

REPORT

1st IWA Polish Chapter Young Water Professionals Conference Cracow, Poland, 12 - 13 September 2017

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The 1st IWA Polish Chapter Young Water Professionals Conference was held on 11-13, September 2017, at the Department of the Environmental Engineering of the Cracow University of Technology. It was the second IWA YWP conference in Poland but for the first time the event of such scale was organized by the Polish Chapter of the IWA YWP, only. The Conference, originally planned as a local event, quickly attracted increasing attention from all over the world and eventually became an international affair. Guests from Europe (Hungary, Czech Republic, Germany, Ukraine), other parts of the world (China, India, Japan, Thailand, Yemen, Iran) and of course from Poland could once again exchange their experience, learn and discuss current research trends and a broad spectrum of emerging topics relevant to the field of environmental engineering. The event was held in Cracow, a former Polish capital and one of the most beautiful and diverse cities in Europe. The city itself is located on the bank of Vistula river, and for more than a 1000 years was a political, trade, cultural and academic center of Poland. For all these years, different styles and trends have shaped the city to its present look and marked it with numerous historical landmarks and sightseeing attractions e.g. the Wawel Castle – the seat of the Polish kings, the biggest medieval market square with its highlights: The Cracow Cloth Hall (Sukiennice) dated back to the 13th century and the 14th century Saint Mary's Church, located at the edge of the square, and many more examples of city's rich architectural and cultural heritage. The Cracow Old Town was listed as the UNESCO World Heritage Site in 1978.

This time the conference focused on three main areas: Water, Wastewater and Energy in smart cities. About 100 conference participants delivered more than 40 inspiring presentations and 40 posters, divided into several problem sessions. The scope of the prepared materials was enormous, ranging from very detailed studies of specific cases to the broad exploration of a multidisciplinary problems. All of this would not be possible without the excellent performance of the local Organizing Committee (http://iwa-ywp.pl/?page_id=1511) led by

D.Sc. M. Cimochowicz–Rybicka (Department of the Environmental Engineering, Cracow University of Technology) and Dr J. Drewnowski (Gdańsk University of Technology), supported by the volunteers from other Polish universities; the equally outstanding work of the Scientific Committee led by D.Sc. S. M. Rybicki (Department of the Environmental Engineering, Cracow University of Technology) and co-led by the Prof. J. Mąkinia (Gdańsk University of Technology) has to be acknowledged.



**100 Young Water Professionals
IWA 1st Polish Chapter YWPs Conference, Cracow, Poland**

The main idea of the conference was to initiate an exchange of knowledge and experience between three intersecting groups: The Young Water Professionals, The Senior Water Professionals and the Industry Representatives. This idea was achieved by development of a few types of meeting grounds.

The first type was the scientific sessions that presented current research trends investigated by the Young Water Professionals. The scientific community selected 40 platform and 40 poster presentations. The platform presentations took place during problem sessions divided into three categories: Water, Wastewater and Energy. The research works presented in the Water section focused mainly on utilization of modern simulation or modeling tools for water systems management, threats evaluation and construction of early warning systems. The theoretical works were supplemented by the case studies on such topics as: sources of humic substances in water, the fate of heavy metals in streams and retention tanks, the impact of drought on salinity levels and others. The Wastewater section focused on further improvements

of different methods of ammonia removal, sludge disintegration, biogas production, and the presence of hydrogen sulphide in sewage systems. The Energy section focused on optimization of energy usage in wastes or wastewater treatment processes, searching for "energy neutral" facilities and on modelling tools to lower the testing costs of potential improvements. All presentations met with the warm and very positive reception, and sparked some discussions that was continued during the coffee breaks. Also the authors of the posters exhibited many interesting materials that resulted in following discussions during the poster session.

The second meeting ground was series of workshops during the first two days of the conference. During the workshops young scientists had an opportunity to enhance their knowledge about vital areas of contemporary research practices and ways to successfully finance their projects. On the first day, after the welcoming drink ceremony, participants could attend for workshop "Successful proposals for individual and project fundraising". Workshop was divided into 3 main topics: "*Where to get job/grant - Funding possibilities examples of local and international scholar, job.*" – presented by Jędrzej Byłka (Poznan University of Technology, Poland), "*Why is important to get funding? - How to convince your boss.*" - presented by Vince Bakos (Budapest University of Technology and Economics, Hungary) and "*What constitutes a winning proposal?*" presented by Jakub Drewnowski (Gdansk University of Technology, Poland). On the second day, at the end of the official opening ceremony, the technical workshop was led by the WTW a Xylem Brand company.

Workshops and a development of a mutual ground for the scientific community were the first two conference goals. The third and equally important one was creation of a meeting ground for both the young scientists and the industry representatives. This idea also turned out to be a great success. The interest and involvement of many different companies from the environmental industry were enormous. The following companies have decided to participate in the conference: CH2M, MPWiK Kraków, WTW a xylem brand, Sądeckie Wodociągi, Diehl Metering, POL-EKO-APARATURA, Krakowski Holding Komunalny, Envirotech and Nivus. The industry representatives readily took the opportunity to present their companies during the opening ceremony. Afterwards, they decided to participate in the problem sessions of their interest and take part in numerous group discussions during the coffee breaks. Some of the companies found it to be an excellent opportunity for setting up recruitment desks.



Conference opening ceremony



Poster gallery moments before poster session

The final conference day brought the last platform presentations' session and the closing ceremony during which the awards for the best platform and poster presentation were presented. The award for the best platform presentation went to Prof. Mahesh Ganesapillai for the work on "*Modeling the process kinetics during fixed-bed column adsorption of nutrients from*

urine by fly ash" (co-authors: Simha P., Deb Ch., Thawani B., VIT University, India) whose outstanding work outshined all other competitors. The award for the best poster presentation went to Phd student Paula Piechna for the work on „*Long-term operation of IFAS-MBBR wastewater treatment plant – the activity of activated sludge and biofilm*” (co-authors: Żubrowska-Sudoł M., Przysiecka Ł., Warsaw University of Technology, Poland)



Congratulations to the author of the best platform presentation



Congratulations to the author of the best poster presentation

After the official closing ceremony, the participants of the conference took part in the technical tour to the Cracow Incineration Plant. The plant, launched in the middle of the 2016, has been the newest addition to the city's waste management system. Thanks to the courtesy of KHK (Cracow Municipal Holding) and the Cracow's MPWiK (Cracow's Waterworks) the tour was guided by the MPWiK director Dr eng. Tadeusz Żaba. The 20 participants of the tour could witness operation of the most advanced facility in the region. The plant can process up to 700 tons of waste each day. Due to public concerns the demands placed on the exhaust purification system were higher than the standards in force. To meet the public demand and ensure inhabitants that the plant operates according to the design criteria the facility publishes on-line, the real-time composition of exhaust gases. ,



The technical tour to the Cracow Incineration Plant and our guide Dr Eng. Tadeusz Żaba

However, scientific discussions and the technical tour were not the only items in the conference program. On the first day, the participants had a possibility to enjoy a cultural program prepared by the local Organizing Committee; its highlight was the Underground Museum under the famous Cracow Main Market Square. The participants rediscovered the forgotten Cracow, early medieval streets and buildings buried under centuries of the city's history.



The cultural tour over- and underground the city center.

After the museum tour, the official part of the first day had been over and the unofficial part begun. The participants were free to discover on their own Cracow by night or to continue the started discussions in less formal circumstances.

The conference was an indisputable success, a perfect place to find potential new collaborators or to share experiences and ideas. The opportunity for open talks between senior and young water professionals and the industry representatives was also a strong point of this event. Though, as the old saying goes "A picture is worth a thousand words"...

day 1: <https://photos.app.goo.gl/8hFTkqkb8MoVfxSI3>

day 2: <https://photos.app.goo.gl/Jj8uYTtBhrWhDA523>

Once the conference comes to the end, the groundwork and planning for the next one begins. The future offers new opportunities, so do not hesitate and follow our website <http://iwa-ywp.pl> for more information about current and future events.

