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## IWWG News and Views

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*In this issue: Greeting message from the new IWWG President; Report on the IWWG Art-Gallery exhibition “Waste reinvented”; 30th Anniversary of the International Waste Management and Landfill Symposium – Sardinia 2017, and details on future IWWG events.*

### Greeting message from the new IWWG President

In the Department of Environmental Engineering at Hokkaido University, we have nine laboratories of e.g. water, air, noise, energy, and solid waste, and 50 senior students choose a laboratory for their graduation thesis research at the beginning of the spring semester. Unfortunately, water related labs were very popular among students because research on water and waste water looks “cool”: they use bio- or nano- technologies and very expensive analytical instruments for the detection of new micro pollutants. So how can we tell “Solid Waste Management is a wonderful research area?” My conclusion is: there are a lot of advantages for researchers and professors as follows.

Firstly, it is very easy to find research topics due to limitless number of combination between solid waste and treatment technologies. Water is just “water”, but solid waste can be defined by many ways: material (plastics, PET, etc.), sources (household, agriculture, etc.), product (WEEE, packages, etc.), property (organics, inorganics, etc.). Depending on waste characteristics, various treatment is possible even for identical waste: thermal (incineration, pyrolysis, etc.), biological (Anaerobic Digestion, composting, etc.), mechanical (shredding, separation, etc.), and combined system of these three groups. As a result, there are almost infinite possibilities for research topics. Substance or chemicals contained in solid waste increase the area of topics further.

Secondly, there are incredible variety in solid waste by country, area, and municipality. Waste characteristic is largely depended on economy, society, culture, and regional waste management policies, so every area has its unique solid waste. Due to variable input to the system, performance of waste treatment/disposal process is also variable. When 400 solid waste incinerators were surveyed several years ago, I found that the energy and material balance was never constant due to different input as well as operation even when the same system was used. This cannot be the case for waste water treatment system.

Thirdly, solid management is an integrated system including a variety of environmental technologies. Wastewater treatment is used in leachate from landfill and digestate from AD system. Acid gas treatment and particulate control is the main pollution control process in incinerators. Odor control is quite important in biological treatment, especially in composting. To reduce the global warming effect, energy recovery and power generation became one of the objectives in solid waste management. Therefore, solid waste management professionals will have an extensive, wide range of knowledge about environmental technologies.

In reality, however, only a few people can enjoy these advantages. Researchers have their own specific area of research, and they must publish papers in scientific journals. To make a paper independent and self-contained, studies are usually conducted under controlled boundary conditions. In order to write another paper, simply the material, methodology, condition, etc. are changed. Therefore it is natural to stick to a narrow, specific research area because the number of publication is nowadays one of the most critical issues for getting a better position. In consequence, we do have many experts in specific (narrow) research areas, but only a few who know about the entire solid waste management system, which is in need by society. I personally believe that extending researchers' interest is really important in order to contribute to the developments in the real-world. For example, if you visit sessions during scientific conferences which are out of your field, you may discover another side and view-point in waste management, define your individual role in the entire WM system, and may be able to create or extend your research into various directions.

In January 2017, I started as the first IWWG President coming from Asia. Some years ago I have developed the Asian Regional Branch (IWWG-ARB) together with Prof. He, China, and Prof. Kim, Korea. Among citizens from these three countries, Japanese are renowned for their poor English. While today's young researchers have good skill of English, our generation always struggled in speaking, listening, and writing. Such typical Japanese is now the president of IWWG, this fact shows that IWWG has a world-wide view without any geographical and cultural bias.

I am looking forward to meet as many IWWG members as possible during our future events, and I do hope that all our members enjoy the benefits from our common activities.



Toshihiko Matsuto, IWWG President

**IWWG ART Gallery at CRETE 2016: “WASTE – reinvented” exhibition**

On the 26th of September 2016, the IWWG Art Gallery opened its doors to the public with “Waste – reinvented”, an exhibition of waste to art, design, fashion and other creative projects.

The Sailing Café’ in the Venician Harbour of Chania (Crete), offered the perfect, and most beautiful, setting for an original display of works from a number of international exhibitors.

This was the first real exhibition hosted by the IWWG Art Gallery and it was made possible by Professor Gidarakos of the Technical University of Crete (TUC) where the 5th International Confer-

ence on Industrial and Hazardous Waste ran in parallel with the event.

One of the focal points of the conference was plastic pollution in the ocean, hence the opening session address by keynote speaker Stefanie Werner of the Federal Environmental Agency (Germany), who talked about strategies to combat marine litter.

“Waste-reinvented” echoed and supported this theme particularly with educational material from the “Out to Sea” exhibition of the Museum for Design in Zurich, the “Ocean Child” project and their ecofriendly surf-boards, the “Lamu Hats” cultural initiative in Kenya and an unusual aquarium by Cretian artist, Yannis Markantonakis.





The exhibition was inaugurated with an official gathering of special guests invited by TUC to enjoy a presentation of the art displayed and a unique light show by the internationally recognized artist, Katrin Bethge.

Katrin used a variety of hand-carved plastic sheets, familiar objects, liquids, sand and other material skillfully maneuvered under an overhead projector, to transport the audience into a world of fantasy that resembled the ocean in all its beauty but also in all its troubles.

Passers-by stopped to admire the mesmerizing flow of images projected onto the outside wall of the Café, whilst music compiled by international performer, John Eckhardt, played in the background. A second official visit to the Gallery was organized for the conference delegates who had the pleasure of being entertained by a unique light show, as well.





The response to the exhibition was very positive and much enthusiasm was shared around the lovely fashion from waste by the internationally awarded French ecodesigner, Katell Gelébart and, of course, the handcrafted plastic chandelier, all the way from South Africa. The tables in the Café were adorned with plants in pretty holders made from upcycled polyester off-cuts from banners, sponsored by Uzwelo Bags, another South African initiative committed to making a difference in the environment.

To add to the range of material presented, the Gallery had invited the delegates of the Crete 2016 to participate in a photographic contest entitled "The Plastic Effect". A number of impressive images depicting the ominous infiltration of plastic in different environments were submitted. The competition was won by Bill Markakis of TUC with "One With The Sea".

We are pleased that the exhibition could be seen not only by invited guests but also by many local people and tourists who stopped at the Café. Several groups of school children visited the exhibition too and engaged in useful discussions. After two weeks the material was transferred to TUC where, on the occasion of Science Day, it attracted a further two thousand viewers.

In addition to the exhibition, the IWWG Gallery was invited to present a workshop at the conference. This consisted of an introduction of the aims and objectives of the project but also of different expressions of art from waste with, again, particular emphasis on artists who have chosen to experiment with plastic as a medium, in the desire to join the global call for solutions to the problematic.

We are highly motivated by the positive outcome of Crete, especially in terms of the very diverse audience the exhibition reached, to raise awareness about the need to reduce, reuse and recycle.



The Crete experience has confirmed to us the powerful role of art, as an educational tool for fostering environmental consciousness, but mostly the relevance of this project and the need to take it further. We are, in fact, already planning a next stop for “Waste-reinvented”, in 2017. Our vision is to create an exhibition for the city of Durban, in South Africa, with the collaboration of the University of KwaZulu-Natal and IWWG-SARB.

Beyond that, we are open to invitations!

Much appreciation and acknowledgements for the success of this exhibition go to:



- Professor E. Gidarakos and Team, Technical University of Crete ([www.tuc.gr](http://www.tuc.gr))
- Marco Ritzkowski, IWWG ([info@iwwg.eu](mailto:info@iwwg.eu))
- Yannis Markantonakis ([horos59arthania@gmail.com](mailto:horos59arthania@gmail.com); [g.p.markantonakis@gmail.com](mailto:g.p.markantonakis@gmail.com))
- The participants of the photo competition, “The Plastic Effect” Robin Oppermann, Umcebo Design ([www.umcebodesign.co.za](http://www.umcebodesign.co.za)) Herbert Menzer, Shela Hat Contest ([www.shela-hat-contest.com](http://www.shela-hat-contest.com))
- Tanya Bailey and Uzwelo Bags for the sponsorship of gifts and prizes ([www.uzwelo.co.za](http://www.uzwelo.co.za))
- John McCarthy, Ocean Child ([john@oceanchild.co.za](mailto:john@oceanchild.co.za))
- Roman Aebersold, Museum for Design, Zurich ([www.museum-gestaltung.ch](http://www.museum-gestaltung.ch))
- Katrin Bethge and John Eckhardt, Visual Basic ([www.katrinbethge.com](http://www.katrinbethge.com))
- Katell Gelébart, Artdeco Design ([www.artdecodesign.typepad.com](http://www.artdecodesign.typepad.com))
- Tabea Weber, KultLaschen ([www.kultlaschen.de](http://www.kultlaschen.de))
- Dr. Debra Reinhart, Icubed, University of Central Florida ([www.cece.ucf.edu](http://www.cece.ucf.edu))

Please follow the Gallery on [www.iwwg.eu](http://www.iwwg.eu) and FB page, “IWWG Art Gallery”.

The Gallery team,



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### SARDINIA 2017 – 16th International Waste Management and Landfill Symposium

Following the incredible success of Sardinia 2015/Arts Edition, which saw the participation of 732 delegates from more than 70 different countries from all the continents, we are proud to announce the 30th Anniversary of Sardinia Symposia, the reference forum for the international community since 1987.

Sardinia 2017 promises to be the most international and largest event of the year in the field of Waste Management and Landfilling. In line with tradition, the 16th edition of the conference will focus on advances of Waste Management science and technologies, presenting case studies and discussing key controversial subjects, sharing experiences from different countries, and assessing social and economic balances.

The conference will include oral sessions and specialized workshops for a total of eight parallel tracks, parallel events, practical design workshops, business to business meetings, discussion forums, a continuously accessible poster area and a wide exhibition space for companies working in the field of Waste Management. Prior to the start of the Symposium, training courses will be offered by IWWG.

Sardinia is unique in that almost all delegates stay within the premises of the Forte Village resort, where comfortable facilities and the frequency of meeting colleagues from all over the world, offer a great opportunity for networking. The Sardinia scientific program will be enriched by an exciting evening events calendar, including music shows, guided tours, sport activities, gala dinner and more.



### **Symposium Themes**

- Waste management policy and strategies.
- Need for appropriate and updated legislation.
- Public concern and education.
- WM assessment and decision tools.
- Producer responsibility.
- WM solutions for large cities.
- Waste transport and collection.
- Waste minimization and avoidance: large scale implementation.
- Circular economy and realistic approach.
- Final sink for residual waste.
- Link between production and recycling operators.
- Biological treatment and energy production.
- Advances in composting and anaerobic technologies.
- Biofuels from waste.
- Thermal treatment and advanced technologies .
- Sanitary landfilling.
- Technologies (pre- and in situ treatment) for landfill sustainability.
- Landfill mining.
- Long term fate of landfill structures: rethinking the design.
- Integrated wastewater and solid waste management.
- WM and climate change.
- Contaminants fate in materials recycling.
- WEEE.
- Nanotechnologies issues in WM.
- Plastics littering: biodegradable plastics is the solution.
- WM in developing and low income countries.
- Design workshops for sustainable WM.

### **Call for abstracts**

Abstracts (at least one but no more than two full pages) should be prepared using the abstract template and submitted to the Organising Secretariat no later than March 1st 2017 using the online form. For any further information or assistance regarding the submission of abstracts, please contact the Organising Secretariat on [papers@sardiniasymposium.it](mailto:papers@sardiniasymposium.it).

For further enquiries and information on registration, exhibition, accommodation, etc., please contact the Organising Secretariat on [info@eurowaste.it](mailto:info@eurowaste.it) or visit the conference webpage [www.sardiniasymposium.it](http://www.sardiniasymposium.it)

### **Future IWWG events**

If you are looking for more information on past, present and future events, organized or co-organized by the IWWG, visiting the IWWG website is the straight tip ([www.iwwg.eu/activities-events](http://www.iwwg.eu/activities-events)). Here you may find an event calendar, offering a well-structured overview on our events during the previous, present and next year, detailed information on individual conferences or symposia as well as links to the accordant conference websites. For a couple of events comprehensive reports as well as selected photographs are available from the same address.

For further information on IWWG activities, please:

- Access the IWWG Website: [www.iwwg.eu](http://www.iwwg.eu)
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