



*16th International Water Association
Specialised Conference on*

Small Water and Wastewater Systems

1-5 December 2019

Murdoch University, Perth, Western Australia

Supported by



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Welcome

Welcome to the International Water Association conference on Small Water and Waste Water Systems 2019 to be held in Perth, Western Australia on 1-5 December at Murdoch University. What an exciting time to be sharing ideas, presenting the latest research findings and discussing new possibilities in science and technology with local and global policy directors, engineers and managers.

I would like to take this opportunity to thank our many great colleagues on the Executive Committee, National Organising Committee, International advisory committee, program committee and invited speakers. When you come to Perth in December 2019 you will be able to see a city with lots of examples of decentralised systems. Please do not hesitate to contact me or my colleagues for any further information.



Objective

Water is essential for all life forms. It is a fundamental resource necessary for socio-economic development and for ecological sustainability.

Good quality water is becoming scarce due to population growth and associated industrial development and pollution, particularly in towns and cities. It is timely that the sustainability and management of water resources is widely discussed, noting that water can be used for unlimited number of times with proper treatment. The conference will have topics regarding small systems (Decentralized systems) which serves less than 100,000 population equivalent. The conference will discuss and explore new and innovative methods of treatment, better understanding and assessment of resources and their supporting ecosystems, proper management for conservation and approaches to achieve the dual aim of economic development and ecological sustainability. The focus is the necessary infrastructure to provide good quality water, in sufficient quantity, in the most sustainable manner.

Host City

The conference will be held at Murdoch University, Perth, Western Australia. Perth, a vibrant, energetic city that offers a truly unique Australian experience. Set on the banks of the spectacular Swan River, Perth is Australia's sunniest capital city and the fastest growing urban centre, offering cultural diversity and sophistication combined with a relaxed and friendly vibe. Beyond Perth, delegates can choose to experience the breathtaking and unparalleled beauty of the natural attractions in the regional areas of Western Australia.

Venue

The conference will be hosted by Murdoch University situated in the southern suburbs of Perth, Western Australia, only 12 minutes by train from the centre of the city and a short bus ride from the popular tourist destination of Fremantle. The University has excellent conference, exhibition facilities and catering facilities, which enable delegates to maximize their time during the conference.

Conference Topics

1. Source separated decentralized wastewater treatment
2. Experiences from developing countries
3. The role of small scale systems in livability
4. Treatment innovations
5. Operation and maintenance in remote locations and Aboriginal communities
6. Governance ,Policy and regulation.
7. Resource recovery
8. Education , Training and Certification
9. Behavior change
10. Decentralized wastewater collection and treatment systems
11. Low technology treatment systems
12. Ecological sanitation
13. Biofilm reactors
14. Sequencing batch reactor
15. Operation and monitoring of small wastewater treatment plant
16. Wastewater reclamation and reuse
17. Sludge management
18. Nutrient removal
19. Rainwater use
20. Environmental microbiology & population dynamics
21. Constructed wetland systems
22. De-salination

Invited speakers

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| Dr Akintunde Babatunde | UK |
| Dr Bhakti Devi | Sydney |
| Prof Wendell Ela | Perth |
| Assoc. Prof. Eran Friedler | Israel |
| Dr Tom Headley | Brisbane |
| Assoc. Prof Jianguong Hu | Singapore |
| Brigadier Aslam Khan | Pakistan |
| Dr Evina Katso | London |
| Mr Johannes Kisser | Austria |
| Dr Kathy Meney | Perth |
| Dr Pierre Mukheibir | University of technology, Sydney |
| Dr Ashok Sharma | Melbourne |
| Dr Markus Starkl | Austria |
| Ms. Sylvie Muwanga Tebitendwa | South Africa |
| Prof Joseph Thanika | Oman |
| Prof Saravanamuth Vigneswaran | Sydney |
| Prof. Jan Vymazal | Czech Republic |
| Assoc. Prof Amit Gross Zuckerberg | Israel |

Inaugural session

The Minister for Water will inaugurate the conference and exhibition on Monday 1 December and talk about the importance of water programs in Western Australia.

Exhibition

An exhibition will be organised to be held at Murdoch University. The exhibitions will include information and products from consulting agencies, equipment manufacturers and representatives from industries.

Language

The official language of the conference will be English. No translation service will be available.

Participation

The conference will provide the opportunity to bring together scientists, engineers and practicing professionals from government departments, international aid agencies, private institutions, consulting establishments, research institutes and university organizations. We expect 350 delegates to attend the conference, but facilities are available for a much larger number.

Publication

All the papers received will be reviewed and the selected papers will be published in an international journal. This will be decided in consultation with the IWA Publications.

Registration fees

All registration fees inclusive of Goods and Services Tax (GST). The registration fee includes cost of book of abstracts, conference papers in USB, attendance at conference sessions, half day local tour, welcome reception, closing ceremony, lunches, morning and afternoon tea and conference gala dinner.

| | Web Hot till 10 Aug 19 | | Early Bird till 30 Sep 19 | | Regular till 30 Nov 19 | | Final | |
|----------------------------|---------------------------|----------------|------------------------------|----------------|---------------------------|----------------|------------|----------------|
| | IWA Member | IWA Non Member | IWA Member | IWA Non Member | IWA Member | IWA Non Member | IWA Member | IWA Non Member |
| Student/YWP/Retired | A\$440 | A\$590 | A\$495 | A\$645 | A\$550 | A\$700 | A\$660 | A\$810 |
| Standard | A\$660 | A\$810 | A\$770 | A\$920 | A\$990 | A\$1040 | A\$1496 | A\$1646 |
| Day Registration | A\$230 | A\$230 | A\$330 | A\$330 | A\$385 | A\$385 | A\$495 | A\$495 |

Conference Features

Free field visits

The conference will offer all delegates a field visit to choose from 3 different streams on desalinations, water efficiency and water reuse. Each stream will include a visit to one or more sites related to that stream and guided by experts at the facility. This gives the participants a unique opportunity to experience the practice of technologies in Western Australia, free of charge.

Accommodation

Promaco Conventions have reserved a number of accommodations. The university has a number of low-cost student apartments available, and the Port City of Fremantle and Perth city provide a wide variety of hotels. We encourage delegates to book accommodation through Promaco when registering to get the most competitive rates.

Technical Tour

An exciting post conference technical tour to Rottnest Island off the coast of Fremantle, Western Australia is available to participants on 5 December 2019. The tour will explore the water practices on the island and will give a unique opportunity to explore Rottnest island and its unique flora and fauna while also getting exclusive access to see what happens behind the scenes to keep the islands' water supply and sanitation standards. The tour will cost \$100 including lunch, ferry and technical talks on the island.

Networking and social functions

The conference offers several networking and social functions. A welcome reception the first day will enable participants to meet other delegates. The conference dinner will be on Tuesday 3 December 2019 for all participants.

Important dates

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| Last date of Abstract submission | 15 July 2019 |
| Abstract acceptance letters | 25 July 2019 |
| Webhot registration ends | 10 August 2019 |
| Early bird registration ends | 30 September 2019 |
| Full paper submission | 15 October 2019 |

Standard registration ends 30 November 2019

Local Executive committee

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| Dr Martin Anda | Murdoch University |
| Mr Andrew Bruce | IINET |
| Mr Robin Connolly | HYDROLOGIA |
| Dr Stewart Dallas | JB associates |
| Dr Sergio Domingos | Water Corporation |
| Dr David Goodfield | Murdoch University |
| Mr Claydon Gregory | Department of Water |
| Dr Biji Kurup | Engineers Environmental International |
| Dr Kuruvilla Mathew | Murdoch University |
| Dr Ross Mars | Water Installations Pty Ltd |
| Mr Premalal Mirihagalla (Housing Authority) | Department of Communities |
| Dr Clemencia Rodriguez | Environmental Health Directorate Urbaqua |
| Ms Shelley Shepherd | Water Corporation |
| Mr Peter Spencer | Water Corporation |
| Ms Kyllie Whitehead | Australian Water Association |
| Mr Llew Withers | Environmental Health Australia |
| Mr Phil Woolhouse | Institute of Plumbing Australia |
| Dr Emma Yuen | CRC for Water Sensitive Cities |
| Mrs Tara Zirakbash | Murdoch University |

National Organizing committee

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| Dr Cara Beal | Griffith University |
| Mr Matthew Carlin | Dept of Health, NSW |
| Mr Darryl Day | ICE WaRM, Adelaide |
| Mr Peter Elliott | EPS Consultants, Sydney Training, NSW |
| Mr Claydon Gregory | Department of Water, WA |
| Dr Sandra Hall | The University of Queensland |
| Mr Adam Jones | BMT WBM Pty Ltd, NSW |
| Mr Stuart Khan | UNSW Sydney |
| Prof Jennifer Mckay | UniSA, Adelaide |
| Prof Cynthia Michell | Sydney |
| Mr Sam Milani | Advanced Waste Water Systems, WA |
| Dr Avanish Panikkar | KMH Environmental, NSW |
| Mr Mark Pascoe | International WaterCentre, Brisbane |
| Dr Keshab Sharma | Advanced water mangement centre, Brisbane |
| Mr Joe Whitehead | Centre for Environmental |
| Mr Luke Zappia | Australian Water, WA |

International advisory committee

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| Mr Carlos Aragón | Spain |
| Mr Moses Basitere | South Africa |
| Prof Andrea Castelletti | Italy |
| Dr Andrea Cominola | Italy |
| Prof Makarand Madhao Ghangrekar | India |
| Dr Hassimi Abu Hassan | Malaysia |
| Mr Pheng Kea | Cambodia |
| Mr Stevo Lavrić | Spain |
| Dr Shaibur Rahman Molla | Bangladesh |
| Prof Innocent Naphi | Zimbabwe |
| Dr Jaime Nivala | Germany |
| Prof Andrea Emilio Rizzoli | Switzerland |
| Mr Ronald Sawyer | Mexico |
| Ms Sylvie Muwanga Tebitenda | South Africa |
| Ms Julia Terlet | United Kingdom |
| Prof Jonathan Wong | Hong Kong |

Program committee

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| Dr Laura Achene | Istituto Superiore di Sanità, Italy |
| Prof Latifa Bousselmi | Centre for Water Research and Technologies, CERTE Tunisia |
| Professor Germán Buitron | Institute of Engineering, Mexico |
| Ms Mei Yee Chan | Cranfield University Singapore |
| Dr Florent Chazareng | France |
| Prof. Francesco Fatone | Università Politecnica delle Marche, Italy |
| Dr. Hassimi Abu Hasan | Universiti Kebangsaan, Malaysia |
| Prof Mooyoung Han | Seoul National University, Korea |
| Prof Arve Heistad | Norwegian University of Life Sciences Norway |
| Dr Inga Herrmann | Luleå University of Technology Sweeden |
| Prof Goen Ho | Murdoch University, Australia |
| Prof Bilqis Amin Hoque | Environment and Population Research Centre (EPRC) Bangladesh |
| Prof Udert Kai | Swiss Federal Institute of Aquatic Science and Technology, Switzerland |
| Prof Yang Liu | University of Alberta, Canada |
| Dr Simos Malamis | National Technical University, Greece |
| Dr Fabio Masi | IRIDRA, Italy |
| Dr Paula Loureiro Paulo | Universidade Federal de Mato Grosso do Sul Brazil |
| Dr Philippe Ange Ker Rault | Ageningen Environmental Research Netherlands |
| Prof Michel Torrijos | National Institute of Agronomic Research, France |
| Prof Guoren Xu | Harbin Istitute of Technology, China |

Further Information

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