

WATER & INNOVATION – WATER TECHNOLOGY

NOVEMBER 3-4, 2011
AMSTERDAM, THE NETHERLANDS

Second announcement and invitation to register

INTRODUCTION

From October 29 to November 4, the city of Amsterdam will host the first International Water Week in the Netherlands (IWW). The IWW highlights integrated solutions covering the entire water cycle. One of the conferences that will be organised during the week of the event is the conference Water & Innovation – Water Technology.

Innovations in water technology are vital to finding solutions to the challenges we face today: climate change, aging infrastructure, urbanisation, resource shortages, the economic and financial crisis, new emerging substances, the need for sustainable development, demographic changes, etc. The water industry is already confronting serious problems. For example, the shortage of energy and other resources demands energy efficient processes and the recovery of nutrients, water and energy from the water cycle. Water shortages necessitate the reuse of domestic waste water for industry and agriculture.

Salinisation of groundwater and surface water related to climate change requires new concepts and processes to desalinate saline and brackish water. Climate change also seriously affects the urban water cycle. Flooding in urban areas is becoming more commonplace, while water quality management in urban areas is becoming increasingly complex. Emerging substances, such as pharmaceuticals, pesticides, personal care products and nanoparticles, demand new technologies to remove these compounds from surface water, waste water and drinking water.

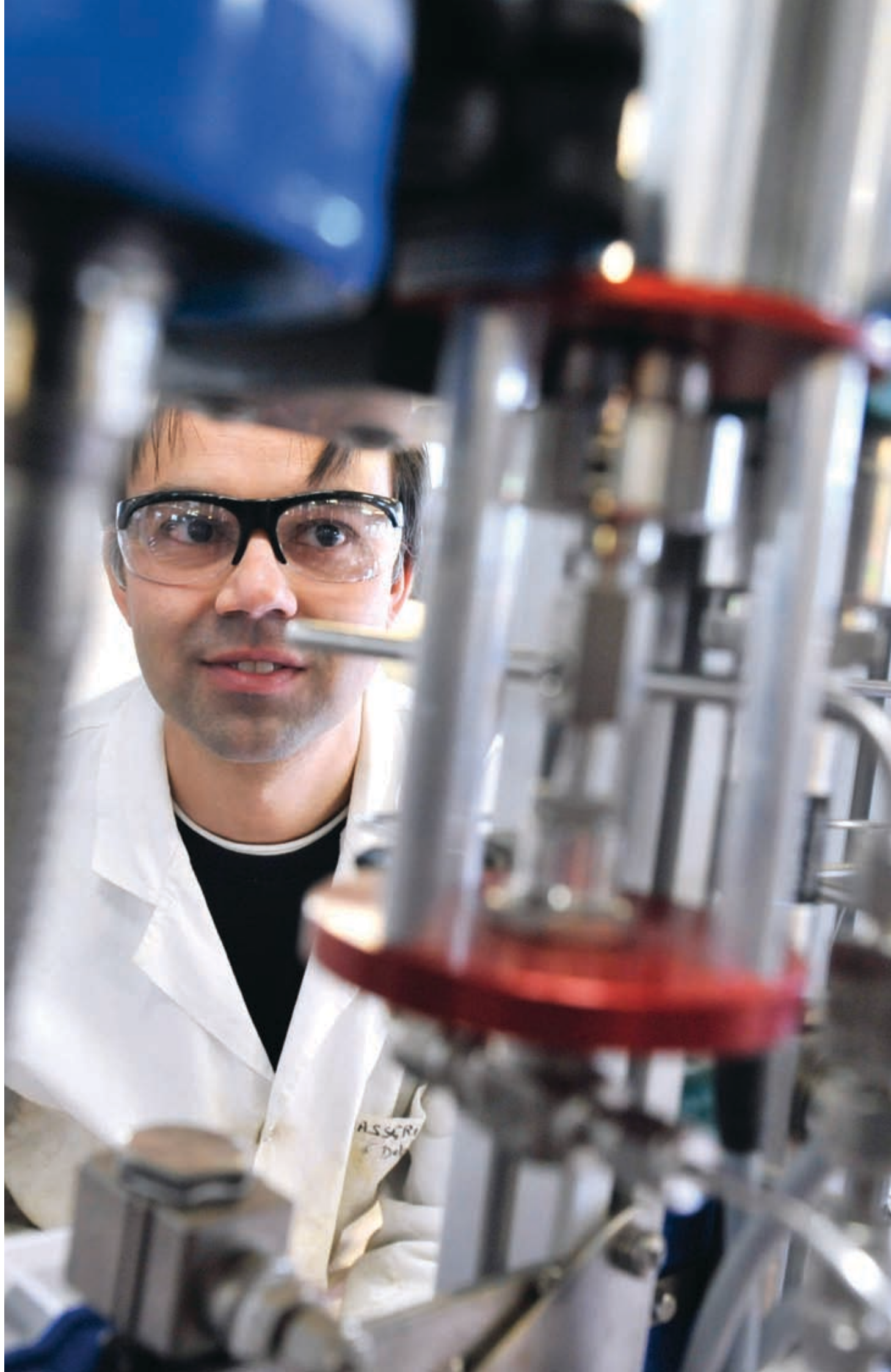
The point is to identify innovations in water technology that contribute to the entire water cycle and that result in improved system economy and performance, more sustainable systems and a clear focus on the customer. International Water Week shares this same focus: integrated solutions! The application of membrane technology, biotechnology, nanotechnology, sensor technology and ICT appears to be an appealing option for achieving breakthroughs in water technology and for offering solutions for the challenges ahead of us.

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KNW
Royal
Netherlands Waternetwork



INTERNATIONAL WATER WEEK
AMSTERDAM



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WELCOME BY THE CONFERENCE PRESIDENT

Dear Delegates,

On behalf of the Programme Committee I would like to invite the water professionals from around the world to attend the International Water Week in Amsterdam and to take part in the conference on Water and Innovation – Water Technology. This 2-day conference is organised by the Royal Netherlands Water Network (KNW) and Waternet, and sponsored by the Dutch drinking water company Oasen. The focus is on presenting integrated solutions for a changing world. Water and Innovation - Water Technology is one of the conferences during the water week in which new developments will be presented that contribute to these integrated solutions.

The conference will attract researchers, scientists, practitioners and advisors working in the field of water technology. It will offer a platform for discussions and will provide ample opportunities to learn and network with professionals in your fields of interest.

During the International Water Week you have the possibility to attend many conferences, to take part in events and to visit the Aquatech, a thriving international trade exhibition for the global water industry with a focus exclusively on this precious resource.

In addition, the city of Amsterdam and its surrounding area offer great opportunities for recreation, such as walking or cycling tours.

I look forward to meeting you in Amsterdam during the International Water Week and to seeing you at the conference Water and Innovation – Water Technology.

Jan Peter van der Hoek,
Chairman Programme
Committee



ABOUT OASEN

Oasen is the water company from the 'Groene Hart'. We produce the best drinking water in the heart of Holland for 750.000 people (330.000 connections). Oasen delivers 45 million m³ delicious and healthy water on a yearly basis. Our company consists of 245 employees. Oasen is a public company, owned by the local government. Our main goals are: high quality and always continuity in our supply. We work according three principles: public health, social responsibility and sustainability. Oasen uses riverbank infiltrate, this is a special type of ground water. We purify this to high quality drinking water in eight production plants. We transport the water using 1865 miles of pipeline. In the next ten years we want to rebuild two large purification factories and renovate 249 miles of pipeline. Our dedication: perfect drinking water for the people and the companies in the green heart of Holland.

Henk Ardesch



SCOPE OF THE CONFERENCE:

The core of the conference is the use of new innovative technologies that result in robust and reliable systems, offering an answer for the problems of today and challenges of tomorrow.

Topics of this conference are:

- Membrane technology in water technology
- Biological processes in water technology
- The use of modeling and ICT in water technology
- Sensor technology in water treatment and water distribution
- Emerging technologies for emerging contaminants

Presentations will focus on the development and application of new innovative technologies in these fields to find an answer to the challenges the water industry is confronted with.

TOPICS OF THIS CONFERENCE:

Strategies and business models

- Strategic plans of countries, regions and cities.
- Combining technologies to integrated solutions
- Energy savings in water utilities (including wastewater transport and treatment)
- The role of water, energy and waste in cities of the future
- Life Cycle Analysis (LCA) concepts and use in management decisions

New water/wastewater treatment concepts and technologies versus energy efficiency

- Scientific understanding – ongoing research
- Technical development and demonstrations
- Practical applications at full scale
- 'Green Chemistry' applications
- Optimization of operation by instrumentation, control and automation
- Co-digestion (organic waste)
- Heat recovery from domestic wastewater
- Underground thermal storage systems

- Biogas for power production/vehicle transport
- Heat pumps for district heating and cooling
- New forms of energy recovery
- Decentralized integrated energy production and water treatment (wind, wave, and solar energy, microbial fuel cells, etc.)
- Interdependency between the two sectors transition strategies from centralized systems to decentralized systems

OUTLINE PROGRAMME
“WATER & INNOVATION WATER TECHNOLOGY ”
3 – 4 NOVEMBER 2011

Thursday 3-11-2011

08.00 – 09.00	Registration
09.00 – 09.10	Opening and welcome
09.10 – 11.00	Session 1: Membrane technology in water treatment (1)
11.00 – 11.20	Coffee break
11.20 – 13.00	Session 2: Membrane technology in water treatment (2)
13.00 – 14.00	Lunch
14.00 – 15.40	Session 3: Biological processes in water treatment (1)
15.40 – 16.00	Tea break
16.00 – 17.40	Session 4: Biological processes in water treatment (2)

Friday 4-11-2011

08.30 – 10.30	Session 5: Emerging technologies for emerging compounds
10.30 – 11.00	Coffee break
11.00 – 13.00	Session 6: Sensor technologies in water treatment and water distribution
13.00 – 14.00	Lunch
14.00 – 15.40	Session 7: The use of modeling and ICT in water technology (1)
15.40 – 16.00	Tea break
16.00 – 16.50	Session 8: The use of modeling and ICT in water technology (2)
01.50 – 17.00	Closing

THURSDAY 3-11-2011

08.00 – 09.00 **Registration**

Room

09.00 – 09.10 **Opening of the conference and welcome**
Jan Peter van der Hoek (Waternet/ Delft University of Technology)

Room **Session 1: Membrane technology in water treatment (1)**
Chair: Lute Broens (Norit)

09.10 – 09.30 **Freshwater from saltwater with lower energy use**
H.Timmer, R.S. Folders, R. van den Berg, S.G.J. Heijman, F.Smits (The Netherlands)

09.30 – 10.00 **Down stream to improve performance of membrane filtration**
M. Remy, S. Vellinga, H. van Dalfsen, J. Kruit, E. Koetse,
N. Wortel (The Netherlands)

10.00 – 10.20 **Salt rejection improvements using seawater nanocomposite membranes**
R.L. Burk, C.J. Kurth, J. Green, M. Dante (USA)

10.20 – 10.40 **Pellet softening in inland desalination with model based control**
G.A. van Houwelingen, R.G. Bond, K.M. van Schagen,
T.F. Seacord (The Netherlands)

10.40 – 11.00 **Discussion**

11.00 – 11.20 **Coffee break**

Room	Session 2: Membrane technology in water treatment (2) Chair: Arie Haasnoot (Oasen)
11.20 – 11.40	Use of electrospun nanofibres for bacteria removal from wastewater treatment plant outlets M. Holba, J. Lev, L. Kalhotka, M. Szostková, D. Kimmer (Czech Republic)
11.40 – 12.00	Effect of low dosages of powdered activated carbon on MBR performance M. Remy, H. Temmink, P. van den Brink, W. Rulkens (The Netherlands)
12.00 – 12.20	Performance of forward osmosis membranes in sewage treatment K. Lutchmiah, K. Roest, D.J.H. Harmsen, M.H. Zandvoort, L.C. Rietveld, H. Ramaekers, K. Lampi, J.W. Post, E.R. Cornelissen (The Netherlands)
12.20 – 12.40	Energy produces from wastewater – Dynamic filtration of A-stage sludge K. Roest, B. Daamen, M.S. de Graaff, E. Wypkema, M.H. Zandvoort, C.A. Uijterlinde, S. Dilven, J.B. van Lier, M.C.M. van Loosdrecht (The Netherlands)
12.40 – 13.00	Discussion
13.00 – 14.00	Lunch
Room	Session 3: Biological processes in water treatment (1) Chair: Cees Buisman (Wetsus)
14.00 – 14.20	Biological active groundwater filters: exploiting natural diversity W. de Vet, W.J. Knibbe (The Netherlands)
14.20 – 14.40	Efficient fat and oil removal in a new type of anaerobic reactor: results of the 500-m3 prototype and pilot research with the BIOPAQ®AFR C.T.M.J. Frijters, T. Hülsen, J. Kruit, D. van Schaick, R. van der Arend, S. Vellinga (The Netherlands)
14.40 – 15.00	Advancements in using the innovative and sustainable aerobic granules technology for cost-effective treatment of urban and industrial wastewater A. Giesen, L.M.M. de Bruin, H.F. van der Roest (The Netherlands)
15.00 – 15.20	Is sequence batch biofilter granular reactor suitable for textile wastewater treatment? A.M. Lotito, C. di Iaconi, U. Fratino, A. Mancini (Italy)
15.20 – 15.40	Discussion
15.40 – 16.00	Tea break
Room	Session 4: Biological processes in water treatment (2) Chair: Jan Peter van der Hoek (Waternet / Delft University of Technology)
16.00 – 16.20	Denitrification with dissolved methane from anaerobic wastewater treatment: a novel opportunity for wastewater treatment C. Kampman, T.L.G. Hendrickx, L. Zhang, F.A. Luesken, T.A. van Alen, H.J.M. op den Camp, M.S.M. Jetten, G. Zeeman, C.N.J. Buisman, H. Temmink (The Netherlands)

- 16.20 – 16.40 **Sustainable nitrogen removal by denitrifying anammox applied for anaerobic pre-treated potato wastewater**
A. Mulder, B. Versprille, D. van Braak (The Netherlands)
- 16.40 – 17.00 **Microbial diversity of sludge from a pilot-scale reactor treating real sewage in simultaneous biological removal of nitrogen and sulfur**
D.F. Fonseca, E. Foresti (Brazil)
- 17.00 – 17.20 **Sulphur in a WWTP – Autotrophic denitrification and sulphur recovery as a wastewater treatment technology?**
A. Dekker, H.W.H. Menkveld, M. Oosterhuis, E. van Rekswinkel, L. Korving, C. Uijterlinde, M.C.M. van Loosdrecht (The Netherlands)
- 17.20 – 17.40 **Discussion**

FRIDAY 4-11-2011

Room **Session 5: Emerging technologies for emerging compounds**

Chair: Jonathan Clement (PWN Technologies)

- 08.30 – 08.50 **Personal care products and pharmaceuticals in new sanitation concepts**
H. Temmink, L. Hernández Leal, M. de Graaff, G. Zeeman
- 08.50 – 09.10 **Batch and fixed bed studies for insecticide carbofuran adsorption onto palm oil fronds activated carbon**
J.M. Salman, A.A. Muhammed (Iraq)
- 09.10 – 09.30 **Drugs of abuse and tranquilizers in Dutch surface waters, drinking water and wastewater**
P. de Voogt, E. Emke, M. van der Aa (The Netherlands)
- 09.30 – 09.50 **On a QSAR approach for the prediction of priority compound degradation by water treatment processes**
B. Wols, D. Vries (The Netherlands)
- 09.50 – 10.10 **Target values of emerging contaminants in drinking water serve as a framework for innovative treatment technologies and analytical methods**
M.B. Heringa, M. Mons, D. van der Kooij, J.P. van der Hoek (The Netherlands)
- 10.10 – 10.30 **Discussion**
- 10.40 – 11.10 **Coffee break**

Room **Session 6: Sensor technologies in water treatment and water distribution**

Chair: Harry Tinmer (Oasen)

- 11.00 – 11.20 **On-line monitoring and control of groundwater treatment plants**
P.S. Ross, K.M. van Schagen, W. van de Ven, S. Bakker, W. Wuestman, L.C. Rietveld (The Netherlands)

11.20 – 11.40	Analysis of nanoparticles in treated domestic wastewater for improved understanding and prevention of membrane fouling M. Schultz, M. Boulestrau, M. Godehardt, U. Miehe, M. Jekel (Germany)
11.40 – 12.00	Bacterial regrowth potential of drinking water measured with a new online sensor G.J.W. Euverink, C.J. Ingham, G. Wubbels, P. van der Maas (The Netherlands)
12.00 – 12.20	An inline autonomous monitor to detect microorganisms G.G. Tamminga, A. Paulitsch Fuchs, G.J. Jansen, G. van der Meer, F.R. van der Leij, G.J.W. Euverink (The Netherlands)
12.20 – 12.40	Biofouling formation in membrane systems; biocides and complementary treatments for biofouling control; techniques to monitor biofilm growth W. Hater, C. zum Kolk (Germany)
12.40 – 13.00	Discussion
13.00 – 14.00	Lunch
Room	Session 7: The use of modeling and ICT in water technology (1) Chair: Luuk Rietveld (Delft University of Technology)
14.00 – 14.20	Model based operation in the water cycle A.W.C. van der Helm, C.J. Ruiken, K.M. van Schagen, L.C. Rietveld (The Netherlands)
14.20 – 14.40	Asset control – leading edge technology improves wastewater transport systems C. Lubbers (The Netherlands)
14.40 – 15.00	Full-scale wastewater treatment plant using short-term flow prediction K.M. van Schagen, M.F. de Koning, J.W. Koelewijn, D. van Kleef (The Netherlands)
15.00 – 15.20	SmaRTControl in Amsterdam K. de Korte (The Netherlands)
15.20 – 15.40	Discussion
15.40 – 16.00	Tea break
Room	Session 8: The use of modeling and ICT in water technology (2) Chair: Djeevan Schiferli (IBM)
16.00 – 16.20	Time for 'intelligent' water supply F. Jutte, R. Schotsman (The Netherlands)
16.20 – 16.40	Higher energy efficiency and better water quality by using model predictive flow control at water supply systems M. Bakker, J.Q.J.C. Verberk, L.J. Palmén, V. Sperber, G. Bakker (The Netherlands)
16.40 – 16.50	Discussion
16.50 – 17.00	Closing

REGISTRATION VIA WWW.INTERNATIONALWATERWEEK.COM

The conference fee covers attendance at the conference sessions, conference documentation, conference dinner on Tuesday 1 November or Thursday 3 November, morning and afternoon coffee/teas and lunch, attendance at RAI exhibition. Below prices are excl. of 19% VAT.

Categories	Early bird rate (before 1st September)	Normal rate (after 1st September)
Member KNW	€ 545,-	€ 595,-
Non member	€ 565,-	€ 595,-
Student	€ 150,-	€ 200,-
RAI exhibitor (5 places)	€ 365,-	€ 415,-
Day rate	€ 356,-	€ 395,-
Passe-partout for all conferences	€ 896,-	€ 995,-
Technical visit	€ 60,-	€ 60,-
Conference dinner ticket	€ 100,-	€ 100,-

The online registration form is available at www.internationalwaterweek.com. After we have received your registration we will send you an invoice with the information how to pay the fee. All remittances should be made in Euro's. Above prices are exclusive of the prevailing Goods & Services TAX (as a guide to delegates the current exchange rate of Euro € 1,- = US \$ 1,28). The organising committee of the conference will confirm registrations after receipt of the payment.

Early Bird Discount:

For registrations confirmed and paid before the 1th of September.

Cancellation:

Before the 1st September 2011, a total refund minus a € 100,- administration fee will be issued.
Between the 1st September – 15th September 2011 a 50% refund will be issued.

After the 15th September 2011, no refund will be made for cancellation.

Refunds of registration after must be applied for in writing and will be settled after the conference.

For registration please visit
www.internationalwaterweek.com

EXCURSIONS

During the International Waterweek there will be several excursions. The costs are € 60,- per excursion. Please mention this on your registration form. On the website www.internationalwaterweek.com you can find information about all the excursions and more information.

Waste Water Plant Amsterdam-West & Energy Plant Amsterdam

Monday 31 October

Visit the largest wastewater treatment plant in Amsterdam (1 million p.e.) in combination with the largest Waste to Energy plant in the world. More than 1.5 million ton of waste and sludge is incinerated at this plant.

Amsterdam Waste Management Plant, source of sustainable energy

Thursday 3 November

Visit the largest Waste to Energy plant in the world. More than 1.5 million ton of waste and sludge is incinerated at this plant. It's results will be demonstrated, knowledge and expertise will be exchanged. More than 1.5 million ton of waste and sludge is incinerated at this plant.

Waste Water Treatment Plant Amsterdam-West

Thursday 3 November

Visit the largest wastewater treatment plant in Amsterdam (1 million p.e.)

CONFERENCE VENUE

Amsterdam RAI is the largest exhibition and convention centre in the Netherlands. The venue offers 12 multi-function exhibition halls (87,000 m²) and 22 congress rooms. RAI Exhibitions, part of Amsterdam RAI, specialises in the organisation of national and international consumer and trade fairs. RAI Exhibitions stages approximately 25 fairs a year in the following categories: professional cleaning; water technology; traffic technology; maritime; automotive; lifestyle; art; food; and government services. More information about the Amsterdam Rai can be obtained at www.rai.nl

CONFERENCE DINNER

The conference dinner will take place on Thursday 3 November. The dinner will be in the centre of Amsterdam. The dinner is included in the conference fee. More information will be available later.

ACCOMPANYING PERSONS

Through the hotels a variety of touristic tours in Amsterdam and the surrounding cities are organized every day. accompanying persons are welcome to attend the conference dinner on Thursday 3 November. The fee for accompanying persons is €100,-. Please mention this option on your registration form.

HOTEL RESERVATIONS

For hotel reservation please visit www.moorga.com and select your conference. You can find all information and bookings of the different hotels in Amsterdam near the RAI conference centre. On the website the organising committee made a selection of 4 hotels near the conference venue, so all delegates can stay in vicinity.

GENERAL INFORMATION

Conference venue

The conference will take place in the RAI Conference centre, Europaplein 22, 1078 GZ Amsterdam, the Netherlands.

Transport

Transport from Amsterdam Schiphol Airport to RAI Conference centre:

- by train directly from the airport to Amsterdam RAI station; every 15 minutes (transfer time 15 minutes). From station RAI a 5 minute walk to the Conference centre.
- of course also taxi's are available at the Airport and Central station of Amsterdam.

Visa

Delegates should check if they require visa for entry to the Netherlands. If any delegate experiences difficulty obtaining a visa please contact the secretariat.

Climate

The Netherlands have a maritime climate. In November the average daily temperature is 9 degrees Celsius and generally mild. A raincoat is advisable.

Conference language

The conference language is English. Therefore, all papers and posters are written and presented in English. There will be no translation facilities.

Insurance

Participants are advised to check whether they are insured during their stay in the Netherlands. Although good care will be taken of the participants, the organisers cannot be held responsible for any loss, damage or personal harm.

Publication

The papers and posters will be published on cd-rom.

SURPRISING AMSTERDAM

Unique city of water

Amsterdam's ties to water are inextricable. The city was not only founded on water, it continues to play a significant role. The Amsterdam Metropolitan Area is renowned for the major role water plays in daily life. It was during the Golden Age that Amsterdam developed into the most prosperous city in Europe on the heels of thriving transoceanic trade. The Dutch have also had to battle against – and ultimately prevailed over – water. With this rich tradition of working together to live with water, Amsterdam has developed into a bustling commercial centre, tourist destination and cultural stronghold.

Things to do and see in Amsterdam

A canal trip is the best way to see the most characteristic parts of Amsterdam. In November the canals are illuminated with thousands of lights. In the Vincent van Gogh museum, the Historic museum or the Municipal museum you will find a great collection of classic and modern art. The house where Rembrandt lived and worked is open to visitors.

Public events

During the week public events will be staged on different locations throughout the city of Amsterdam. These public events should increase the familiarity of residents and visitors with the various stories and images that are part of the unique features of this water city. It also highlights Amsterdam as an appealing economic, tourist and cultural destination and as a unique city with a rich history in which its people live on and near the water.

ORGANISING COMMITTEE

Roelof Kruize	Waternet, the Netherlands
Gerard Blom	Deltares, the Netherlands
Martien den Blanken	PWN, the Netherlands
Peter de Jong	Witteveen + Bos, the Netherlands
Monique Bekkenutte	Royal Netherlands Water Network (KNW), the Netherlands

PROGRAMME COMMITTEE

Jan Peter van der Hoek	Waternet / Delft University of Technology, the Netherlands
Luuk Rietveld	Delft University of Technology, the Netherlands
Wim van Vierssen	KWR Watercycle Research Institute / Delft University of Technology, the Netherlands
Cees Buisman	Wetsus, the Netherlands
Mark van Loosdrecht	Delft University of Technology / KWR Watercycle Research Institute, the Netherlands
Hendrik Jan IJsinga	VEWIN, the Netherlands
Jonathan Clement	PWN Technologies, the Netherlands
Djeevan Schiferli	IBM, the Netherlands
Lute Broens	Norit, the Netherlands
Henk Ardesch	Oasen, the Netherlands

All information can be obtained from:

Conference secretariat Moorga

Havenplein 5
1721 CA Broek op Langedijk
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E waterinnovation@moorga.com
I www.internationalwaterweek.com
or www.moorga.com (latest news)

Conference location:

RAI Conference centre

Europaplein 22
1078 GZ Amsterdam
The Netherlands

Partners conferences:

waternet

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OVERALL PROGRAMME CONGRESSES

	CONGRESSES	EXCURSIONS
Monday 31-10-2011	Watercities in Transition (NEMO) Young Water Professionals (Waternet)	<ul style="list-style-type: none"> • Waste water plant Amsterdam West & Energy Plant Amsterdam • Amsterdam Water Management; a glance behind the stages • Flood protection in Amsterdam, a multi layer safety approach • Drinkwater winning area Leiduin: a bike safari • History of the Amsterdam Watercycle: a boat tour
Tuesday 01-11-2011	Watercities in Transition (NEMO) Young Water Professionals (Waternet) Water related to sustainable energy (West Indisch House)	<ul style="list-style-type: none"> • Flood early warning in the Amsterdam area • Flood protection in Amsterdam, a multi layer safety approach
Wednesday 02-11-2011	Water Operator Partnership (Waternet) Water related to sustainable energy (West Indisch House) Young Water Professionals (RAI)	<ul style="list-style-type: none"> • WATERgraafsmeer • Zuidas, Amsterdam: urban densification • Amsterdam Water Management; a glance behind the stages • Drinkwater winning area Leiduin: a bike safari
Thursday 03-11-2011	Water & Innovation : Watertechnology (RAI) International conference on Benchmarking (RAI) Young Water Professionals (RAI)	<ul style="list-style-type: none"> • Lake Ouderkerkerplas: cold retrieval and water-quality improvement • Amsterdam Water Management; a glance behind the stages • Technical visit HVC
Friday 04-11-2011	Water & Innovation: Watertechnology (RAI) International Conference on Benchmarking (Waternet) Young Water Professionals (RAI)	<ul style="list-style-type: none"> • IJburg, Amsterdam: building a neighbourhood in Lake IJmeer • Flood protection in Amsterdam, a multi layer safety approach • History of the Amsterdam Watercycle: a boat tour