



January / February 2015

Inside

Join IDA in Rio for Water Reuse and Desalination Conference

Message from the Secretary General

Viewpoint: What Is a Brand?

Countdown to the IDA World Congress

Analyst Corner

IDA Launches Mentorship Program

New Members Added to IDA Journal Editorial Advisory Board

Report from International Water Summit

IDA Desalination Academy IROC Program Level One Certification Program

3rd R&D Committee Workshop Report

New Horizons for Desalination Conference

Plans Announced for World's First Solar-powered Desalination Plant

Young Leaders Spotlight

Singapore's National Research Foundation Accepting EWT PhD Scholarship Applications

More on "What's in Store for 2015"

Affiliate Spotlight: AEDyR Conference

Calendar of Events

Join Us in Rio de Janeiro for Water Reuse and Desalination for Latin America Development



March 23-24, 2015 | Windsor Atlantica Hotel, Rio de Janeiro, Brazil

IDA's first conference in Latin America takes place on March 23-24, 2015 in exciting Rio de Janeiro, at the beautiful Windsor Atlantica Hotel. This highly anticipated two-day conference will focus on the desalination and water reuse processes and technologies that play a vital role in the human and economic well-being of the Latin American region.

Organized in cooperation with [Asociación Latinoamericana de Desalación y Reuso de Aguas](#) (ALADYR), IDA's Latin American affiliate, the program will feature international and local speakers exchanging their experiences and showing the state-of-the-art desalination and water reuse

technologies for municipal and industrial applications. In addition to the outstanding technical program, the conference will offer delegates outstanding networking and business building opportunities with experts in the industry.

The program features four sessions:

Sessions 1 and 2 Desalination and Water Reuse – Success Stories in the World and Latin America

These sessions will show several successful case studies coming from different parts of the world bringing the practical experience of implementation of desalination plants.

[continues on page 3](#)



message

from the Secretary General

Patricia Burke



Over the past several months, IDA has been engaged in a strategic planning process that will take the Association forward through 2019. The process has been rigorous and inclusive. We conducted in-depth interviews with 22 of our Directors and obtained valuable insights from several more via detailed questionnaires. We fielded one-on-one interviews with additional industry stakeholders – highly respected individuals from various aspects of the industry who could comment knowledgeably about IDA, and surveyed our members on what constitutes IDA’s true value proposition. The process also included an analysis of the industry as well as potential competitors for membership, mindshare and financial support.

The resulting insights were inspirational, presenting an exciting view of what IDA’s future can look like. And never before has the timing for charting our future course been more important.

The landscape of our industry has changed since our previous strategic plan was completed in 2008. Increased importance of industrial applications for desalination and desalination technologies is just one important shift. Technology development continues to advance rapidly. Sustainability is a reality, not just an idea. Water reuse, which uses desalination technologies, is becoming more important than ever. Expectations about communication have changed dramatically as well. We live in a world where communication is instantaneous and the news cycle is 24/7.

This a crucial time for IDA. It is a defining moment when we can vault to a new level of leadership, or fall behind in an increasingly difficult competitive environment. We are confident that IDA is more than up to this challenge, but achieving the goals outlined in the plan will require the engagement of all our stakeholders.

For more than 40 years, IDA has been the only global association focused on desalination. We are known for our world-leading events, outstanding educational programs, publications and more. We have an extraordinary membership comprising the world’s leading authorities in our industry. All of this makes IDA the point of connection for the world’s desalination community in a way no other organization can rival.

And now we are expanding our focus on advanced water reuse, which opens new windows of opportunity for our current and prospective members. Our upcoming Water Reuse Conference, which will take place next year in Nice, France, is just one exciting new development.

The strategic planning process has made us stronger and more committed than ever to being a relevant, forward-thinking organization. Over coming months, you will see changes including a new brand identity, new website, expanded programs and more.

Each of you has contributed to what makes IDA special. We thank you and look forward to sharing with you a vibrant and rewarding future.

Join Us in Rio de Janeiro for Water Reuse and Desalination for Latin America Development

continued from page 1

Session 1 Chair: Mr. Miguel Angel Sanz, Director of Development & Innovation, Degremont, France

Session 1 Co-Chair: Prof. Ivanildo Hespanhol, Director, University of Sao Paulo; International Reference Center for Water Reuse (CIRRA), Brazil

Session 2 Chair: Mr. Renato Giani Ramos, Latin America Filtration Marketing Manager, Dow Water & Process Solutions, Brazil

Session 2 Co-Chair: Mr. Carlos Cosin, CEO, Abengoa, Spain

Speakers for Sessions 1 and 2 include:

- Mr. Marcos Koehler Asseburg, P.E., Director, Odebrecht Environmental - Aquapolo Ambiental, Brazil
- HE Shaikh Nawaf Bin Al Khalifa, Electricity and Water Authority, EWA, Bahrain
- Mr. Marco Antonio Vargas Medina, General Manager, Sedapal, Peru
- Mrs. Sue Murphy, Chief Executive Officer, Water Corporation of WA, Australia
- Ms. Gabriela Manueco Pfeiffer, Deputy Director of Engineering and Construction, Acuamed, Spain
- Mr. Han Tong Ng, Senior Deputy Director, Industry Development Department, PUB, Singapore
- Dr. Corrado Sommariva, Managing Director Middle East, ILF Consulting
- Mr. Roberto Cavalcanti Tavares, President, Compesa, Brazil

- Mr. Abraham Tenne, Head of Desalination Division, Israel's Water Authority
- Mr. Juan Pablo Mendez Vega, ProInversion, Peru

Session 3 Oil & Gas Applications

This session will focus on the various technical challenges related to water faced by oil producers globally and some of the solutions that have been successfully implemented such as low-salinity water flooding and enhanced oil recovery (EOR); sulphate removal process (SRP); Steam-Assisted Gravity Drainage (SAGD) water recycling with evaporators; fracking and associated flowback and produced water treatment.

Session Chair: Mr. Guillaume Clairet, EVP, H2O Innovation, Canada

Session Co-Chairs: Ms. Lisa Henthorne, SVP and CTO, Water Standard, USA and Mr. Eduardo Torres, Senior Advisor, Petrobras, Brazil

Confirmed speakers are:

- Mr. Marcel Vasconcelos Melo, Manager, Water Treatment/Reuse Technologies, Petrobras, Brazil
- Eng. Jose Manuel Alvarado Doria, Deputy Director of Production, PEMEX, Mexico
- Mr. Luis Barberii, Project Manager, PDVSA Petroleos de Venezuela SA, Venezuela
- Dr. David Pernitsky, Senior Process Engineer, Suncor Energy Inc., Canada

[continues on page 4](#)

Join Us in Rio de Janeiro for Water Reuse and Desalination for Latin America Development

continued from page 3

Session 4 Mining and Industrial Applications

The case of the mining industry in Latin America is quite particular. As most mining projects and operations are located inland, and very often at higher altitudes, desalination projects are, in reality, the result of a complex integration of marine works, a desalination treatment system combined with a high-pressure water conveyance pipeline, and an energy transmission project.

In this session, desalination for industrial applications will be presented with a focus on a business model, complexity of design, size and cost of the installations and operation.

Session Chair: Mr. Raymond Philippe, Business Development Manager, MWH Global, Chile

Session Co-Chairs: Dr. Corrado Sommariva, MD, ILF, United Arab Emirates and Mr. Eduardo Pacheco, General Director, Tratamento de Aqua, Brazil

Confirmed speakers are:

- Dr. Srinivas (Vasu) Veerapaneni, Desalination Technology Leader & Sr. Process Engineer, Black & Veatch Corporation
- Mr. Alejandro Sturniolo, Vice President of Marketing and Sales, Operations, RWL Water, Argentina
- Ms. María Luisa Flores, Manager of Sustainability and Environment, Esmeralda Corp S.A.C, Peru
- Ms. Nataska Schincariol, Technical Manager of Environmental Engineering, General Water, Brazil

Pre-registration is [available online](#). IDA and ALADYR members are eligible for discounted registration fees. [Click here](#) for more information, or contact conferences@idadesal.org with any questions.

What Is a Brand?



By Lance Johnson

Centuries ago, a brand was a symbol burned into the hide of live-stock so that ranchers could easily identify their animals from others. Over time, the symbols of ranchers with a bet-

ter reputation would be identified as a good “brand” – whatever “good” meant in the mind of the customer.

Starting in the 1950s, modern advertising began using this branding concept to build recognition and differentiate one organization from another.

The embodiment of these attributes into a recognizable symbol or logo became so important that organizations today take a great amount of effort to develop a relevant logo and protect how that logo is used.

It’s important to understand that a brand is far more than a company’s graphic identity. In fact, a brand is much more than a logo or a tag line. It is an organization’s DNA and true purpose.

A **brand** is built up over time. It embodies an organization’s true purpose and reflects supporting attributes that define the brand “promise,” such as integrity, innovation, value, people, reliability, knowledge to name a few. It’s up to the organization to keep that brand promise through its actions and behavior.

On the other hand, a **logo** is merely a visual association of that brand promise to the customer and all other stakeholders. Once the

logo becomes recognizable, then it becomes an easy way to communicate who you are. Therefore, the important first step is to define who you are and how you want to be perceived by your customers and market, which is what branding is all about.

The brand promise is summation of what the organization delivers to the customer in the form of products and services. The brand promise also builds an expectation on what the organization will deliver. How well one is delivering the brand promise will determine the perception of the brand by the customer.

The organization may think it is doing a great job, but if the customer does not think so, then there will be a disconnect in perception. Delivering on the promise is key and builds a strong perception of your brand.

All this will become the organization’s personality expressed in traits like *trustworthy, reliable, established, proactive, innovative* to name a few positive traits; or *shady, lost their way, stuck in the past, unresponsive, undependable* to name a few negative traits. How you want others to perceive your organization is highly dependent on how well you manage your brand and the attributes that make it up.

All of this is particularly relevant and timely, as IDA is refreshing its strategy to ensure it meets its objectives and has a long-term vision.

Traditionally, IDA’s focus has mostly been around desalination for municipalities and co-located desal and power plants. Today and in the future, however, we see our membership expanding their participation to oil & gas, mining, food processing, and coal-to-chemical

[continues on page 15](#)

Countdown to the IDA World Congress



Technical Program: The Largest in World Congress History

With 404 extended abstracts accepted for paper or poster presentation, the IDA World Congress 2015 Technical Program promises to be the largest and most comprehensive ever.

“The quality of the submissions was exceptional, and we are especially pleased that papers represent a truly global look at desalination and water reuse,” says IDA Secretary General Patricia A. Burke.

The World Congress theme is **Renewable Water Resources to Meet Global Needs**. This theme reflects the discussions already taking place around the world surrounding the growing demand for a sustainable source of fresh water in response to population growth, economic expansion, degradation of existing resources and the effects of climate change.

The Technical Program will feature four days of sessions, lectures, panel discussions and workshops. The program will also include a new feature: an interactive plenary session that will be in an open forum format on the last day.

The Technical Program brings together leading experts from government, academia, and industry to share valuable knowledge, experiences and views; and provide unparalleled opportunities for cross-collaboration between these sectors

IMPORTANT DATES FOR AUTHORS

Please mark your calendars with these important dates for accepted abstracts:

February 15. First draft manuscripts due

May 15. Final manuscript with content and format approved – ready for publication; in addition, copyright agreement due

May 15. Presenter registered for the Congress deadline

July 1. Draft PowerPoint presentation due

Aug 15. Final PowerPoint presentation due

Questions and Concerns about the Program of the IDA World Congresses may be directed to the Technical Program Manager Ms. Darlene Seta via email at papers@idadesal.org Please include **IDAWC15** in the subject line of your mail.



to resolve the challenges of desalination and advance its adoption around the world.

For the latest information on the Technical Program and other World Congress news, please visit wc.idadesal.org

[continues on page 7](#)

Countdown to the IDA World Congress

continued from page 6

Special Combination Package Available for Exhibitors

IDA is offering a special package for exhibitors who want to extend their visibility at the World Congress. For an additional \$5,000 US – one half of the advertised price – exhibitors can become Corporate Supporter sponsors.

Benefits include a 50-word editorial and logo in D&WR Magazine's pre-Congress issue; 50 word company profile and logo in the World Congress issue of IDA News; and logo in IDA's pre-event email marketing, social media campaign and pre-Congress ads, in D&WR's post-Congress issue, in the Final Program and World Congress Proceedings; and on the IDA World Congress website.

For more information or to take advantage of this exciting opportunity, contact Leslie Merrill at lmerrill@idadesal.org



First of Three IDA Desalination Academy Courses Announced for World Congress

David H. Paul will present a day-long course on **Water & Wastewater Minimization Using Current & Emerging Membrane Technologies** in conjunction with the IDA World Congress 2015. The course will take place on Sunday, August 30, 2015 from 8:30 am – 4:30 pm, the day prior to the opening of the World Congress. This timing is designed to provide attendees with a thorough understanding of most of the technologies covered by papers to be presented at the World Congress.

The training will be provided in a step-by-step, easy-to-understand manner, providing practical and immediately usable insights into strategies for reducing raw water usage and reducing wastewater discharge at water treatment facilities.

The multimedia presentation will cover how a variety of technologies work and can be used for water and wastewater minimization, including Brackish Water Reverse Osmosis (BWRO), Seawater Reverse Osmosis (SWRO), Forward Osmosis (FO), Electrodialysis (ED), Electrodialysis Reversal (EDR), Closed Circuit Desalination (CCD™), High Efficiency Reverse Osmosis (HERO™), Membrane Capacitive Deionization (MCDI), Membrane Distillation and Membrane Filtration (both polymeric and ceramic).

Registration will be available soon. For more information, please visit wc.idadesal.org



Investment Capital Continues To Rush into Membranes for Desalination Despite the Diminishing Opportunity for Energy Reduction



**By James Fotouhi,
BlueTech Research**

A recent analysis performed by BlueTech Research on water industry investments and acquisitions in 2014 (as seen in figure 1) has revealed that membranes continue to be

highly favored targets for investments. Notable investments and acquisitions in desalination based membranes this year include:

- LGEs US\$ 200m acquisition of Nano H2O

- NAGARE's US\$ 10.5M series A funding round
- Interchina and Poten's joint venture and investment in Aquaporin

Technology companies offering desalination membrane products offer investors two very attractive value propositions:

1. Entrance into one of the fastest growing equipment markets for water and wastewater (RO membranes).
2. A protectable and potentially disruptive technology targeting the desalination industries greatest pain point: energy.

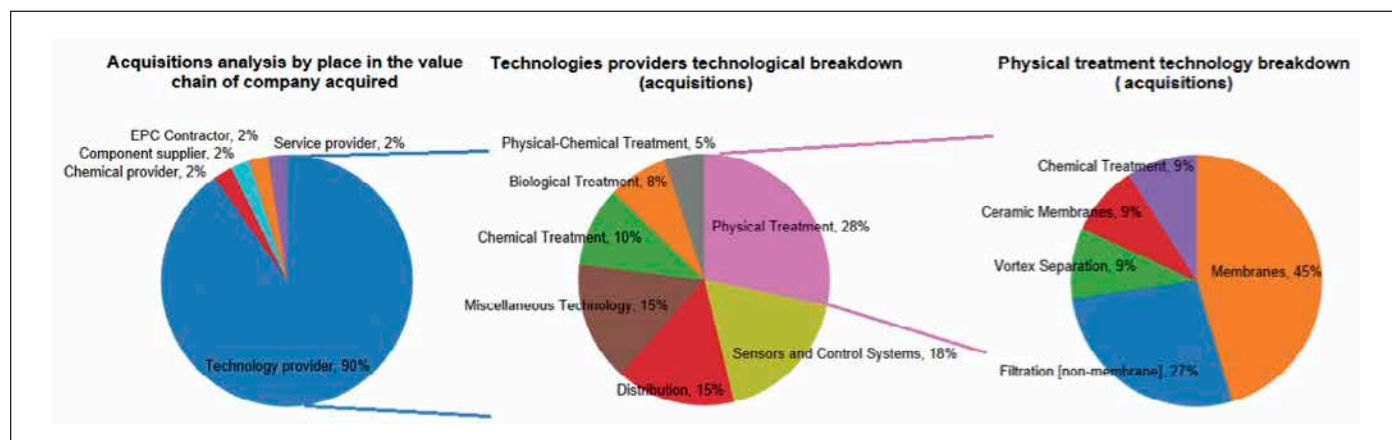


Figure 1: Number Acquisitions in Water Technology (2014)

Carbon Nanotubes, graphene, aquaporins and nanoparticle coatings for RO membranes are frequently espoused as the future for enabling low energy desalination, with the potential decreases in energy usage described in orders of magnitude. However in a recent BlueTech webinar exploring the topic of energy optimization in reverse osmosis desalination,

panelists emphasized that commoditized TFC membranes are quickly approaching the minimum osmotic energy gradient ($\approx 1 \text{ kWh/m}^3$ for seawater) with operations showing energy usage as low as 1.7 kWh/m^3 when combined with energy recovery. An attendee survey conducted during and after the web briefing, asking "What aspect of an RO desalination plant

[continues on page 9](#)

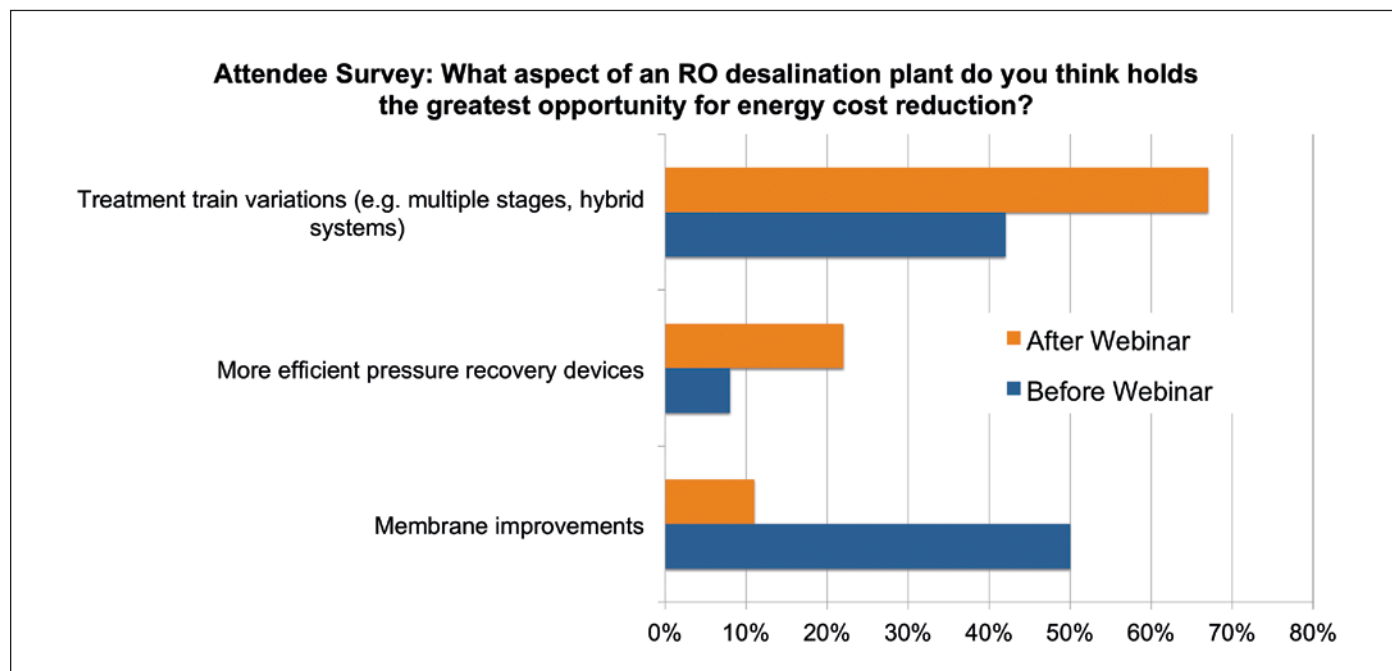


Figure 2: Attendee survey results before and after BlueTech Webinar on Energy Optimization in RO Desalination

do you think holds the greatest opportunity for energy cost reduction?” revealed a strong pre-conception that membranes offered the largest opportunity. This idea subsequently shifted at the end of the briefing as seen in figure 2.

A 2011¹ paper published in *Science* discussing the future of desalination technology expects these aforementioned membrane technologies to yield modest reductions in energy of 10-15%. While these reductions are non-trivial, an inefficient flowsheet design will far outweigh savings from reduced pressure requirements, notwithstanding the challenge of overcoming the lower salt reduction that accompanies an increase in permeability. The success of companies such as Energy Recovery and Desalitech indicate there are significant energy savings to

be realized in the plant beyond the selection of a membrane.

Membrane pretreatment and brine management are emerging as much more attractive markets for new technologies targeting desalination, as evidenced by forward osmosis companies such as Oasys that have largely abandoned seawater desalination targeting high salinity wastewaters in oil and gas.

¹ Elimelech, M. Phillips, W. *The Future of Seawater Desalination: Energy, Technology, and the Environment*. *Science* 5 August 2011: Vol. 333 no. 6043 pp. 712-717

James Fotouhi is BlueTech Research’s Practice Area Leader for research into water reuse and alternative water. He can be reached at james.fotouhi@bluetechresearch.com

IDA Launches Mentorship Program

Around the world, IDA is known for the exceptional depth of knowledge and experience represented in its membership and the willingness among these leaders in desalination and water reuse to share their perspectives.

IDA members, starting with those who participate in the Young Leaders Program, are about to benefit from this experience as never before with the launch of the IDA Mentorship Program.

The purpose of this program is to connect an industry leader with an emerging industry professional through a mentoring relationship that can lead to a transfer of knowledge and broadening of networks between the two. The program is based upon encouragement, constructive comments, openness, mutual trust, respect and a willingness to learn and share information. While it will initially be aimed at YLP members, it may be broadened in scope at a future date.

For the emerging professional – the mentee, this program presents an opportunity to draw on the experience of established industry professionals in terms of their technical knowledge and also their business experience. For the mentor, it presents an opportunity to further strengthen the desalination and water reuse community by fostering the next generation of leaders. IDA is working closely with the YLP to manage and implement the program.

At present, IDA is pleased to announce that these highly respected individuals have agreed to serve as mentors for the program: Lisa Henthorne, IDA Past President and Senior Technology Officer of Water Standard; Prof. Harvey Winters, Fairleigh-Dickinson University, faculty member of the IDA Desalination Academy and past IDA Director; and Leon Awerbuch, IDA Director and Dean of the

IDA Desalination Academy and President/CTO of Leading Edge Technologies Ltd.

IDA's intent is to recruit mentors from all regions of the world and with fluency in a variety of languages. If you are interested in becoming a mentor, please contact Patricia Burke at paburke@idadesal.org.

Q&A

How does it work?

- Qualifying mentees will be matched one-on-one with qualifying mentors, with no more than two mentees assigned to each mentor.
- Mentors will reach out to introduce themselves to mentees, and, from that point, lead interactions to identify and pursue topics of mutual interest.

I would like to join as a mentee. How can I participate?

- Prospective mentees may apply by completing the IDA Mentor Program Questionnaire that will soon be available on the IDA website.

I would like to join as a mentor. How can I participate?

- Prospective mentors may apply by completing the IDA Mentor Program Questionnaire on the IDA website. Over time, IDA is planning to create mentor network that covers all parts of the globe with the capability to converse in many languages.

How long does the program last?

- Mentees and mentors are asked to commit for a period of one year.

What time commitment is required?

- The time-commitment will largely depend on the level of common interests within each group. Our estimate is 1 to 3 hours per month.

IDA Journal Welcomes New Members of Editorial Advisory Board

IDA and Maney Publishing have expanded the Editorial Advisory Board of the IDA Journal of Desalination and Water Reuse with the addition of eight new members.

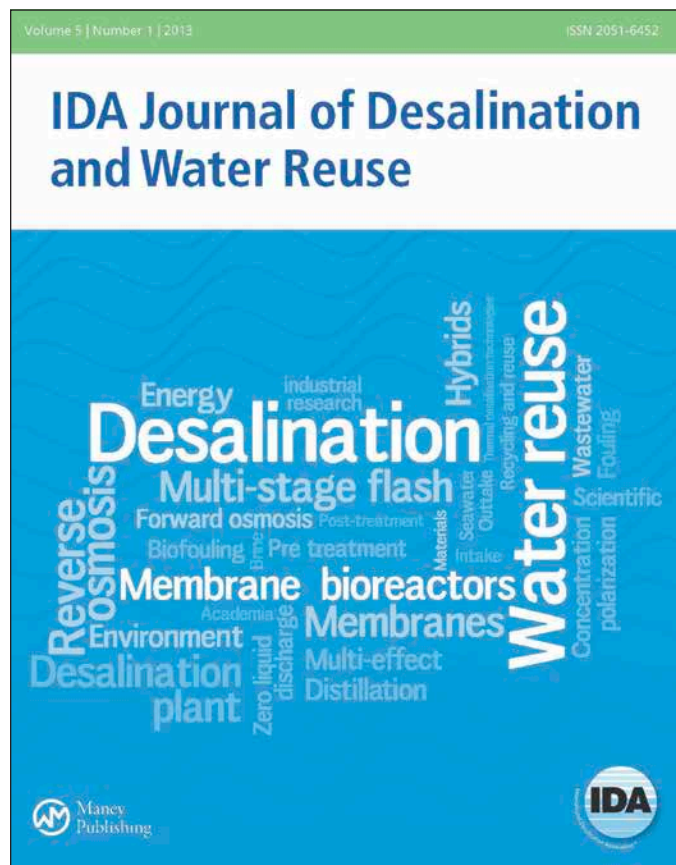
“The IDA Journal has had a strong working Board made up of experts in the fields of desalination and water reuse. However, since we are still in the growing stages, we felt that more topical and geographical representation was still needed. With that in mind, we invited a new group of respected authorities and leaders in the fields of interest. We are delighted they have accepted, and together with existing Board members, they are already working with the journal to increase submission and readership,” comments Isabel C. Escobar, PhD, Editor-in-Chief.

“Our goal is to increase the number of high-impact articles that we publish while continuing to publish technically relevant, peer-reviewed articles that bridge the gap between academia and industry. The Journal’s Editorial Advisory Board comprises a solid mixture of respected academic and industrial representatives who fully participate in the Journal’s development by commissioning two to three research papers or rapid communications per year and also support the Editor-in-Chief by refereeing approximately three papers each year and suggesting appropriate referees when needed,” notes Patricia A. Burke, IDA Secretary General.

New members of the Editorial Advisory Board are:

- Dr. Hassan Arafat, Masdar Institute of Science and Technology, United Arab Emirates
- Dr. Michael Dixon, LG NanoH2O, USA
- Dr. Prakash Narayan Govindan, Gradiant Corporation, USA
- Dr. Thomas Hinkenbein, Murdoch University, Australia
- Mr. Kevin Price, USA
- Ms. Ursula Annunziata, Genesys International Ltd., UK
- Dr. T H Chong, Nanyang Technological University, Singapore Membrane Technology, Singapore
- Dr. Hokyong Shon, University of Technology Sydney, Australia

The full list of Editorial Advisory Board can be found [here](#).



Report from the International Water Summit

IDA Session on Energy Efficient and Clean Technology Desalination a Great Success

IDA once again had an important role at the International Water Summit (IWS) held in January in Abu Dhabi as part of Abu Dhabi Sustainability Week. As a Knowledge Partner, IDA organized, in close cooperation with IWS, a well-attended and engaging session that addressed important and timely issues and opportunities regarding desalination.

The session focused on Energy Efficient and Clean Technology Desalination. "The feedback is that it was an excellent program with distinguished keynote speakers and panelists who were all leaders of the desalination and water reuse industry," said session chair Leon Awerbuch, IDA Director and Dean of the IDA Desalination Academy, and President/CTO of Leading Edge Technologies.

"The focus of this session was on use of renewable energy and increased efficiency of future desalination plants as well as the importance of reuse and better utilization of treated water. We touched on many critical subjects. As a Chairman, I found the speakers and panelists well prepared in explaining their point of view and responding to questions from the moderator as well as the audience. There was a lively exchange of views, and we received input from the panelists and the audience that this was the best session of the day," Awerbuch noted.

Designed to run 2.5 hours, this session was divided into three parts. **Part One** involved two keynote presentations, each lasting 15 minutes. The first remarks were delivered by Mohammad El Ramahi – Associate Director, Utilities Interface, Engineering and Operations, Masdar, who presented a

case study on "Desalination: Next Generation Renewable Energy Powered Desalination Pilot Project". This was followed by HE Dr. Abdulrahman M. Al-Ibrahim, Governor & Chairman of the Board, Saline Water Conversion Corporation (SWCC), Kingdom of Saudi Arabia, presenting "Opportunity to Enhance Energy Efficiency in Saudi Desalination Sector".

Each speaker delivered his keynote address with a clear vision and emphasis on the importance of renewable energy to desalination finding better solutions to meet the continuous growing demand for water. The clear message was that water for life does not have an alternative solution, while oil and fossil fuels can be substituted by renewable and alternative energy.



Part Two was an hour-long, panel discussion on "Desalination Energy & Environment Nexus". The discussion focused on such questions as:

- Which renewable energy sources do you think have the most potential for application to desalination plants and why?
- What, in your opinion, is the potential for all of the fossil energy used for desalination in KSA and Gulf to be replaced by renewable or nuclear sources?

[continues on page 13](#)

Report from the International Water Summit

continued from page 12

- How will the water footprint of water production impact regional sustainability and future water security?
- What is the best response to the need for strategic and economic water storage as a response to overcome water security risk?
- What action needs to be taken to bridge the gap between research and industry through testing pilot plants and demonstration projects?
- How can we balance environmental and financial cost?
- What are the roles of localization and international co-operation?
- What is the role of IWS, IDA and other industry meetings to help to address the challenges facing water sustainability in arid regions?



Part Two also covered innovative seawater desalination, energy efficient seawater desalination, and efficient integration of power generation and desalination.

Moderator was Leon Awerbuch, Dean of the IDA Desalination Academy and President/CTO of Leading Edge Technologies. Panelists included:

- HE Dr. Abdulrahman M. Al-Ibrahim, Governor & Chairman of the Board, Saline Water Conversion Corporation (SWCC), Kingdom of Saudi Arabia

- Dr. Corrado Sommariva, Managing Director, ILF Middle East and IDA Director and Immediate Past President, United Arab Emirates
- Dr. Hassan Arafat, Associate Professor – Department of Chemical and Environmental Engineering, Masdar Institute, United Arab Emirates
- William Chang, Executive Managing Director, Emirates, Sembcorp Water and Power Company, United Arab Emirates
- Dr. Masaru Kurihara, IDA Director, President of APDA and Toray Fellow, Japan
- Imad Al Sharif, Vice President, Desalination, Energy Recovery Inc., USA

For **Part Three**, IDA organized a panel on “Sustainable Desalination and Advanced Water Reuse – Development & Trends Leading to Energy and Cost Reduction. Questions for discussion included:

- Trends and integration of desalination and water reuse
- Improvements in membrane and pretreatment processes
- Very high efficiency in thermal and hybrid desalination plants
- The feasibility of achieving a 20% reduction in energy consumption in all major desalination processes
- Challenges of mega-scale desalination programs
- Water reuse in industrial applications and ZLD challenges\Desalination and water reuse for oil and gas

continues on page 14

Report from the International Water Summit

continued from page 13

- Innovative approach to privatization of water reuse
- Reducing cost of desalination and advance water reuse



Moderator for Part Three was Miguel Angel Sanz, IDA's 2nd VP and Director – Development & Innovation Degrémont, Suez Environment, France.

Panelists were:

- Francisco Javier Bernaola, Research and Development Director at Abengoa Water
- Fady Juez, IDA Director, Managing Director Metito, UAE
- Ghassan Ejje, IDA Past President and Senior Vice President BESIX, Belgium
- Michel Canet, IDA Director and Business Development Advisor, Veolia Technologies
- Dr. Nobuya Fujiwara, IDA Director and Deputy Director, General Manager of Desalination Membrane Department/ Director, Director of Toyobo, Japan/IDA

“From IDA’s perspective, we were able to deliver key messages about the importance of desalination, focus on value and critical importance of reuse both for municipal and industrial purposes, the role of renewable energy and energy efficiency as well as the importance of strategic and economic storage of water and wastewater in aquifer storage and recovery (DASR and WASR). We

also covered new technologies and importance of technological innovation, sustainability and value of water,” said Awerbuch.

In addition to the IDA session, Dr. Abdullah Al-Alshaikh, President of IDA and CEO of AWT, contributed his views on a **Panel Discussion: Taking a Unified Strategic Approach to address the Challenges of the Water Energy Nexus**. This media style question-and-answer panel discussion brought together water utilities, NGOs and industry experts to explore contrasting aspects of water energy nexus challenges that included setting common objectives and targets for improvement, creating an effective method for distribution of water and energy resources, solving the interlinked challenges of urban water and energy to enable the growth of cities and businesses, and sharing urban solutions to improve utility performance.

IDA to Participate in Abu Dhabi Water Platform

During the International Water Summit, IDA participated in an invitation-only event with key Abu Dhabi stakeholders and selected industry representatives to explore an alliance with the Abu Dhabi Water Platform (ADWP). As a result of the meeting, IDA has become a collaborator in the initiative, which is being led by Masdar and the Masdar Institute.

The goal of the Abu Dhabi Water Platform is to bring together, attract and coordinate ideas, R&D, laboratories, technology application, demonstration and customers, and encourage innovation across the entire value chain and societal spectrum. In so doing, ADWP will become the “one stop shop”, the focal point on water in Abu Dhabi where numerous organizations are pursuing similar

continues on page 15

Report from the International Water Summit

continued from page 14

goals on innovation, commercialization and implementation of advanced water solutions without clear coordination.

Its seven key objectives are to:

- Identify water related concerns, considering the water-food-energy nexus
- Find cost-effective solutions addressing water concerns
- Coordinate and initiate action
- Incubate and attract business to Abu Dhabi
- Develop and commercialize water technologies
- Secure and transfer knowledge to Abu Dhabi
- Establish and reinforce Abu Dhabi as a leading nation in sustainable development and water solutions

“Quite a bit of discussion was focused on what IDA can bring to the ADWP by means of exchange ideas and technology,” said Leon Awerbuch, IDA Director and Dean of the IDA Desalination Academy.

IDA Secretary General Patricia A. Burke invited the ADWP to hold its next meeting at IDA World Congress in San Diego. “Masdar will reach out soon to key stakeholders to schedule one-on-one meetings to discuss the water platform in more detail. The main objective of these meetings will be to seek further stakeholder input, guidance and commitment,” she said.

VIEWPOINT

What Is a Brand?

continued from page 5

applications that will require desalination and water reuse, but they will also require additional advanced water treatment technologies in order to meet the needs of their customers.

The IDA needs to adapt to these changes. Part of that process involves defining what the IDA's true purpose is, how we can deliver on our purpose, and ensuring that we remain relevant to our membership.

As we see our true purpose of “connecting people and ideas to enable a sustainable source of fresh water,” we need to ensure that our brand promise supports our purpose for current membership, future membership in

geographies that have emerging needs, new applications and industries.

Desalination and water reuse will remain a core part of the IDA, but we need to look beyond to those ideas that can create a sustainable source of fresh water for our members and for the planet. We need to ensure that our brand and messaging supports these changes. Please look forward to more on this topic in the near future.

Lance Johnson is the Secretary and a Director of the International Desalination Association. He can be reached at landalson@gmail.com

IDA Desalination Academy Offers IROC Program Level One Certification Program

In collaboration with David H. Paul, Inc., a world-leading, full service high-tech water treatment training and consulting company, the IDA Desalination Academy offers the International Reverse Osmosis Certification (IROC) Program.

Level 1 Reverse Osmosis Specialist Certification is now being offered in a 31 hour online training program that provides a thorough understanding of water treatment in general and the RO technology in detail. Level 1 is the first of four levels that comprise the complete IROC program, which consists of 675 hours of Internet-based training.

The Level 1 Certification program is ideal for anyone who deals with small, medium, large or huge RO systems including operators, engineers, sales persons, maintenance technicians, designers and installers, supervisor and managers – anyone who deals with RO technology.

The training covers the following topics:

- Water contaminants to be removed
- Different challenges with different source waters
- The fundamentals of a water treatment plant
- Water treatment applications
- Conventional and advanced water treatment including clarification, filtration, disinfection, microfiltration, ultrafiltration, nanofiltration, reverse osmosis & more
- Typical water treatment schemes and what each treatment step does
- How to read piping & instrumentation diagrams

For more information about Level 1 Certification and the IROC program, please visit www.idadesal.org/academy

Exclusive Training Provided by:



3rd IDA R&D Committee Workshop Focuses on Advances on Emerging Technologies for Desalination

On December 8-9, 2014, IDA's Research & Development Committee held its third workshop, this time in Singapore with the support of PUB, Singapore's national water agency. Led by Chairman and IDA President Dr. Abdullah Al-Alshaiikh, the two-day, invitation-only program focused on "Emerging Technologies for Desalination: Advances in New Materials and Systems."

The workshop explored five topics: Emerging Materials for Desalination, Biomimetic/Biomimicry Research for Desalination, Renewable and Low-energy Desalination, High Efficiency Desalination and Energy Recovery, and Pre-treatment for Desalination. Speakers included many of the world's leading researchers and scientists,

turning the workshop into a world-class forum to explore advances that will help define the future of desalination technologies.

Session moderators were Anthony Fane, NTU – Emerging Materials for Desalination; Tang Chuyang, University of Hong Kong – Biomimetic and Biomimicry Research for Desalination; Gary Amy, KAUST – Renewable and Low-energy Desalination; Neil Palmer, NCEDA and In. S. Kim, GIST – High Efficiency Desalination and Energy Recovery; and Ahmad Al-Arifi, SWCC – Pre-Treatment and Algal Blooms. Round table discussions followed presentations in each session, and attendees were invited to attend a site visit to the Tuaspring, Hyflux desalination plant.

New Horizons for Desalination Conference News

Reminder: Call for Abstracts Deadline Extended to March 31

The deadline for submitting Extended Abstracts for this exciting conference has been extended to March 31, 2015. IDA is seeking papers in the following areas: Renewable Water Needs, Opening Market for Infrastructure, Renewable Desalination, Water for Oil and Gas and Emergency Solutions.

New Horizons for Desalination takes place in Santa Margherita, Portofino, Italy on May 17-19, 2015. It is being held in cooperation with [Rotary Club La Spezia](#) and part of the conference proceeds will be donated to a water-related humanitarian project. Over the two days, the program will explore growing requirements for desalination and advanced water treatment in new infrastructure markets such as mining, energy, oil and gas, and so forth, where the judicious application of these solutions could bring about a sharp contribution towards cost and energy savings as well as environmental stewardship.

[Pre-registration](#) is now open.

Sponsors Announced for New Horizons Conference

IDA is pleased to announce that eight companies have signed on as sponsors to support this event. The following companies are confirmed as Silver Sponsors:

ABENGOA



CADAGUA



For information about sponsorships, please [click here](#).

Abengoa and AWT to Develop World's First Solar-powered Desalination Plant

The idea of solar-powered desalination just took a giant leap forward to becoming reality, as Advanced Water Technology (AWT) announced that selection of Abengoa to jointly develop the world's first large-scale desalination plant to be powered by solar energy. The plant, which is valued at US\$130 million, will produce 60,000 m³/d day of water to supply Al Khafji City in North Eastern Saudi Arabia, ensuring a constant water supply throughout the year.

This is a global pioneering project since it incorporates a photovoltaic plant that will be capable of supplying the power required by the desalination process, significantly reducing the operational costs. It will also have a system to optimize power consumption and a pre-treatment phase to reduce the high level of salinity and the oils and fats that are present in the region's seawater.

The Al Khafji desalination plant will ensure the stable supply of drinking water, contributing to the country's socio-economic development. As in other cities in Saudi Arabia, water is a scarce resource. Abengoa and AWT will supply the local population with water needs in a sustainable and reliable way.

AWT is a newly formed company based in Riyadh whose mission is to bring affordable water solutions through innovation and sustainability. It is the commercial arm of KACST (King Abdulaziz City Science and Technology) and is owned by Taqnia.

For AWT, this development represents its initial foray into the upstream activities of desalination water production. It plans to expand its activities in the near future to include downstream activities such as water reuse and water management. IDA President Abdullah Al-Alskhaikh is CEO of AWT.

Abengoa applies innovative technology solutions for sustainability in the energy and environment sectors, generating electricity from renewable resources, converting biomass into biofuels and producing drinking water from seawater. This latest contract will increase Abengoa's total desalination capacity to nearly 1.5 M m³/day, enough to supply 8.5 million people around the world. It will also strengthen its position in the Middle East where it has already been awarded major projects in the water sector, such as the Barka desalination plant in Oman, and in the energy sector, such as the region's largest solar plant, in Abu Dhabi.



Seated left to right: Manuel Valverde, Abengoa E&C Executive Vice President, and Abdullah Al-Alskhaikh, CEO of AWT and President of the International Desalination Association participated in the recent announcement of the Al Khafji solar-powered desalination plant. Among dignitaries attending the ceremony were the Chairman of the Board of AWT Prince Turki bin Saud bin Muhammad, Governor of SWCC H.E. Dr. Abdulrahman Al-Ibrahim and several members of AWT's staff.

Young Leaders to Host Event at IDA Conference in Rio de Janeiro

The IDA YLP will host a reception to introduce the program and the world of desalination to attendees of IDA's conference Water Reuse and Desalination for Latin America, as well as other potential members in the region.

The event will take place on Monday, March 23 from 6:30 pm – 8:30 pm at the Windsor Atlantica Hotel, Rio de Janeiro, the conference hotel.

The program will include brief presentations on The History of Desalination by Emilio Gabbrielli, The Present and The Future of Water in the World by Carlos Cosin, and IDA and the Young Leaders Program by Ryan Furukawa. Manuela Mello will then talk about the water situation in Brazil and the importance of new engineers becoming part of IDA.

A question and answer session offers attendees the opportunity to explore related topics of interest, and the program concludes with ample time for networking.

The IDA YLP is open free of charge to all IDA members 35 years of age or under. To learn more, visit www.idaylp.org

IDA YLP Holds Event at KAUST, Saudi Arabia

The Middle East and North Africa (MENA) region is one of the most arid regions in the world, where desalination is the main source for water supply in many countries, making it a critical aspect for the region's sustainability.

IDA YLP special/technical coordinators Dr. Assiyeh Tabatabai and Mr. Nasir Moosa organized an event at the King Abdullah University for Science & Technology (KAUST) with a large number of participants in attendance. The event was held in conjunction with a DOW workshop "Design and Finance your Own Desalination Plant", which was held as part of KAUST's Winter Enrichment Program (WEP). WEP is a two-week program organized twice a year at KAUST, running science, technology and arts lectures and workshops. It is open to all MS and PhD participants who receive academic credits for participation in WEP programs.

The aim of the IDA YLP event was to provide students and scientists in the early stages of their career with a chance to come together and discuss the potential role of IDA YLP and KAUST in promoting desalination as a career choice within Saudi Arabia and the region, thereby giving IDA YLP exposure and recognition in the MENA region.

The event opened with a short introduction by Mr. Nasir Moosa on the IDA YLP initiative, followed by a presentation by Dr. Assiyeh Tabatabai on the mission and activities of IDA as well as the objectives, activities and benefits of the IDA YLP. Over 30 participants, mostly young professionals from the water industry and the Water Desalination and Reuse Centre (WDRC), were present at the event.

The presentation was followed by an extended discussion on potential opportunities for more active engagement of young professionals in the desalination industry in the MENA region. There was general consensus on creating a

[continues on page 21](#)

Applications Now Being Accepted for Singapore's National Research Foundation (NRF) Environmental and Water Technologies (EWT) PhD Scholarship

Singapore's Environment & Water Industry Programme Office (EWI) promotes the environment & water R&D and industry in Singapore and envisions increasing opportunities for careers, R&D and exciting new technologies in this industry. As part of the talent grooming to support this fast rising industry, the National Research Foundation (NRF), through the EWI, is providing PhD scholarships to develop research experts in Environmental and Water Technologies (EWT): the NRF (EWT) PhD scholarships.

The NRF (EWT) PhD Scholarships offer support for up to four years of academic pursuit, leading to a PhD in the fields of Environmental Science & Engineering, Chemical Engineering, Civil Engineering, Mechanical Engineering, Chemistry, Physics, Biological Sciences and Materials Science or Engineering. The area of research should be in or related to EWT and should meet the following key drivers: expanding water resources, improving water quality and security, and reducing energy consumption.

The suggested PhD research areas include but are not limited to the following:

- Biological Processes
- Advanced Oxidation Process and Disinfection
- Water Distribution
- Watershed Management and Flood Management
- Seawater Desalination
- Sludge and Brine Management
- Sensors and Instrumentation
- Groundwater / Underground Caverns
- Decentralized Water Treatment Technologies
- Industrial Water Technologies

The scholarships are tenable at National University of Singapore (NUS), Nanyang Technological University (NTU) and Singapore University of Technology and Design (SUTD).

The deadline for applications is March 20, 2015. Details on the award, eligibility requirements and the application process are available [here](#).

What's in Store for 2015?



The following comments from Guillaume Clairet, IDA Director and Executive Vice President of H2O Innovation, were omitted in this story that ran in our November/December issue. Here is his perspective.

Desalination's main challenges in 2015 are these issues:

- There is a perception that desalination is expensive.
- In addition, there is a (mis)perception that it is disruptive to the environment.

- The price of oil is dropping, so this market space will slow down.

Desalination's main opportunities in 2015 are:

- Finally, California is picking up with two significant projects approved (Carlsbad 50MGD and Monterrey). This is a new market for desalination.
- Africa and South America are high potential markets and in need of local expertise.
- Best brine discharge strategies, and the use of remaining osmotic energy in the brine are still yet to be implemented commercially. Where will be the first SWRO plant that will use Forward Osmosis for harvesting of osmotic potential in the brine?

IDA YLP Holds Event at KAUST, Saudi Arabia

continued from page 19

stronger presence in the region with KAUST/WDRC facilitating in collaboration with IDA and the YLP program.

The event concluded with a buffet lunch sponsored by IDA, where a variety of delicacies and refreshments were served.

In addition to the event participants, the Centre Operations Manager Dr. Faisal Wali and a number of WDRC employees attended the

luncheon. The event triggered great interest in membership in IDA.

Being a hub for innovation and knowledge generation, KAUST plays an important role in the development of local young professionals and can be an important partner of the YLP program in the region.



AEDyR 2014 International Congress a Great Success



By **Antonio Casañas**

Asociación Española de Desalación y Reutilización (AEDyR)

reported great success in attendance and interesting debates the X International Congress held in Seville, Spain on November 26-28, 2014. More than 235 participants, including managers, technicians and professionals, attended the sessions that formed the X International Congress where they shared knowledge and experiences in the areas of desalination and reuse (watch video highlights of the event).

AEDyR has established a new concept of congress, dynamic, practical and participatory in two days and a half which has brought together 73 speakers and more than 235 attendees from 14 different countries (Spain, Korea, Brazil, France, Netherlands, Italy, Russia, Saudi, Morocco, Algeria, Mexico, United Arab Emirates, Argentina and Finland).

The opening ceremony was attended by the Minister of Environment of the Junta de Andalucía, M^a Jesús Jiménez Serrano; President of the International Desalination Association, Dr. Abdullah Al-AlShaikh; the Director General of

ACUAMED, D. Arcadio Mateo del Puerto; and Miguel Angel Sanz, Vice President of AEDyR.

To view video highlights, please visit <http://youtu.be/n5EVHBaS0pA>

Photos from the AEDyR Congress can be viewed [here](#).

AEDyR was created in 1998, following the successful IDA World Congress held in Madrid in a year earlier. This Association intends to gather all individuals, companies and organizations dealing with desalination and water reuse in Spain. AEDyR is one of the world's few non-regional, country-specific desalination associations. To learn more, click [here](#).



IDA President Dr. Abdullah Al-Alshaikh (far left) and IDA 2nd Vice President Miguel Angel Sanz (far right) participated in the AEDyR X International Congress. Also pictured are Reyes Giron and Luz Nogales.

Calendar of Events

March 2-6, 2015

AWWA/AMTA 2015 Membrane Technology Conference & Exposition

Orlando, Florida, USA

March 23-24, 2015

Desalination and Water Reuse for Latin America Development

Rio de Janeiro, Brazil

April 12-17, 2015

7th World Water Council

Daegu-Gyeongbuk, South Korea

April 21-23, 2015

WETEX 2015

Dubai, UAE

April 27-28, 2015

Global Water Summit: The Water Value Revolution

Athens, Greece

May 10-14, 2015

EuroMed 2015

Palermo, Italy

May 12-14 2015

Ozwater'15

Adelaide, Australia

May 17-19, 2015

New Horizons for Desalination

Santa Margherita, Portofino, Italy

July 1-4, 2015

2nd Int'l Workshop on Membrane Distillation

Ravello (SA), Italy

August 30 – September 4, 2015

IDA 2015 World Congress

San Diego, CA USA

May 22-26, 2016

Desalination for the Environment, Clean Water and Energy

Rome, Italy

September 26-27, 2016

IDA Water Reuse Conference

Nice, France

November 6-9, 2016

Membranes in Drinking and Industrial Water Production

Leeuwarden, The Netherlands

May 6-10, 2018

Desalination for the Environment, Clean Water and Energy

Nantes, France



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