, Vienna University of Technology, Austria;
- *Advances in the Synthesis of Nanocrystalline Perovskites, and their Properties in Heterogeneous Catalytic Processes*, presented by **Prof. dr. Sébastien Royer**, Université Poitiers, France.

Current research in the areas of the major themes of **ICEEM08** combines techniques and processes that consider the sustainable development concept and instruments applied for production and consumption systems so as to decrease their impacts 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. The parallel oral and poster sessions were chaired by the members of the International Scientific Committee as well as by other recognized professionals.

The authors presenting their contributions within ICEEM08 sessions were invited (after the conference) to submit full papers for publication, based on the recommendations of the conference organizers and International Scientific Committee. The following international journals supported the ICEEM08 selected papers publication after specific peer-review processes: *Process Safety and Environmental Protection* (Elsevier, ISI ranked), *New Biotechnology* (Elsevier, ISI ranked), *Environmental Engineering and Management Journal* (ISI ranked), *Sustainable Production and Consumption* (Elsevier).

The ICEEM08 event facilitated the interactions of researchers and professionals from different countries, with different backgrounds, experiences and research directions with environmental background, demonstrating thus an interest for **present** and **future** in the perspective of sustainability dimensions.

The ICEEM conferences represent an important platform to disseminate excellent scientific results, but also the starting point for other research co-operation or educational projects, while maintaining the internationally recognized standards for ICEEM communications and international peer-reviewed publications. Considering this frame, ICEEM08 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 the organizers and the support of the conference secretariat is highly acknowledged.

We hope very much to continue this tradition and we are looking forward to the organization of the 9th

International Conference on Environmental Engineering and Management, ICEEM09 which will be take place between **6th and 9th of September 2017, in Bologna, Italy**. This event will be organized by the Department of Environmental Engineering and Management of “Gheorghe Asachi” Technical University of Iasi, in collaboration with *Alma Mater Studiorum* Università di Bologna, Italy and the *Environmental Biotechnology Section* of the European Federation of Biotechnology (EFB).

References

*** ICEEM official website: www.iceem.ro

Guest editors:

Professor Carmen Teodosiu, ICEEM08 President, “Gheorghe Asachi” Technical University of Iasi, Romania

Professor Maria Gavrilesu, Editor-in-Chief of EEMJ, “Gheorghe Asachi” Technical University of Iasi, Romania

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ICEEM08 conference participants, September 10, 2015



ICEEM08 Opening Ceremony, September 10, 2015



ICEEM08 Plenary speakers



ICEEM08 organizing committee and secretariate



Carmen Teodosiu is full Professor and Director of Department of Environmental Engineering and Management, *Gheorghe Asachi* Technical University of Iasi, Romania (TUIASI). She obtained her chemical engineering degree at TUIASI (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 Chemistry at TUIASI, in 1998. Between 2008-2016, Prof. Teodosiu was Vice-Rector for Research at TUIASI. Prof. Teodosiu's research and teaching experience is in the fields of water and wastewater treatment processes, environmental integrated management and sustainability assessments. Prof. Teodosiu published more than 163 scientific papers in international ISI peer-reviewed journals, conference proceedings, 22 books, 7 patents, 122 key note lectures in international/national conferences. She has been involved as director/ PI in 28 international grants&strategic projects, 82 national research grants and contracts with industry. Prof. Carmen Teodosiu is PhD supervisor in the domains of *Chemical Engineering* (since 2005) and *Environmental Engineering* (since 2009). She is a member of the Editorial Boards of 7 international peer-reviewed journals. 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 8 editions organized so far.



Maria Gavrilescu is full 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 and teaching interests include: chemical and biological process engineering, biotechnology/ environmental biotechnology, environmental risk assessment and management/ industrial safety, integrated pollution prevention and control/ sustainable industrial production/ cleaner production and waste management, eco-innovation/ eco-design/ eco-technologies, environmental and sustainability evaluations. Professor Gavrilescu is PhD Supervisor in *Chemical Engineering* (since 2002) and *Environmental Engineering* (since 2009). She is author/co-author of more than 650 titles, including 46 books/chapters, 147 papers published in ISI ranked journals, ISI Proceedings (12), other peer-reviewed journals and conference proceedings (over 140), 12 patents, keynotes, oral presentations, posters etc. Prof. Gavrilescu coordinated or worked as researcher in over 60 national and international research projects. Also, she is a founder of the *National Society of Environmental Science and Engineering*, being also member of: Editorial Advisory Board of international journals; *Romanian Society of Chemistry*; *European Federation of Biotechnology* (member of Experts Board of *Environmental Biotechnology* Section) etc. The scientific visibility is illustrated by over 2500 citations (h-index 24) (WOS or Scopus).



Antonio Marzocchella is full Professor of Biotechnological and Chemical Plants at the Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale, Università degli Studi di Napoli *Federico II* (UNINA) Italy. He graduated in Chemical Engineering at the UNINA and got the PhD in Chemical Engineering in 1992. He has been member of: Administration Board of UNINA (1988–2000); Presidio di Qualità di Ateneo at UNINA (2016-now); Scientific Committee of International Conferences; Editorial Board of *International Journal of Nonlinear Science & Numerical Simulations*; Editorial Advisory Board of *Environmental Engineering and Management Journal*. The research interests include: development of biofilm reactors; bioconversions by means of bacteria free and/or immobilized under aerobic/anaerobic conditions; bioremediation of industrial wastewaters; dynamics of three-phase bioreactors; bioadsorption; biofuels production by biotechnological routes; biofixation of carbon dioxide; intensive cultures of autotrophic microorganisms; biobased products from autotrophic microorganisms; hydrodynamics of gas-solids, gas-liquid, gas-liquid-solids systems. Results of the scientific activity are reported in about 150 contributions, including over 100 peer-reviewed journals, conference proceedings and book chapters, 4 patents. He has been scientific responsible of research groups involved in: international (HORIZON2020, EUROTRANSBIO) and national (CNR, PRIN, PON-POr) projects; investigations committed by industrial patterns.