

Report on the 44th International Symposium: *Actual Tasks on Agricultural Engineering*, 23rd-26th February 2016, Opatija, Croatia

Doc. Dr. Sc. Igor Kovačev, Convenor of the Symposium
Prof. Daniele De Wrachien, Past President of EurAgEng

The 44th International Symposium *Actual Tasks on Agricultural Engineering* was held on 23rd-26th February 2016 in Grand Hotel Adriatic Opatija, Republic of Croatia. The principle Organiser, Agricultural Engineering Department, Faculty of Agriculture, University of Zagreb was supported by the following frameworks: Department of Agricultural Engineering, Faculty of Agriculture, University J.J. Strossmayer, Osijek, Department of Bio-systems Engineering, Faculty of Agriculture and Lifesciences, University of Maribor (Slovenia), Agricultural Institute of Slovenia, National institute for agricultural machinery - INMA Bucharest (Romania) and Croatian Agricultural Engineering Society. In addition, CIGR, EurAgEng and AAEE bestowed their support and endorsement on the Event.

This year 73 participants from 8 countries attended the Symposium. It consisted of an Opening Session and six Topic Sessions covering all the broad subject-areas that fall under the scope of Agricultural Engineering. At the Opening Session Prof. Dr. Daniele De Wrachien, former president of the EurAgEng, in his speech highlighted briefly the main historical steps of the symposium emphasising its significant role as a gathering event for scientists, engineers and dealers from southeast European countries and brought the greetings of EurAgEng and CIGR. The Convenor, Doc. Dr. Sc. Igor Kovačev ended the Opening Session with the greetings of the Croatian Society of Agricultural Engineering to the audience.

A number of lectures followed, among which are worth mentioning: *Fluid dynamics of sprinkler spray flow: classic and quantum trajectories* presented by Prof. Dr. Daniele De Wrachien from Italy, *Climate adaptive land reclamation and improvement systems- an integrated approach of current challenges in agriculture* given by Prof. Dr. Rares Halbac-Cotoara-Zamfir from Romania, *Stress and strains distribution in the frame of agricultural cultivators using finite element method* presented by Prof. Dr. Sorin Stephan Biris from Romania, *Finite element model for simulating mechanical behaviour of biomass residues* featured by PhD student Goran Mikulandric from Belgium, *Use of digestate in the potato growing technology* performed by Dr. Sc. Jaroslav Cepl from Czech Republic, *Non-traditional energy plant properties and qualitative indicators* delivered by Prof. Dr. Algirdas Jasinskas from Lithuania, *Decrease of ecological footprint in greenhouse by replacing the conventional fuels with renewable ones* delivered by Prof. Dr. Mira Lakota, from Slovenia, *Spectro-radiometrical analysis of plastic nets for greenhouse shading* presented by Prof. Dr. Pietro Picuno from Italy, *Experimental models of underground temperature for decision making in wine cellar design* presented by Doc. Dr. Sc. Stefano Benni from Italy, *LCA-tool to assess sustainability in agricultural engineering*, presented by Prof. Dr. Andreas Gronauer from Austria.

This year meeting of CIGR WG Rural Development and Preservation



of Cultural Heritage was organized during symposium and we have some interesting presentation like *Green energy and rural development-role of high education* delivered by Prof. Dr. Milan Martinov from Serbia *Machinery induced compaction of agricultural soil and mitigation strategies in Danube region* presented by Dr. Sc. Gerhard Moitzi from Austria and *Biomass valorisation for energy uses and Central European Initiative instruments to promote regional cooperation* by project manager Peter Canciani from Italy. In the Topic Sessions, each starting with a review report, 52 papers were discussed, in oral presentation. At the Closing Session the Convenor emphasised the role of EurAgEng and CIGR in the ecologically sustainable development of agriculture and in the preservation of the rural cultural heritage with in the East-European countries.

Participants were given electronic copies of the Proceedings consisting in volumes of 581 pages, containing 52 papers all peer reviewed. Papers from the Proceedings have been indexed in Thomson Reuters (The Conference Proceedings Citation Index, part of *Web of Science*[®] database) since 1997.

Maziva Zagreb d.d.-INA group (national petrol company) presented its results of field testing latest palette of synthetic and bio-degradable oils in presentation *Biodegradable lubricants for agricultural machinery* delivered by BSc Eng Tonca Caleta Prolic.

Downloadable electronic version of proceedings of the 44th symposium is available at symposium's web site <http://atae.agr.hr/proceedings.htm> starting on 30th of March 2016. Information regarding the 45th Symposium in the year 2017 will soon be available at the web site: <http://atae.agr.hr>