



<p><b>U2 Hall I &amp; K</b></p> <p><b>KEYNOTE PLENARY SESSION</b>  <b>8.15 New and virtual water: trends and challenges</b>  <b>Alexander Zehnder</b> Alberta Water Research Institute <b>Canada</b>  <b>Introduced by Helmut Kroiss</b> TU Vienna <b>Austria</b></p> <p><b>O1 Lounge 5</b></p> <p><b>ADAPTING TO THE IMPACTS OF CLIMATE CHANGE</b></p> <p><b>Adapting to the impacts of climate change 1</b>  <b>Chair Carol Howe</b> The Netherlands</p> <p>9.00 Integrated systems evaluation of climate change and future adaptation strategies for the Lower River Murray, Australia <b>John Ward</b> Australia <b>663641</b></p> <p>9.20 Influence of climate change on water resources in an alpine region <b>Carolina Engelhard</b> Austria <b>665143</b></p> <p>9.40 Living with climate change: adapting to global warming impacts on Australian water supplies <b>Will Strachan</b> Australia <b>664423</b></p> <p>10.00 Impacts of meteorological extreme events on the safety of drinking water supply in Austria <b>Mario Unterwainig</b> Austria <b>663665</b></p> <p><b>P</b> 10.20 Stochastic soil moisture model derivation with cumulant expansion theory in steady-state condition <b>Suhee Han</b> Korea <b>665845</b></p> <p><b>P</b> 10.25 From El Nino to La Nina and back: challenges of managing coastal areas through climate change <b>Amit Chanan</b> Australia <b>665940</b></p>	<p><b>U2 Hall G &amp; H</b></p> <p><b>KEYNOTE PLENARY SESSION</b>  <b>8.15 Cities of the future</b>  <b>Paul Brown</b> Camp Dresser &amp; McKee Inc <b>USA</b>  <b>Introduced by Suez Environment</b></p> <p><b>O1 Hall L</b></p> <p><b>HEALTH AND THE ENVIRONMENT</b></p> <p><b>Hazard analysis and detection methods 1</b>  <b>Chair Wolfgang Kuehn</b> Germany</p> <p>9.00 Picogram determination of N-nitrosodimethylamine in water <b>Ruikang Hu</b> Singapore <b>664238</b></p> <p>9.20 Use of comprehensive two-dimensional GC for the broad screening of hazardous contaminants in urban wastewaters <b>Semard Gaelle</b> France <b>665209</b></p> <p>9.40 Emissions of perfluorinated alkylated substances (PFAs) from point sources: identification of relevant branches <b>Manfred Clara</b> Austria <b>664062</b></p> <p>10.00 Multidetector of waterborne pathogens in raw and treated water samples using DNA array technology <b>Sophie Courtois</b> France <b>665391</b></p> <p>10.20 Bacteriophages of bacteroides as faecal source trackers <b>Muniesa Maite</b> Spain <b>663790</b></p> <p><b>P</b> 10.40 Assessing the fate of priority substances and pertinent emerging pollutants in wastewater treatment: a challenging task for environmental laboratories <b>Mar Esperanza</b> France <b>664816</b></p>
<p><b>Morning break 10.30</b></p>	
<p><b>ADAPTING TO THE IMPACTS OF CLIMATE CHANGE</b></p> <p><b>Adapting to the impacts of climate change 2</b>  <b>Chair Henk van Schaik</b> The Netherlands</p> <p>11.15 The impact of climate change on drinking water supply by riverbank filtration <b>Paul Eckert</b> Germany <b>666988</b></p> <p>11.35 Analyzing water quality changes due to reservoir management and climate change for optimization of drinking water treatment <b>Wolfgang Uhl</b> Germany <b>664906</b></p> <p>11.55 Water supply planning to face up to climatic change <b>Raquel Chamochin</b> Spain <b>667119</b></p> <p>12.15 Effects of global warming on waterworks: a proposal from Japan <b>Yoshihiko Misono</b> Japan <b>664382</b></p> <p><b>P</b> 12.35 Effect of climate change on peak demands <b>Jan Vreeburg</b> The Netherlands <b>663704</b></p> <p><b>P</b> 12.40 An action for climate change by Tokyo waterworks <b>Norikazu Yamamuro</b> Japan <b>664466</b></p>	<p><b>HEALTH AND THE ENVIRONMENT</b></p> <p><b>Hazard analysis and detection methods 2</b>  <b>Chair Frans Schulting</b> The Netherlands</p> <p>11.15 Application of direct LC-MS detection for the monitoring of the water quality of the Danube <b>Wolfram Seitz</b> Germany <b>668549</b></p> <p>11.35 Drinking water protection: saved by the system: the case of detection and follow-up to methylene chloride in the Ohio River, USA <b>Alan Vicory</b> United States <b>665178</b></p> <p>11.55 Use of quantum dot for immunofluorescent and immunoelectrochemical detection and identification of microcystin-Lr from cyanobacteria <b>In S Kim</b> Korea <b>667048</b></p> <p>12.15 Tracking the source of faecal pollution in water: quantitative microbial source tracking of genetic markers from human and ruminant origin <b>Georg Reischer</b> Austria <b>662903</b></p> <p><b>P</b> 12.35 Decentralized collection of iodinated x-ray contrast media in hospitals: results of feasibility study and practice test phase <b>Bernd Heinzmann</b> Germany <b>663607</b></p> <p><b>P</b> 12.40 Estimation of pesticide runoff to evaluate the monitoring priority of pesticide on water quality management <b>Motoyuki Kamata</b> Japan <b>666153</b></p>
<p><b>Lunch 12.45</b></p>	
<p><b>WORKSHOP</b></p> <p><b>Education in engineering</b></p> <p>2.15 Emerging challenges to managing the water cycle coupled with a general shortage of skilled staff provide the sector with a pressing need to enhance the capacity of existing and, moreover, the next generation of sector staff. This workshop provides an international discussion forum for new and innovative concepts in environmental engineering education to ensure that the long-term resource needs of the sector can be met.</p>	<p><b>HEALTH AND THE ENVIRONMENT</b></p> <p><b>Water safety plans</b>  <b>Chair Jodieann Dawe</b> Australia</p> <p>2.15 Implementation of a technical risk management concept based on water safety plans: a benefit for German water supply? <b>Wolfgang Merkel</b> Germany <b>663947</b></p> <p>2.35 Quantitative risk assessment in the water safety plan: case studies from drinking water practice <b>Gertjan Medema</b> The Netherlands <b>667613</b></p> <p>2.55 Drinking water safety plans: getting from guidance to reality <b>Tim Darlow</b> United Kingdom <b>664012</b></p> <p>3.15 Water safety plan of an artificial groundwater recharge site with reclaimed water for drinking water production <b>Chris Thoeys</b> Belgium <b>669483</b></p> <p><b>P</b> 3.35 Regulator verification of drinking water analysis through an audit trail process <b>David Drury</b> United Kingdom <b>662768</b></p> <p><b>P</b> 3.40 Microbiological water quality of a massive riverbank filtration system on the Danube River <b>Jean-Jacques Grandguillaume</b> France <b>665166</b></p>
<p><b>Afternoon break 3.45</b></p>	
<p><b>WORKSHOP</b></p> <p><b>Education in engineering</b></p> <p>4.30 Continued</p>	<p><b>HEALTH AND THE ENVIRONMENT</b></p> <p><b>Risk assessment, disease burden and health surveillance</b>  <b>Chair Rosina Girones</b> United States</p> <p>4.30 Methods and techniques for risk assessment of water supply systems <b>Ladislav Tuhovcak</b> Czech Republic <b>664464</b></p> <p>4.50 Experiences of policy makers, regulators, utilities and scientists with implementation of legislative GMRA for drinking water in The Netherlands <b>Ana Maria de Roda Husman</b> The Netherlands <b>667626</b></p> <p>5.10 Selection and adaptation of a risk assessment method for drinking water supply <b>Claudia Niewersch</b> Germany <b>665925</b></p> <p>5.30 Calculating the risk of contamination of vegetables from irrigation <b>Katrina Charles</b> United Kingdom <b>666319</b></p> <p><b>P</b> 5.50 Enteropathogenic viruses and bacterial faecal indicators in German raw waters for drinking water treatment <b>Beate Hamsch</b> Germany <b>665160</b></p> <p><b>P</b> 5.55 Waterborne health hazards attributable to drinking water in Japan <b>Toshiro Yamada</b> Japan <b>664860</b></p>

7.00 – 9.00 pm **Concert at Musikverein with Vienna Symphony Orchestra, Böesendorferstr 12, Musikverein, 1010 Vienna.** Bring your ticket to gain entry. Musikverein is five minutes' walk from Karlsplatz train station. If you have not purchased a ticket, please go to the Registration Desk and check availability.



<h2>U2 Hall I &amp; K</h2>	<h2>U2 Hall G &amp; H</h2>
<p><b>KEYNOTE PLENARY SESSION</b>  <b>8.15 New and virtual water: trends and challenges</b>  <b>Alexander Zehnder</b> Alberta Water Research Institute <b>Canada</b>  <b>Introduced by Helmut Kroiss</b> TU Vienna <b>Austria</b></p>	<p><b>KEYNOTE PLENARY SESSION</b>  <b>8.15 Cities of the future</b>  <b>Paul Brown</b> Camp Dresser &amp; McKee Inc <b>USA</b>  <b>Introduced by Suez Environment</b></p>
<h2>O1 Hall M</h2>	<h2>O1 J 565</h2>
<p><b>MANAGING AND PLANNING WATER SERVICES</b></p> <p><b>Strategic management of water resources in urban water systems 1</b>  <b>Chair Mary-Ann Dickinson</b> United States</p> <p>9.00 Modelling the impacts of climate change on a water treatment plant in South Australia <b>Olivia Thorne</b> United Kingdom <b>664879</b></p> <p>9.20 Water interchange between agriculture and the urban supply <b>Francisco Cubillo</b> Spain <b>667683</b></p> <p>9.40 Assessing desalination as a sustainable alternative using a multiple criteria decision support model <b>Maria do Céu Almeida</b> Portugal <b>668886</b></p> <p>10.00 Measuring the metabolism of decentralised urban developments: do they demonstrate increased urban sustainability? <b>Ted Gardner</b> Australia <b>667580</b></p> <p><b>P</b> 10.20 Managing and planning water services <b>Islam Ul-haque</b> Pakistan <b>667109</b></p> <p><b>P</b> 10.25 Service procurement selection methodology <b>Greg Cashin</b> Australia <b>663060</b></p>	<p><b>WORKSHOP</b></p> <p><b>100 years of disinfection</b>  <b>Chair Joan Rose</b> United States</p> <p>9.00 Dr Harriet Chick's discovery and the history of disinfection <b>Joan Rose</b> United States</p> <p>9.10 100 years of disinfection kinetics in water and beyond <b>Chuck Haas</b> United States</p> <p>9.30 Chlorine disinfection: how does it work? Quality assurance and quality control <b>Chuck Haas</b> United States</p> <p>9.45 Ozone disinfection: how does it work? Quality assurance and quality control</p> <p>10.00 UV disinfection: how does it work? Quality assurance and quality control <b>Regina Sommer</b> Austria</p> <p>10.15 Membrane filtration: how does it work? Quality assurance and quality control <b>Joe Jacangelo</b> United States</p>
<p style="text-align: center;"><b>Morning break 10.30</b></p>	
<p><b>MANAGING AND PLANNING WATER SERVICES</b></p> <p><b>Strategic management of water resources in urban water systems 2</b>  <b>Chair Bruno Nguyen</b> France</p> <p>11.15 Multi-objective optimization of energy management in water supply systems <b>Helena M Ramos</b> Portugal <b>665138</b></p> <p>11.35 An integrated design, build, operate alliance for the delivery of the Gold Coast desalination project <b>Greg Cashin</b> Australia <b>663110</b></p> <p>11.55 Getting ready for climate change: implications for the United States West Coast <b>Perri Standish-Lee</b> United States <b>662968</b></p> <p>12.15 Optimum use of gravity springs in water supply systems <b>Katarina Tothova</b> Slovak Republic <b>668356</b></p> <p><b>P</b> 12.35 Institutional challenges and opportunities: decentralized and integrated water resource infrastructure <b>Valerie I Nelson</b> United States <b>666639</b></p> <p><b>P</b> 12.40 Water options as a new tool for facilitation of water allocation efficiency <b>Sergei Schreider</b> Australia <b>664316</b></p>	<p><b>WORKSHOP</b></p> <p><b>100 years of disinfection</b>  <b>Chair Joan Rose</b> United States</p> <p>11.05 European perspective <b>Gertjan Medema</b> The Netherlands</p> <p>11.30 North American perspective <b>Mark Sobsey</b> United States</p> <p>11.45 Mexican perspective <b>Blanca Jiminez</b> Mexico</p> <p>12.00 Asian perspective</p> <p>12.15 Discussion</p>
<p style="text-align: center;"><b>Lunch 12.45</b></p>	
<p><b>MANAGING AND PLANNING WATER SERVICES</b></p> <p><b>Demand management, water conservation and metering</b>  <b>Chair Stuart Hamilton</b> United Kingdom</p> <p>2.15 Characterization of end uses and explanatory factors on consumption of water for domestic use <b>Francisco Cubillo</b> Spain <b>667535</b></p> <p>2.35 Non-intrusive leak detection in large diameter, low-pressure non-metallic pipes: are we close to finding the perfect solution? <b>Malcolm Farley</b> United Kingdom <b>668740</b></p> <p>2.55 Automatic meter reading system that finds leaks <b>Tim Waldron</b> Australia <b>667057</b></p> <p>3.15 Partnerships for enhancing the water-saving culture in Zaragoza, Spain <b>Sam Kayaga</b> United Kingdom <b>663381</b></p> <p><b>P</b> 3.35 Water demand reduction for outdoor uses: efficient gardening <b>Raquel Chamochin</b> Spain <b>667125</b></p> <p><b>P</b> 3.40 Major upcoming non-revenue water reduction: performance-based contract for Dar es Salaam, Tanzania <b>Peter Macy</b> United States <b>666647</b></p>	<p><b>WORKSHOP</b></p> <p><b>Urban water decision-making</b>  <b>Chair Stuart White</b> Australia</p> <p>2.20 Understanding water demand for efficient management <b>Ludwig Pawlovsky</b> Germany, <b>Robert Wescott</b> UK</p> <p>2.35 Water and energy: a new framework for planning <b>Stuart White</b> Australia, <b>Mary Ann Dickinson</b> USA, <b>Tom Chesnutt</b> USA</p> <p>2.50 Asset management: learnings for planning <b>Nicola Bazurro</b> Italy</p> <p>3.05 Integrating security in systems operation: new challenges <b>Bruno Nguyen</b> France</p> <p>3.20 Panel discussion</p>
<p style="text-align: center;"><b>Afternoon break 3.45</b></p>	
<p><b>MANAGING AND PLANNING WATER SERVICES</b></p> <p><b>Disaster preparedness response and recovery</b>  <b>Chair Don Broussard</b> United States</p> <p>4.30 The response to the Wilma hurricane: lessons learned by the water and sanitation services in Cancun <b>Gerardo Aguilera Soriano</b> France <b>663707</b></p> <p>4.50 Added value of online satellite data transmission for flood forecasting: warning systems in medium sized catchments <b>Christophe Ruch</b> Austria <b>665381</b></p> <p>5.10 The first tier of rapid toxic material assay in response to heightened water security <b>Qiantao Cai</b> Singapore <b>666376</b></p> <p>5.30 Containerised mobile water treatment unit <b>Ramchandran Natarajan</b> India <b>662922</b></p> <p><b>P</b> 5.50 The influence of tsunamis on water treatment at purification plants along the Yodo River <b>Takeshi Tanaka</b> Japan <b>665071</b></p> <p><b>P</b> 5.55 Some experience of water operations in facing extreme hydro-climatic event consequences <b>Hao-Nhien Pham</b> France <b>663779</b></p>	<p><b>WORKSHOP</b></p> <p><b>Urban water decision-making</b>  <b>Chair Stuart White</b> Australia</p> <p>4.30 Public participation in water supply-demand management <b>Stuart White</b> Australia</p> <p>4.45 Improvements in efficiency experiences in the USA <b>Mary Ann Dickinson</b> USA</p> <p>5.00 Integrating water and urban initiatives: experiences in Pamplona <b>Javier Torrens</b> Spain</p> <p>5.15 Looking for efficiency in low and middle income countries <b>Roland Liemberger</b> Austria, <b>Malcolm Farley</b> UK</p> <p>5.30 Discussion with panel</p>

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<b>O1 J 241</b>	<b>O1 Hall N</b>
<b>WATER TREATMENT</b>	<b>WATER RESOURCES AND RIVER BASIN MANAGEMENT</b>
<b>Membranes in water treatment 1</b> <b>Chair Samer Adham</b> Qatar 9.00 Phenols and dicarboxylic acids removal from aqueous solutions by NF/RO membranes <b>Arcadio Sotto</b> Spain 665395 9.20 Influence of organic and colloidal fouling on the removal of sulfamethoxazole by nanofiltration membranes <b>Christiane Esendiller</b> Germany 664321 9.40 Electrostatic repulsion as a mechanism in fouling of ultrafiltration membranes <b>Vitaly Gitis</b> Israel 667006 10.00 Cleaning solutions assessment for nanofiltration membrane in drinking water treatment plant <b>Kecili Karima</b> France 664079 <b>P</b> 10.20 Fractionation of biofilter effluent and their impact in membrane fouling process <b>Andreas Farnleitner</b> Austria 666710 <b>P</b> 10.25 Towards less than 0.4 kwh m3 energy consumption of membrane bioreactor for water reclamation <b>Guihe Tao</b> Singapore 664680	<b>Assessment of anthropogenic impacts on water quality</b> <b>Chair Harry Zhang</b> United States 9.00 Field observations and management policy for hot spring used water in Wulai Area, Taiwan <b>Chi-Feng Chen</b> Chinese Taiwan 665995 9.20 A decision model for good chemical and ecological status implementation in river basins <b>Cunha Maria</b> Portugal 664237 9.40 DNA based quantitative microbial source tracking (QMST) on a large scale in the Danube River catchment area <b>Georg Reischer</b> Austria 667712 10.00 Endocrine disrupters compounds (EDCS) and pharmaceuticals presence in the Paris suburbs rivers <b>Caroline Lecarpentier</b> France 665024 <b>P</b> 10.20 A simplified conflict resolution model for reservoir operation considering water quantity issues <b>Reza Kerachian</b> Iran 665833 <b>P</b> 10.25 Algal fate and behaviour in the San Joaquin river, California, USA <b>Gary Litton</b> United States 665922
<b>Morning break 10.30</b>	
<b>WATER TREATMENT</b>	<b>WATER RESOURCES AND RIVER BASIN MANAGEMENT</b>
<b>Membranes in water treatment 2</b> <b>Chair Jean-Michel Laine</b> France 11.15 Rejection of pharmaceuticals and personal care products (PPCPs) and endocrine disrupting chemicals (EDCs) by low pressure reverse osmosis membranes <b>Hiroaki Ozaki</b> Japan 663615 11.35 Influence of calcium on membrane fouling in MF membrane caused by hydrophilic fraction of NOM <b>Hiroshi Yamamura</b> Japan 664198 11.55 Enhancing boron rejection in seawater reverse osmosis facilities <b>Robert Huehmer</b> United States 667039 12.15 Protein fouling and chemical cleaning of RO membrane <b>Huajuan Mo</b> Singapore 664480 <b>P</b> 12.35 Ultrasound enhanced backwashing in ultrafiltration modules with ceramic membranes: results with natural surface water <b>Angela Boley</b> Germany 666763 <b>P</b> 12.40 Barcelona desalination plant: 200 000 m3/day of drinking water <b>Frédéric Gueguen</b> France 667670	<b>Monitoring system development and data management</b> <b>Chair Myron Rosenberg</b> United States 11.15 Assessing crucial stress on life cycle of fish in suburban streams <b>Yutaka Sakakibara</b> Japan 663994 11.35 Assessment of groundwater monitoring networks using the entropy theory and the C-means clustering method <b>Reza Kerachian</b> Iran 666463 11.55 Intelligent monitoring networks: transformation of data into information for water management <b>Stefan Winkler</b> Austria 668736 12.15 Trophic structure of stream macroinvertebrate communities revealed by stable isotope analysis <b>Kozo Watanabe</b> Japan 664425 12.35 Monitoring methods and decision support for landuse activities <b>Stefan Kollarits</b> Austria 666558 <b>P</b> 12.40 A decision support system for the real-time analysis and management of reservoir turbidity flows <b>Se Woong Chung</b> Korea 665586 <b>P</b> 12.45 Second joint Danube survey: a comprehensive water quality investigation on a large river <b>Igor Liska</b> Austria 669170
<b>Lunch 12.45</b>	
<b>WATER TREATMENT</b>	<b>WATER RESOURCES AND RIVER BASIN MANAGEMENT</b>
<b>Membranes in water treatment 3</b> <b>Chair Peer Kamp</b> The Netherlands 2.15 Investigating membrane biofouling from perspectives of bacteria size and shape using flow field-flow fraction <b>Eunkyung Lee</b> Korea 665894 2.35 Risk management approach for monitoring ultrafiltration membrane integrity and experimental validation using MS2-phages <b>Anne Brehant</b> France 665304 2.55 Modelling of external and internal concentration polarization effect on flux behaviour of forward osmosis <b>Chien Hsiang Tan</b> Singapore 665802 3.15 Multifunctional TiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> UF membrane for drinking water treatment <b>Xiwang Zhang</b> Singapore 664397 <b>P</b> 3.35 Seawater desalination by reverse osmosis: advances in technology and energy efficiency <b>Wolfgang Neubrand</b> Switzerland 667867 <b>P</b> 3.40 Organic fouling of nanofiltration membranes: force measurements of organic foulants in systems containing coagulant and divalent cations <b>Darren Delai Sun</b> Singapore 664698	<b>Model development and application 1</b> <b>Chair Qiuwen Chen</b> China 2.15 Uncertainty effects in a simulation-optimization model and application of a distributed TMDL <b>Chi-Feng Chen</b> Chinese Taiwan 665954 2.35 A hydroinformatic tool for estuarine water quality management <b>Jose M.P. Vieira</b> Portugal 666062 2.55 Prediction of the Huangpu River's water quality, Shanghai in 2010 World Expo based on tidal river network model <b>Hailong Yin</b> China 666426 3.15 Hydro-economic analysis of water supply for the binational transboundary region of Baja California, Mexico <b>Leopoldo Mendoza</b> Mexico 665936 <b>P</b> 3.35 Error analysis of a steady state water quality model, qual2e using a combination of EFDC-hydro and WASP7.2 <b>Dongil Seo</b> Korea 663406 <b>P</b> 3.40 Dynamic 3D groundwater model for a gravel bar at the Danube River bank <b>Julia Drex</b> Austria 665023
<b>Afternoon break 3.45</b>	
<b>WATER TREATMENT</b>	<b>WATER RESOURCES AND RIVER BASIN MANAGEMENT</b>
<b>Conventional and full-scale treatment</b> <b>Chair Joel Mallevialle</b> France 4.30 Objectives for optimization and consequences for operation, design and concept of drinking water treatment plants <b>Luuk C Rietveld</b> The Netherlands 665448 4.50 Customer-demand-based drinking water softening policy towards realisation of softening plants at WML in The Netherlands <b>Luc Jozef Palmen</b> The Netherlands 665097 5.10 Experimental study of sand filters conversion into granular activated carbon filters at La Presa water works, Valencia <b>Javier Macián Cervera</b> Spain 663121 5.30 Effects of several water quality parameters on arsenic removal by coagulation: laboratory experiments and a pilot-scale study <b>Dora Laky</b> Hungary 666083 <b>P</b> 5.50 Approach to water treatment process selection and design to maximize sustainability and mitigate environmental impact <b>Jesus Garcia-Aleman</b> Canada 666812 <b>P</b> 5.55 Comparison between iron and aluminum salts for the coagulation of low turbidity and high pH source water <b>Hsuan-Hsien Yeh</b> Chinese Taiwan 666191	<b>Model development and application 2</b> <b>Chair Qiuwen Chen</b> China 4.30 Developing a conflict resolution model for conjunctive use of surface and groundwater resources: application of NSGA-II and the Nash bargaining theory <b>Reza Kerachian</b> Iran 666905 4.50 Characterization and modelling of turbidity density plume induced into stratified reservoir by flood runoffs <b>Se Woong Chung</b> Korea 663841 5.10 An objective test of stochastic behaviour in riverine water quality models <b>Geoffrey Thomas Parker</b> Canada 664406 5.30 Modelling raw water quality: development of a drinking water management tool <b>Christine Kübeck</b> Germany 664885 <b>P</b> 5.50 Distributed modelling of river water quantity and quality in a hilly forested watershed using remote sensing and GIS inputs <b>Binaya Raj Shivakoti</b> Japan 666268 <b>P</b> 5.55 Reduction of Sakarya river water quality data by principal component analysis <b>Rabia Koklu</b> Turkey 664739

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<p><b>U2 Hall I &amp; K</b></p> <p><b>KEYNOTE PLENARY SESSION</b>  <b>8.15 New and virtual water: trends and challenges</b>  <b>Alexander Zehnder</b> Alberta Water Research Institute <b>Canada</b>  <b>Introduced by Helmut Kroiss</b> TU Vienna <b>Austria</b></p> <p><b>O1 Hall O</b></p> <p><b>WASTEWATER TREATMENT</b></p> <p><b>Wastewater reclamation and reuse 1</b>  <b>Chair Heechul Choi</b> Korea</p> <p>9.00 Use of polishing pond effluents to cultivate lettuce (<i>Lactuca sativa</i>) in a hydroponic system <b>Regina Keller</b> Brazil <b>665650</b></p> <p>9.20 Removal of effluent organic matter, toxic anions and micropollutants using membranes for sustainable wastewater reclamation <b>Sarper Sarp</b> Korea <b>662774</b></p> <p>9.40 Tertiary polishing of BNR process effluent using autotrophic and heterotrophic hybridization of two-stage filter <b>Kyung Sok Min</b> Korea <b>666761</b></p> <p>10.00 Dissolved organic matter in the sewage effluent of SBR: the impact of pH value <b>Jin Guo</b> China <b>666354</b></p> <p><b>P</b> 10.20 Reclaiming potable quality water from wastewater effluents by new low-temperature distillation method <b>Nagamany Nirmalakhandan</b> United States <b>665449</b></p> <p><b>P</b> 10.25 Comparison of organic micropollutant removal by PAC/NF and NF/GAC treatment of reclaimed water <b>Christian Kazner</b> Germany <b>665973</b></p>	<p><b>U2 Hall G &amp; H</b></p> <p><b>KEYNOTE PLENARY SESSION</b>  <b>8.15 Cities of the future</b>  <b>Paul Brown</b> Camp Dresser &amp; McKee Inc <b>USA</b>  <b>Introduced by Suez Environment</b></p> <p><b>U2 Hall G &amp; H</b></p> <p><b>WORKSHOP</b></p> <p><b>Cities of the future: integrating water and energy into urban design</b>  <b>Chair Paul Brown</b> United States</p> <p>9.00 Introduction and keynotes  Introduction <b>Paul Brown</b> United States  Global changes and new imperatives in water and energy <b>Paul Reiter</b> IWA  New approaches to integrating water and urban design <b>Kala Vairamoorthy</b> United Kingdom</p> <p>9.50 Case studies of cities under stress  • Melbourne and Australia <b>John Langford</b> Australia  • Los Angeles and the US South-west <b>Mark Buehler</b> USA</p> <p style="text-align: right;">Jointly organized by IWA &amp; CDM</p> 
<p><b>Morning break 10.30</b></p>	
<p><b>WASTEWATER TREATMENT</b></p> <p><b>Wastewater reclamation and reuse 2</b>  <b>Chair Peter Cornel</b> Germany</p> <p>11.15 Fate of NDMA and its precursors during polishing of wastewater for artificial groundwater recharge <b>Martin Krauss</b> Switzerland <b>664102</b></p> <p>11.35 Secondary effluent reclamation: combination of pre-treatment and disinfection technologies <b>Laura Alcalde</b> Spain <b>666008</b></p> <p>11.55 Slow sand filtration of treated domestic wastewater as a pretreatment to UF: effects on the performance of UF pilot plant <b>Xing Zheng</b> Germany <b>666635</b></p> <p>12.15 Tertiary treatment for municipal and industrial wastewaters agricultural reuse <b>Cecilia Caretti</b> Italy <b>665325</b></p> <p><b>P</b> 12.35 Process technical oriented aspects of biological removal of 17a-ethinylestradiol in an aerated fixed bed reactor <b>Ilse Forrez</b> Belgium <b>666012</b></p> <p><b>P</b> 12.40 Strategies for controlling photoreactivation after UV disinfection with chlorine <b>Meiting Guo</b> China <b>663467</b></p>	<p><b>WORKSHOP</b></p> <p><b>Cities of the future: integrating water and energy into urban design</b>  <b>Chair Paul Brown</b> United States</p> <p>11.15 Case studies of cities under stress (continued)  • Xian and Urban China <b>Xiaochang Wang</b> China</p> <p>11.35 Panel discussion with <b>John Langford</b> Australia, <b>Rob Skinner</b> Australia, <b>Jim Gill</b> Australia, <b>Pat Mulroy</b> USA, <b>Xiaochang Wang</b> China</p> <p style="text-align: right;">Jointly organized by IWA &amp; CDM</p> 
<p><b>Lunch 12.45</b></p>	
<p><b>WASTEWATER TREATMENT</b></p> <p><b>Wastewater reclamation and reuse 3</b>  <b>Chair Blanca Jimenez</b> Mexico</p> <p>2.15 Indirect potable reuse: balancing costs and benefits <b>Larry Schimmoller</b> United States <b>665152</b></p> <p>2.35 Newater: multi safety barrier approach for indirect potable use <b>Harry Seah</b> Singapore <b>663362</b></p> <p>2.55 The BedZED wastewater reclamation plant: decentralised urban reuse in London using an MBR <b>Bart Verrecht</b> United Kingdom <b>664741</b></p> <p>3.15 Reclamation and agricultural reuse of wastewater: the experience of the Cagliari sewage treatment plant, Sardinia, Italy <b>Andrea Virdis</b> Italy <b>667129</b></p> <p><b>P</b> 3.35 Fate of micropollutants in two artificial recharge sites with reclaimed wastewater <b>Christa McArdell</b> Switzerland <b>665492</b></p> <p><b>P</b> 3.40 Optimising RO for indirect potable reuse <b>Lee A Foster</b> Australia <b>665806</b></p>	<p><b>WORKSHOP</b></p> <p><b>Cities of the future: integrating water and energy into urban design</b>  <b>Chair Kala Vairamoorthy</b> United Kingdom</p> <p><i>New approaches and responses to stress</i></p> <p>2.15 New approaches to integrating water and urban design: principles and experience gained through new town design <b>Peter Head</b> United Kingdom</p> <p>2.40 Case studies of new approaches  • Singapore <b>Khoo Teng Chye</b> Singapore  • Xian <b>Xiaochang Wong</b> China  • Melbourne <b>Rob Skinner</b> Australia  • Los Angeles <b>Paul Brown</b> United States  • Alexandria <b>Carol Howe</b> The Netherlands</p> <p style="text-align: right;">Jointly organized by IWA &amp; CDM</p> 
<p><b>Afternoon break 3.45</b></p>	
<p><b>WASTEWATER TREATMENT</b></p> <p><b>Decentralised wastewater collection and treatment systems</b>  <b>Chair Simon Gonzalez</b> Mexico</p> <p>4.30 Resources and nutrients oriented greywater treatment for reuse <b>Fangyue Li</b> Germany <b>662928</b></p> <p>4.50 Assessing the performance of small-scale greywater treatment systems under controlled laboratory conditions <b>Melissa Toifl</b> Australia <b>668071</b></p> <p>5.10 Ecosan demonstration project at the headquarters of the GTZ, Germany <b>Steffen Blume</b> Germany <b>666111</b></p> <p>5.30 Hydroponics reducing effluent's heavy metals discharge <b>Abdellah Rababah</b> Jordan <b>662780</b></p> <p><b>P</b> 5.50 Infiltration percolation to treat a small community's wastewater <b>Miquel Salgot</b> Spain <b>666358</b></p> <p><b>P</b> 5.55 Decentralized wastewater treatment with the use of a submerged aerated biofilter as an option for the post-treatment of a septic tank effluent <b>Marcelo Nolasco</b> Brazil <b>668190</b></p>	<p><b>WORKSHOP</b></p> <p><b>Cities of the future: integrating water and energy into urban design</b>  <b>Chair Kala Vairamoorthy</b> United Kingdom</p> <p>4.30 Panel discussion: reconciling the present with the future</p> <p>5.45 Wrap-up and preview of day two: <b>Kala Vairamoorthy</b> United Kingdom</p> <p style="text-align: right;">Jointly organized by IWA &amp; CDM</p> 

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Panel: <b>Norbert Jardin, Diane d'Arras</b></p> <p>Jointly organized by IWA &amp; MWH</p> <p>  <b>MWH</b>  <small>BUILDING A BETTER WORLD</small></p> <p><b>SCIENCE AND PRACTICE OF WATER AND SANITATION IN DEVELOPING COUNTRIES</b></p> <p><b>New sanitation approaches for developing countries 1</b>  <b>Chair Heidi Syman</b> South Africa</p> <p>11.15 A measure for provisional and urgent sanitary improvement in developing countries: septic-tank performance improvement <b>Hidegori Harada</b> Japan <b>666136</b>  11.35 Ecosan: sustainable sanitation solution for India <b>Sreevidya Satish</b> India <b>663421</b>  11.55 People-centered approaches in sustaining water, food and environmental sanitation in the Philippines <b>Carlos Miniano Pascual</b> Philippines <b>667303</b>  12.15 Perception of household onsite grey wastewater treatment and reuse in Palestinian rural areas <b>Nidal Mahmoud</b> Palestinian Territory <b>664018</b>  12.35 Hikkaduwa coastal zone waste management project environmental and sanitation effects <b>P Y D De Silva</b> Sri Lanka <b>662036</b>  12.40 Study of ecosan project experiences with the help of GTZ ecosan project data sheets <b>Christine Werner</b> Germany <b>666117</b></p> <p><b>Lunch 12.45</b></p> <p><b>WORKSHOP</b></p> <p><b>Water and energy: jointly optimizing two critical resources</b>  <b>Chair Charles Ainger</b> United Kingdom</p> <p>2.15 Interactions between hydropower generation and water ecology <b>Wolfgang Rauch</b> Austria  2.35 Implications of cooling water demand on inland water resources <b>Leon Duvivier</b> France  2.55 Water and energy dilemmas in developing countries <b>Lawrence E Jones</b> United States  3.15 Discussion: are water issues sufficiently high on the agenda for power companies? Panel: Morning speaker from International Energy Agency, MC representative of IWA Watershed and River Basin Management specialist group</p> <p>Jointly organized by IWA &amp; MWH</p> <p>  <b>MWH</b>  <small>BUILDING A BETTER WORLD</small></p> <p><b>SCIENCE AND PRACTICE OF WATER AND SANITATION IN DEVELOPING COUNTRIES</b></p> <p><b>New sanitation approaches for developing countries 2</b>  <b>Chair Jay Bhagwan</b> South Africa</p> <p>2.15 The ROSA project: a new approach to sustainable sanitation in eastern African cities <b>Guenther Langergraber</b> Austria <b>664279</b>  2.35 Anaerobic co-digestion of kitchen garbage and excess sludge under various temperatures <b>Taira Hidaka</b> Japan <b>664490</b>  2.55 Experiences with sanitation concepts for separate discharge and treatment of grey-, brown- and yellow-water based on an EU demonstration project <b>Anton Peter-Fröhlich</b> Germany <b>663396</b>  3.15 Sanitation and related sustainability criteria <b>Christine Werner</b> Germany <b>666275</b>  3.35 Advancing sanitation outcomes through health communication approach <b>Rose Mary Namboozie</b> Uganda <b>664895</b>  3.40 Environmental and resource performance of a dry UD toilet system in a network with a well performing WWTP <b>Håkan Jönsson</b> Sweden <b>666728</b></p> <p><b>Afternoon break 3.45</b></p> <p><b>WORKSHOP</b></p> <p><b>Water and energy: jointly optimizing two critical resources</b>  <b>Chair Charles Ainger</b> United Kingdom</p> <p>4.30 From microbial fuel cells to bio-electrochemical systems: how to convert organic pollutants to electric energy and more <b>Jurg Keller</b> Australia  4.50 Large-scale heat transfer from wastewater to city heating and cooling systems <b>Tommi Fred</b> Finland  5.10 Emerging water-related technologies for energy production <b>Rafael Waters</b> Sweden  5.30 Final discussion: moving forward, which contributions can IWA provide? Panel: <b>Ase Johannessen, Robyn McGuckin, Teng Chye Khoo, Roelof Kruize, Carl-Emil Larsen</b></p> <p>Jointly organized by IWA &amp; MWH</p> <p>  <b>MWH</b>  <small>BUILDING A BETTER WORLD</small></p> <p><b>SCIENCE AND PRACTICE OF WATER AND SANITATION IN DEVELOPING COUNTRIES</b></p> <p><b>Mitigating water supply challenges in developing countries</b>  <b>Chair Nilaksh Kothari</b> United States</p> <p>4.30 Solar disinfection for household treatment of roof-harvested rainwater <b>M Mansoor Ahammed</b> India <b>667091</b>  4.50 System for treating collected rainwater for human use <b>Garrido Sofia</b> Mexico <b>666764</b>  5.10 Arsenic removal from groundwater using indigenous iron and manganese oxidizing bacteria <b>Tatsuhide Hamasaki</b> Japan <b>665834</b>  5.30 Potential use of monsoon rainwater for drinking purpose in Bangladesh <b>Md Golam Mostafa</b> Bangladesh <b>665985</b>  5.50 Through franchising, uplifting the operation of small locally-managed water services systems <b>Kevin Wall</b> South Africa <b>666072</b>  5.55 Significance of faecal contamination of drinking water in seroprevalences against <i>Helicobacter pylori</i> and <i>Campylobacter jejuni</i> in rural Cambodia <b>Takayuki Miura</b> Japan <b>666486</b>  6.00 Household water treatment, storage and handling: a case study from the Mekong Delta, Vietnam <b>Susanne Herbst</b> Germany <b>665013</b></p>
<p>7.00 – 9.00 pm <b>Concert at Musikverein with Vienna Symphony Orchestra, Böesendorferstr 12, Musikverein, 1010 Vienna.</b> Bring your ticket to gain entry. Musikverein is five minutes' walk from Karlsplatz train station. If you have not purchased a ticket, please go to the Registration Desk and check availability.</p>	



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<b>O1 Lounge 1</b> <b>WASTEWATER TREATMENT</b> <b>Oxidation processes in wastewater treatment 1</b> Chair <b>Michael Sievers</b> Germany 9.00 Comparison of the electrocatalytic characteristics of SnO <sub>2</sub> anodes with nano-coating and non-nano-coating for phenol removal <b>Yujie Feng</b> China 664685 9.20 Heterogeneous photocatalytic ozonation of 2,4-D in dilute aqueous solution with TiO <sub>2</sub> fibre <b>Rabindra Raj Giri</b> Japan 662269 9.40 Effect of temperature on imidacloprid oxidation by homogeneous photo-fenton processes <b>Claudio Zaror</b> Chile 666886 10.00 Electrochemical degradation of pentachlorophenol on a palladium modified gas-diffusion electrode <b>Hui Wang</b> China 663190 <b>P</b> 10.20 Prediction of an azo dye degradation by heterogeneous photo-fenton process using artificial neural networks <b>Masoud Bagherzadeh Kasiri</b> France 665939 <b>P</b> 10.25 Decolorization and degradation of indigo dye acid blue 74 by KMnO <sub>4</sub> /UVH <sub>2</sub> O <sub>2</sub> process <b>Mohammad Ebrahim Olya</b> France 665510	<b>O1 Lounge 2</b> <b>WASTEWATER TREATMENT</b> <b>Upgrading wastewater treatment systems 1</b> Chair <b>Norbert Jardin</b> Germany 9.00 Use of recommendations for the design of activated sludge treatment facilities in different climates <b>Maryna Tserashchuk</b> Germany 665075 9.20 Assessment of climate change impacts on wastewater treatment in Oslo, Norway: a case study on winter operation <b>Benedek Plosz</b> Norway 666695 9.40 Biologically and chemically enhanced clarification: a new concept for providing cost-effective treatment of wet weather flows <b>Julian Sandino</b> United States 662568 10.00 Use of activated sludge plants for enhanced treatment of combined sewage <b>Brigitte Nikolavcic</b> Austria 668387 <b>P</b> 10.20 Bench-scale demonstration of ATPT-anaerobic digestion for upgrading wastewater sludge treatment <b>Masanobu Takashima</b> Japan 665780 <b>P</b> 10.25 Particle size analysis and pilot plant operation used for design of large-scale tertiary treatment microscreen applications <b>Ola Fredriksson</b> Sweden 663953
<b>Morning break 10.30</b>	
<b>WASTEWATER TREATMENT</b> <b>Oxidation processes in wastewater treatment 2</b> Chair <b>Achim Ried</b> Germany 11.15 Treatment of yellow water by membrane separations and advanced oxidation methods <b>Lazarova Zdravka</b> Austria 668826 11.35 Biofilter and advanced oxidation in leachate treatment processes <b>Saravanamuthu Vigneswaran</b> Australia 664719 11.55 Latent remediation: an innovative approach in advanced oxidation technologies <b>Rashmi Chand</b> United Kingdom 663632 12.15 Adsorption and photocatalysis kinetics of UV light responsive and visible light responsive titanium dioxide in wastewater treatment <b>Dang Ho</b> Australia 663872 <b>P</b> 12.35 Beneficial effect of integrated heterogeneous sonophoto-fenton processes in the degradation of phenolic aqueous solutions <b>Yolanda Segura</b> Spain 665386 <b>P</b> 12.40 Treatment of edible olive processing wastewater by wet air oxidation <b>Evan Diamadopoulos</b> Greece 663655	<b>WASTEWATER TREATMENT</b> <b>Upgrading wastewater treatment systems 2</b> Chair <b>Jiri Wanner</b> Czech Republic 11.15 Cost-effective upgrading of a biological wastewater treatment plant by using lamella separators with bypass operation <b>Norbert Jardin</b> Germany 666996 11.35 Upgrading and retrofitting of wastewater treatment plants in Shanghai <b>Xuejun Tan</b> China 666124 11.55 The effect of flow equalization and prefermentation on the sludge production and sludge characteristics in a BNR plant <b>Anna Miia Kaarina Mikola</b> Finland 665441 12.15 Cost and performance aspects of two-stage activated sludge plants <b>Stefan Winkler</b> Austria 668421 <b>P</b> 12.35 Optimization of secondary clarifier using 3D modelling of sludge <b>Jaroslav Pollert</b> Czech Republic 663614 <b>P</b> 12.40 WWTP upgrading towards positive energy balance: the case study of Dijon, France <b>Carlos Alberto Peregrina Cambero</b> France 665069
<b>Lunch 12.45</b>	
<b>WASTEWATER TREATMENT</b> <b>Advances in physico-chemical processes and technology</b> Chair <b>Yoshimasa Watanabe</b> Japan 2.15 Treatment of RO brine: towards sustainable water reclamation practice <b>How Yong Ng</b> Singapore 665767 2.35 Performic acid (PFA): tests on an advanced primary effluent show promising disinfection performance <b>Ronald Gehr</b> Canada 661966 2.55 Ozone oxidation of estrogenic active substances in wastewater and drinking water <b>Sylvie Baig</b> France 667752 3.15 A novel solution for hydroxylated PAHs removal by oxidative coupling reaction using Mn oxide <b>Ki-Hoon Kang</b> Korea 663557 <b>P</b> 3.35 Hydrodechlorination of chlorinated methanes by nanoscale Pd/Fe bimetallic particles <b>Xiangyu Wang</b> China 667243 <b>P</b> 3.40 The oxidation of hypophosphite by fenton's reagent and subsequent removal of phosphorus by iron (III) <b>Shun-Hsing Chuang</b> Chinese Taiwan 665820	<b>WASTEWATER TREATMENT</b> <b>Sludge and biosolids management 1</b> Chair <b>Ludovico Spinosa</b> Italy 2.15 Prediction of thermal hydrolysis impact at different sludge characteristics <b>Phimphaka Phothilangka</b> Austria 668245 2.35 Lysis of bacterial cells by the combined action of thermophilic bacteria <b>Yingxue Sun</b> China 664169 2.55 Rheology as a tool for measurement of sludge shear <b>Banu Ormeci</b> Canada 666842 3.15 Application of excess activated sludge ozonation in a SBR plant: effects on substrate fractioning and solids production <b>Agostina Chiavola</b> Italy 666201 <b>P</b> 3.35 Activated sludge model adaptation to MBR treatment of tannery wastewater at high SRT <b>Riccardo Gori</b> Italy 665317 <b>P</b> 3.40 Solubilization of excess sludge by the solar photo-fenton reaction <b>Masahiro Tokumura</b> Japan 663412
<b>Afternoon break 3.45</b>	
<b>WASTEWATER TREATMENT</b> <b>Activated sludge population dynamics</b> Chair <b>Per Halkjaer Nielsen</b> Denmark 4.30 Ecological engineering of bioaugmentation from side-stream nitrification <b>Robert Smith</b> United States 666854 4.50 Assessment of a biological process for the treatment of vegetable oil effluent <b>Dashika Naidoo</b> South Africa 666429 5.10 Effect of salinity on the activity, settling and microbial community of activated sludge in sequencing batch reactors <b>Xinmin Zhan</b> Ireland 666176 5.30 PHA-accumulating microorganisms in full-scale wastewater treatment plants <b>Mamoru Oshiki</b> Japan 665363 <b>P</b> 5.50 Treatment of high ammonium concentrated effluent in a side part SBRR: a useful process to control nitrogen discharge <b>Laure Graveleau</b> France 667668 <b>P</b> 5.55 Simplification of ASM No. 2 and control on wastewater treatment removing phosphate in Seoul <b>Kim Shin-Geol</b> Korea 666559	<b>WASTEWATER TREATMENT</b> <b>Sludge and biosolids management 2</b> Chair <b>Helmut Kroiss</b> Austria 4.30 Application of metaproteomic analysis for studying extracellular polymeric substances (EPS) in activated sludge flocs <b>Chul Park</b> United States 665450 4.50 Effect of a bio-stimulant on sludge biomass treating municipal wastewater <b>Ki-Young Park</b> Korea 663627 5.10 Adsorption of Cd(II), Zn(II) by extracellular polymeric substances extracted from waste activated sludge <b>Lei Zheng</b> China 664319 5.30 Enhanced heavy metals removal without phosphorus loss from anaerobically digested sewage sludge <b>Ayumi Ito</b> Japan 664095 <b>P</b> 5.50 Nutrients release of sludge reduction induced by oligochaetes <b>Junxin Liu</b> China 666304 <b>P</b> 5.55 Sustainable practices that bridge traditional and leading-edge approaches: advanced digestion technologies implementation and enhanced biogas generation <b>Zeynep K Erdal</b> United States 666895

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<h2>U2 Hall I &amp; K</h2>	<h2>U2 Hall G &amp; H</h2>
<p><b>KEYNOTE PLENARY SESSION</b>  <b>8.15 New and virtual water: trends and challenges</b>  <b>Alexander Zehnder</b> Alberta Water Research Institute <b>Canada</b>  <b>Introduced by Helmut Kroiss</b> TU Vienna <b>Austria</b></p>	<p><b>KEYNOTE PLENARY SESSION</b>  <b>8.15 Cities of the future</b>  <b>Paul Brown</b> Camp Dresser &amp; McKee Inc <b>USA</b>  <b>Introduced by Suez Environment</b></p>
<h2>U2 D 441</h2>	<h2>U2 Hall P</h2>
<h3>WORKSHOP</h3>	<h3>MANAGING AND PLANNING WATER SERVICES</h3>
<p><b>Good modelling practice: guidelines for use of activated sludge models</b>  <b>Chair Günter Langergraber</b> Austria</p> <p>9.00 Welcome <b>Günter Langergraber</b> Austria  9.10 Background and purpose of the GMP Task Group <b>Leiv Rieger</b> Canada  9.30 Results of the questionnaire <b>Andrew Shaw</b> Australia  9.40 Case study: the unified protocol and application matrix as applied for the Beenyp WWTP <b>Andrew Shaw</b> Australia  9.50 Walk through the GMP Guidelines: project definition <b>Imre Takacs</b> Canada  10.00 Walk through the GMP Guidelines: data collection and evaluation <b>Stefan Winkler</b> Austria</p>	<p><b>Strategic asset management and long-term planning</b>  <b>Chair Helena Alegre</b> Portugal</p> <p>9.00 Asset management: the required utility organization paradigm shift <b>Scott Haskins</b> United States <b>669171</b>  9.20 Alternative approaches for setting targets for non-revenue water <b>Stuart Trow</b> United Kingdom <b>667032</b>  9.40 Integrated approach for water network rehabilitation <b>Dewi Rogers</b> Italy <b>666552</b>  10.00 Developing asset management competencies in water utilities: fitting training approaches to need <b>Jo Parker</b> United Kingdom <b>666732</b>  <b>P</b> 10.20 Water services asset management in South Africa: national strategy and implementation <b>Kevin Wall</b> South Africa <b>666281</b>  <b>P</b> 10.25 Quantifying long-term renewal needs for water distribution systems <b>Hervé Vicente</b> United Kingdom <b>664298</b></p>
<p><b>Morning break 10.30</b></p>	
<h3>WORKSHOP</h3>	<h3>DESIGN AND OPERATION OF WATER SYSTEMS</h3>
<p><b>Good modelling practice: guidelines for use of activated sludge models</b>  <b>Chair Günter Langergraber</b> Austria</p> <p>11.15 Walk through the GMP Guidelines continued: model setup <b>Leiv Rieger</b> Canada  11.30 Calibration/validation <b>Leiv Rieger</b> Canada  11.45 Simulation and results interpretation <b>Imre Takacs</b> Canada  12.00 Discussion of GMP guidelines and wrap-up  12.30 Composing summary, report and presentation</p>	<p><b>Rehabilitation and maintenance of assets</b>  <b>Chair Sveinung Saegrov</b> Sweden</p> <p>11.15 Strategic asset management planning of stormwater drainage <b>Jeku Jeyakumaran</b> Australia <b>664728</b>  11.35 Rehabilitation and maintenance of water distribution network assets <b>Symeon Christodoulou</b> Cyprus <b>666211</b>  11.55 Holistic planning methodology for long-term design and capacity expansion of water networks <b>Paul Kalungi</b> United Kingdom <b>664052</b>  12.15 Coast trunk sewer rehabilitation project for the Orange County sanitation district <b>Robert J Warren</b> United States <b>669322</b>  <b>P</b> 12.35 Roof renewal of aging pre-stressed concrete distribution tank <b>Noboru Higuchi</b> Japan <b>663264</b>  <b>P</b> 12.40 Influencing factors on mid-term rehabilitation of water supply systems <b>Gerald Gangl</b> Austria <b>663781</b></p>
<p><b>Lunch 12.45</b></p>	
<h3>WORKSHOP</h3>	<h3>WORKSHOP</h3>
<p><b>Trends and opportunities for international cooperative research</b>  <b>Chair Frans Schulting</b> The Netherlands &amp; <b>Mike Farrimond</b> United Kingdom</p> <p>2.15 This workshop highlights international water research strategies and trends, showcasing research projects from the European Union, North America, East Asia and Australasia. It focuses on two significant areas of international research: endocrine disrupting chemicals (EDCs) and the water and energy interface.</p>	<p><b>Strategic asset management: phase two</b>  <b>Co-chairs Helena Alegre</b> Portugal &amp; <b>Steve Albee</b> United States</p> <p>2.15 Managing urban water infrastructure in a strategic and sustainable way is a major challenge and priority for modern societies. Although such infrastructure has been managed since it was commissioned, the adoption of well devised approaches to asset management has seen a tremendous evolution in recent years. This workshop comprises a keynote address to set the scene and put strategic asset management into perspective, presentations by experienced and leading-edge entities from different regions of the world and a discussion panel. The presentation topics include programmatic, informational and operational aspects.</p>
<p><b>Afternoon break 3.45</b></p>	
<h3>WORKSHOP</h3>	<h3>WORKSHOP</h3>
<p><b>Trends and opportunities for international cooperative research</b>  <b>Chair Frans Schulting</b> The Netherlands &amp; <b>Mike Farrimond</b> United Kingdom</p> <p>4.30 Continued</p>	<p><b>Strategic asset management: phase two</b>  <b>Co-chairs Helena Alegre</b> Portugal &amp; <b>Steve Albee</b> United States</p> <p>4.30 The final panel is the opportunity for speakers and workshop participants to discuss and wrap-up some key issues. Presenters and panellists include Jaime Melo Baptista Portugal, Scott Haskins United States, Wolf Merkel Germany and other speakers from Australia, Singapore and United Kingdom.</p>



<p><b>U2 Hall I &amp; K</b></p>	<p><b>U2 Hall G &amp; H</b></p>
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<p><b>OE Forum</b></p>	<p><b>OE E 557</b></p>
<p><b>INDUSTRY FORUM</b></p>	<p><b>INDUSTRY FORUM</b></p>
<p><b>Bentley Water's solutions for sustaining urban water infrastructure</b>  <b>Hosted by Bentley</b></p> <p>9.00 This forum addresses the key challenges that water professionals are facing in managing urban water infrastructure, such as: water and sewer networks rehabilitation and investment planning; complexity and variability of urban water assets; uncertainty and lack of information about the conditions of the pipes and their performance; leakage detection and analysis; real-time modelling, decision support and SCADA integration; and the need for a systems approach and multiple stakeholder views and participation. Bentley presenters will demonstrate some of the key software technology for water distribution networks analysis, design and management and present several case studies.</p>	<p><b>New technologies in water treatment for removal of arsenic, manganese, uranium, radium and urea</b>  <b>Hosted by BWT</b></p> <p>9.00 New treatment technologies for the removal of some compounds from water are needed in order to face changes in legislation and production. This workshop presents results of the removal of arsenic from tap water using a new, not granular-based ion exchange material. Manganese has to be removed from many mineral waters. This workshop presents a technology for manganese removal from mineral water with activation of manganese dioxide by ozone, as well as new materials for the removal of uranium and radium based on zeolithe. In ultrapure water treatment urea becomes a problem due to the decrease of the TOC limit value. A new technology based on oxidation of urea is also presented.</p>
<p><b>Morning break 10.30</b></p>	
<p><b>INDUSTRY FORUM</b></p>	<p><b>INDUSTRY FORUM</b></p>
<p><b>New technology to optimise network efficiency</b>  <b>Hosted by Suez Environment</b></p> <p>11.15 Regulation and business trends <b>Michel Vermersch</b> IWA Water Loss Task Force State of the art and definitions <b>David Duccini</b> Suez Environment Non Revenue Water Technical Committee France          Leak reduction through district metering: cases of Barcelona and Cartagena, Spain <b>Enric Castellvi</b> Grupo Agbar Spain          Calculating network real-time efficiency by combining AMR and district metering: Paris, Vrigne-aux-Bois, Hauts de Vaugrenier <b>Thierry Bouzigues</b> Suez Environment, CIRSEE France          Improving network efficiency through pressure modulation: case of Casablanca <b>Tahar El Agal</b> Lydec Morocco          Permanent leakage detection with acoustic loggers: case of Dijon <b>Claude Valentin</b> Lyonnaise des Eaux France          Leak detection in low-pressure networks and large mains using tracer gas: cases of Alicante and Jakarta <b>Ignacio Casals</b> Grupo Agbar Spain</p>	<p><b>Buderus/TRM ductile cast iron pipe: serving through high performance</b>  <b>Hosted by Buderus</b></p> <p>11.15 Buderus and its Austrian operation, Tiroler Röhrenwerke (TRM), is the second largest supplier of ductile iron pipe in Europe. Buderus and TRM operate two foundries in Germany and Austria and market their products to municipalities, utilities and other professional users in Europe, Africa and the Middle East. A very characteristic profile of technology in jointing and coating of pipes enables Buderus and TRM to position their products as economically superior to other piping concepts in municipal practice. Their technologies are serving all high performance and high demand applications in the water industry. They are also the market leader in a very unique field of piping: artificial snow preparation in alpine ski resorts.</p>
<p><b>Lunch 12.45</b></p>	
<p><b>INDUSTRY FORUM</b></p>	<p><b>INDUSTRY FORUM</b></p>
<p><b>Managing an aging infrastructure: the role of industry in battling water loss</b>  <b>Hosted by Miya</b></p> <p>2.15 Introduction <b>Roland Liemberger</b> Miya          2.25 Reducing NRW in metropolitan Manila, the Philippines <b>Rogelio Singson</b> Maynilad Water Services Manila          3.00 Water loss reduction technologies: what lies ahead? How can technology help in cost-effective water loss reduction? <b>Ariel Moshkovitz</b> Miya          3.15 The Miya solution: Miya's holistic solution to water loss management <b>Booky Oren</b> Miya          3.30 Questions and answers</p>	<p><b>How industry is helping to connect people to sustainable systems: energy reductions and efficiency gains in municipal applications</b>  <b>Hosted by ITT</b></p> <p>2.15 This exchange is about new technologies and systems that work more efficiently and have less impact on the environment. These are solutions that benefit the environment by reducing carbon dioxide emissions but also benefit users by reducing their energy costs. A higher degree of efficiency and lower energy consumption are two factors in this search. Developing chemical-free treatment systems is another. Drawing on expertise in these areas, ITT will discuss how these approaches can help provide solutions that can become vital components as new infrastructure is built in developing countries.</p>
<p><b>Afternoon break 3.45</b></p>	
<p><b>INDUSTRY FORUM</b></p>	
<p><b>Panel discussion</b></p> <p>4.30 Representatives from Bentley, Suez Environment, Miya, BWT, Buderus and ITT will discuss solutions for municipalities and how industry supports the provision of basic services.</p>	

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