



“Gheorghe Asachi” Technical University of Iasi, Romania



EDITORIAL

A SPECIAL ISSUE DEDICATED TO THE 9th INTERNATIONAL CONFERENCE ON ENVIRONMENTAL ENGINEERING AND MANAGEMENT, *ICEEM09*, 2017

September 6-9, 2017, Bologna, Italy

The *International Conference on Environmental Engineering and Management (ICEEM)* was initiated and organized every two 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 innovation, and educational programmes.

Department of Environmental Engineering and Management from *Gheorghe Asachi* Technical University of Iasi support the *Environmental Engineering* programmes that are leaders at national level since their 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)**, **2015 (ICEEM08)** 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 prestigious European universities as follows:

- **ICEEM06** organized in Hungary (Lake Balaton) 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 **9th edition of ICEEM** was organized in collaboration with the prestigious European university, *Alma Mater Studiorum* University of Bologna (UNIBO), Italy and was held on September 6-9, 2017 in Bologna, a city of a great cultural tradition.

Founded in 1088, the *Alma Mater Studiorum* – Università di Bologna is known as the oldest university of the western world. Nowadays, it still remains one of the most important institutions of higher education across Europe and the second largest university in Italy with 11 Schools, 32 Departments and more than 84,000 students. *Alma Mater Studiorum* Università di Bologna is a multicampus university based in Bologna, Cesena, Forlì, Ravenna, and Rimini. According to National indicators, the University of Bologna is the most internationalized among the Italian Universities and among the first institutions in Europe for the number of bilateral agreements and EU funded educational projects.

ICEEM09 edition was organized by the Department of Environmental Engineering and Management of the *Gheorghe Asachi* Technical University of Iasi (TUIASI), Romania and *Alma Mater Studiorum* – Università di Bologna, Italy under the aegis of *Romanian Academy*, having as official partners: a) *Environmental Biotechnology Section* of

the *European Federation of Biotechnology* (EFB), b) *Academic Organization for Environmental Engineering and Sustainable Development* (Romania), c) *InterMEDIU Information, Consultancy&ODL Centre* (Romania).

The conference presidents were: **Prof.Dr., dr.h.c. Carmen Teodosiu** (Romania), **Prof.Dr., dr.h.c. Fabio Fava** (Italy) and **Prof.Dr., dr.h.c. Philippe Corvini** (Switzerland), *ICEEM09* being supported by the International Scientific Committee (ISC) whose 47 members came from 18 countries. The *ICEEM09* 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, 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 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 implementation of concepts, models and to the contributions to sustainable development. Thus, there were six major themes covered by *ICEEM09* as follows:

- *Environmental biotechnology and circular economy*;
- *Water and wastewater cycles: technologies, recycling and valorization*;
- *Sustainable waste management and exploitation for chemicals, materials and energy recovery*;
- *Sustainability assessments and eco-innovation*;
- *Novel materials for environmental and energy applications*;
- *Monitoring and modeling of environmental pollution*.

ICEEM09 conference had 215 participants, registered for 134 oral communications and 104 posters, grouped in 33 sessions. Participants at *ICEEM09* came from 26 countries of 3 continents, providing a global character to this edition, countries such as: Algeria, Austria, Belgium, Denmark, Ecuador, France, Germany, Greece, Hungary, Iran, Italy, Lithuania, Malaysia, Morocco, Mexico, The Netherlands, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia, Spain, Switzerland, Turkey, United Kingdom, being represented. This large number of participants was similar to that of the previous *ICEEM* conference (*ICEEM08*).

The majority of participants are top specialists in the environmental field, coming from Universities, RD&I Institutes, NGO's and industry representatives. The accepted contributions were published by ECOZONE Publishing House (OAIMDD) in the *ICEEM09* Conference Abstracts Book that was made

available to each conference participant on a flash disk in the conference folder.

The *ICEEM09* opening ceremony was held on September 6, 2017 in Complesso Belmeloro of *Alma Mater Studiorum* Università di Bologna and was chaired by: **Prof.Dr. Antonino Rotolo**, (Vice-Rector for Research at UNIBO), **Prof.Dr. Carmen Teodosiu** (*ICEEM09* conference chairperson), **Prof.Dr. Phillippe Corvini** (*ICEEM09* conference chairperson and Chair of the *Environmental Section* of the *European Federation of Biotechnology*) and **Prof.Dr. Lorenzo Bertin** (UNIBO).

Three plenary and six keynote conferences, distributed over three days were held by renowned scientific personalities, covering the most important topics in environmental sciences and engineering as follows:

- **Prof.Dr. Adisa Azapagic**, The University of Manchester, United Kingdom,
- **Prof.Dr. Willy Verstraete**, University of Ghent, Belgium,
- **Prof.Dr. Nicolas Kalogerakis**, Technical University of Crete, Greece,
- **Prof.Dr. Nathalie Gontard**, NIAR, France,
- **Prof.Dr. Francesco Fatone**, University Politecnica delle Marche, Italy,
- **Prof.Dr. Anton Friedl**, Vienna University of Technology, Austria,
- **Prof.Dr. Almudena Hospido**, University of Santiago di Compostela, Spain,
- **Prof.Dr. Dana Perniu**, Transilvania University of Brasov, Romania and
- **Prof.Dr. Thomas Ternes**, Federal Institute of Hydrology, Koblenz, Germany.

The participants' presentations within the sections of the *ICEEM09* major themes consider research at laboratory, pilot and full scale, novel materials and processes applied for various environmental problems, as well as sustainability instruments applied for production and consumption systems so as to decrease their environmental impacts. 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.

On the last conference day, September 9, 2017, several events were organized as follows: 1) New Horizon2020 opportunities and EU successful projects presentations; 2) Workshop of International Association of Mediterranean Agro-industrial Wastes (IAMAW); 3) EIT-RM event; 4) *ICEEM09* Closing Ceremony.

The involvement and support of the *European Institute of Innovation and Technology - Raw Materials (EIT-RM)* for the organization of a special session and for supporting the best PhD EIT-RM related presentation award is also important to mention.

The authors presenting their work within **ICEEM09** 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 **ICEEM09** 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, ISI indexed).

The **ICEEM09** event facilitated the interactions/networking 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 cooperation or educational projects, while maintaining the internationally recognized standards for ICEEM communications and international peer-reviewed publications. Considering this frame, **ICEEM09** 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 is a major challenge and the support of the two local scientific and organizing committees (Italian and Romanian) is highly acknowledged.

We hope very much to continue this tradition and we are looking forward to the organization of the anniversary edition: **10th International Conference on Environmental Engineering and Management, ICEEM10** which will take place between **18th and 21st of September 2017, in Iasi, Romania**. This event will be organized by the Department of Environmental Engineering and Management of *Gheorghe Asachi* Technical University of Iasi, in collaboration with the *Environmental Biotechnology Section* of the *European Federation of Biotechnology* (EFB), under the aegis of the *Romanian Academy*.

References

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

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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 PhD in Chemistry at TUIASI, in 1998. Prof. Teodosiu was Vice-Rector for Research (2008-2016) and Director of the Doctoral Schools at TUIASI (2008-2012). 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 182 scientific papers in international ISI and peer-reviewed journals, conference proceedings, 25 books, 7 patents, 145 key note lectures in international/ national conferences. She has been involved as director/ PI in 31 international grants & strategic projects, 143 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 9 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 9 editions organized so far.



Fabio Fava is Full Professor of Industrial & Environmental Biotechnology at the School of Engineering of the University of Bologna (Italy) since 2005. He has about 170 papers on peer-reviewed international journals in the fields of Biowaste Biorefinery, Blue Biotechnology and Bioeconomy, where he coordinated the FP7 projects NAMASTE and BIOCLEAN and participated in the FP7 projects ECOBIOCAP, ROUTES, MINOTAURUS, WATER4CROPS, ULIXES, KILL SPILL and BIORICE. He is the current Italian Representative at the European Commission (Brussels) in the: a) Horizon2020 Programming Committee *Food Security, Sustainable Agriculture and Forestry, Marine and Maritime and Inland Water Research, and the Bioeconomy* (SC2), b) States Representatives Group of the *Public Private Partnership BioBased Industry* (BBI JU), and c) EuroMed GSOs BLUEMED WG. He is also the Italian Representative in the Working Party on *Biotechnology, Nanotechnology and Converging Technologies* at OECD (Paris). Finally, he is the scientific coordinator of the International Exhibition on Green and Circular Economy ECOMONDO yearly held in Rimini (Italy).



Maria Gavrilesu is full Professor at the Department of Environmental Engineering and Management, *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, sustainable industrial production/cleaner production, waste management, environmental and sustainability evaluations, eco-innovation/ eco-design/ eco-technologies, circular economy. Professor Gavrilesu is PhD Supervisor in *Chemical Engineering* (since 2002) and *Environmental Engineering* (since 2009). She is author/co-author of more than 650 titles, including over 50 books/chapters, over 200 papers published in ISI ranked journals, ISI Proceedings, over 250 papers in peer-reviewed journals and conference proceedings, 12 patents, keynotes, oral presentations, posters etc. Prof. Gavrilesu coordinated over 60 national and international research projects. Also, she is member of: Editorial Advisory Board of international journals; *Romanian Society of Chemistry*; *European Federation of Biotechnology* (member of Experts Board of *Environmental Biotechnology* Section), independent expert of European Commission etc. The scientific visibility is illustrated by over 3500 citations (h-index 29 in WOS, 30 in Scopus). Prof. Gavrilesu is Editor-in-chief of *Environmental Engineering and Management Journal* (ISI ranked), *Procedia Environmental Science, Engineering and Management* (Scopus), Co-editor of *Annals of Academy of Romanian Scientists*.