



08:15 – 09:00 KEYNOTE ADDRESS

How can we make a better case for water use efficiency in non-water-stressed regions? **John Carey** Canada *Introduced by Canadian Utilities*

Room 17

09:15 – 10:45

SCIENCE AND APPLICATION OF WATER TREATMENT

Room 5

Membrane systems for wastewater treatment – optimising membrane processes

Chair **Boris Lesjean** Germany

09:15 Introduction

09:20 Physico-chemical characterisation versus in situ microstructural characterisation of membrane fouling in membrane bioreactors **Ng How Yong** Singapore

09:40 Characterising hydrodynamics at membrane surface in air sparged submerged membrane systems through direct observation and particle image velocimetry **Sepideh Jankhah** Canada

10:00 Real-time monitoring of membrane bioreactors with statistically-based models incorporating 2D-fluorescence data **Maria AM Reis** Portugal

10:20 Simulation of membrane fouling considering mixed liquor viscosity and variation of shear stress on membrane surface **Hlwan Moe Zaw** Japan

10:40 Closing summary

09:15 – 10:45

CITIES OF THE FUTURE

Room 6

Institutional and spatial change for cities of the future 4

Chair **Rob Skinner** Australia

09:15 Recap of day 1 and introduction by Chair **Uwe Brandes** US, **Rob Skinner** Australia

09:30 Spatial, development and institutional factors – translating vision and principles into on-the-ground reality – the Canadian perspective **Maggie Carlson** Canada

09:45 Adopting the cities of the future principles in the United States – the view from the San Francisco Public Utilities Commission **Vicki Elmer** US

10:00 European perspective on the institutional and development challenges to adopting the cities of the future principles and recommendations **Jacques Labre** France

10:15 Interactive discussion **Peter Binney** US

10:35 Conclusions – priorities for next stages **Ross Young** Australia

10:45 – 11:15 Morning break

Exhibition

11:15 – 12:45

SCIENCE AND APPLICATION OF WATER TREATMENT

Room 5

Membranes for wastewater treatment – full-scale application of membrane technology

Chair **Val Frenkel** US

11:15 Introduction

11:20 Ten persistent myths and realities of the MBR technology for municipal applications **Boris Lesjean** Germany

11:40 Design and implementation of ZeeWeed MBR retrofits **Ana Calderon** Canada

12:00 Economical evaluation of decentralised MBRs achieving varying effluent qualities **Boris Lesjean** Germany

12:20 Treating municipal wastewater with the goal of resource recovery **Paul Sutton** US

12:40 Closing summary

11:15 – 12:45

CITIES OF THE FUTURE

Room 6

W Turkish cities of the future – integrating water and development planning 5

Chair **Paul Reiter** IWA

Working group **Glen Daigger** US, **Steve Moddemeyer** US, **Ruya Tasli** Turkey, **Orhan Yenigun** Turkey

11:15 Working group – Trabzon and Kayseri, Turkish cities of the future

- Report on results of Kayseri and Trabzon session in Turkey in July
- Team member discussion about the concepts and challenges

Concepts developed will assist in a follow-on workshop in Istanbul in cooperation with IWA, the City of Istanbul, IWA Turkey and the Turkish Ministry of the Environment and Forestry.

12:45 – 14:15 Lunch

Exhibition

14:15 – 15:45

SCIENCE AND APPLICATION OF WATER TREATMENT

Room 5

Membranes for wastewater treatment – membrane fouling

Chair **Roger Ben Aim** US

14:15 Introduction

14:20 Membrane fouling management in wastewater treatment – myths versus lessons learned from operating membrane bioreactor and tertiary filtration systems **Zeynep K Erdal** US

14:40 Characteristics of different fractions of microbial flocs and their role in membrane fouling **Weijue Gao** Canada

15:00 Optimisation of direct osmosis–high salinity cleaning for RO fouling control in water reuse **Jian-Jun Qin** Singapore

15:20 Control of membrane fouling in membrane bioreactor with plasma technology **In-Soung Chang** Korea

15:40 Closing summary

14:15 – 15:45

CITIES OF THE FUTURE

Room 6

W Montreal Declaration 6

Facilitator **Paul Brown** US

Panelists **Paul Reiter** IWA, **Uwe Brandes** US, **Nicholas Buchoud** France, **Dennis McGlade** US

14:15 Panel discussion – what we heard – what this means

14:55 Presentation of draft Montréal Declaration **Kala Vairavamoorthy** UK

15:05 Roundtable group discussion Facilitator – **Paul Reiter** Netherlands

15:35 Closing presentation **Paul Reiter** Netherlands

15:45 – 16:15 Afternoon break

Exhibition

16:15 – 17:00 KEYNOTE ADDRESS

Water and energy **Helmut Kroiss** Austria *Introduced by Oil Sands Developers Group*
Poster awards ceremony

Room 17