Specialist Conference

Registration Brochure

Stabilisation Ponds 2011

9th IWA Specialist Group Conference on Waste Stabilisation Ponds

Stamford Grand Adelaide, Glenelg, Adelaide, Australia
August 1–3, 2011
Invitation to Register

Waste stabilisation ponds and their allied systems have an important role to play in the future of wastewater management. There are many drivers which will lead to a renaissance in this technology. Water utilities are currently engaging with the ‘energy/water nexus’. How can we manage wastewater treatment while protecting the environment and at the same time reduce our impact on climate change via energy efficiencies or co-generation of energy? Furthermore, many parts of the world including Australia have recently suffered droughts. A response is to increase wastewater reuse. Waste stabilisation ponds are important for pathogen reduction in many reuse schemes, contributing to the management of the exposure risk to public health. The development of more efficient designs and operating regimes will enhance pathogen removal and reduce evaporative losses for these systems and contribute to sustainable water resource management.

These challenges are all themes within the program of the International Water Association’s 9th Specialist Group Conference on Waste Stabilisation Ponds. The expert peer review provided by the conference’s International Scientific Review Committee ensures you that the papers presented within the multi-streamed technical sessions are of a very high calibre. Your engagement and participation in the conference will be actively encouraged during the innovative, facilitated Colloquia at the completion of all the respective conference streams.

We invite you to enjoy the relaxed and friendly host city of Adelaide and the wider attractions of South Australia, including its fine wines, food and beaches. The post-conference technical tour will provide an opportunity not only to visit treatment systems but also to see some of the hills and vales of South Australia.

We look forward to welcoming you to Adelaide in August

Chair of Organising Committee
Howard Fallowfield

Stabilisation Ponds 2011 Committee

Local Organising Committee
Prof. Howard Fallowfield (Chair)
South Australian Department of Health
South Australian Water Corporation
Flinders University

Dr Alex Keegan
Prof. Nancy Cromar
Neil Buchanan

International Scientific Review Committee
Chair, Howard Fallowfield (Brazil)

Marcos von Sperling
(University of Minas Gerais, Brazil)

Howard Pearson
(Nancy Cromar, France)

Bernadette Picot
(University of MONTPELLIER, France)

Rupert Craggs
(Miller A. Camargo, Colombia)

Rafael Kopshitz Xavier Bastos
(University of SÃ£o Paulo, Brazil)

Rejane H. R. da Costa
(Flinders University, Australia)

Miller A. Camargo
(University of SÃ£o Paulo, Brazil)

Rafael Kopshitz Xavier Bastos
(University of SÃ£o Paulo, Brazil)

Rejane H. R. da Costa
(Flinders University, Australia)

Michael Short
Sonia Heaven
(Civil Engineering & Environment, UK)
Keynote Speakers

**Dr David Cunliffe**
Principal Water Quality Adviser
Public Health
Department of Health

Dr Cunliffe is the Principal Water Quality Adviser with the South Australian Department of Health. He has 30 years experience in dealing with public health aspects of water supplies including risk assessment, regulation of drinking water quality, approval of major recycled water systems, assessment of recreational water quality and investigation of incidents and water-borne disease.

Dr Cunliffe has contributed to the development of a range of national and international guidelines including Australian and World Health Organization (WHO) guidelines for drinking water quality, recycled water use and recreational water quality. He has participated in applied public health research and has published on a broad range of issues relating to drinking water quality, rawwater, desalination and management of recycled water supplies. He is a member of the WHO Drinking Water Quality Committee and the Australian NHMRC Water Quality Advisory Committee.

**Dr David Batten**
Leader, Algal Pre-feasibility Study
CSIRO Energy Transformed Flagship

David first joined CSIRO in 1970, his work then culminating in a PhD in Regional Economics and leadership of the Regional Development Team. In the eighties, he worked on a global forest sector model at the International Institute for Applied Systems Analysis (near Vienna) and in 1986, he was appointed to a Chair in Infrastructure Economics in Sweden. From 1991–95, he held the concurrent position of Professorial Fellow at the Institute for Futures Studies, a scientific think tank in Stockholm.

During his years in Sweden, David’s work stressed the importance of evolutionary approaches to industrial development, including the future of biomass, energy and transportation. He specialized in substitution analysis of new for old technologies. System analytic tools – that focus on the dynamic interdependencies between the components of these complex systems – have underpinned his research and continue to do so.

In 2002, David was invited to return to CSIRO to lead several “One-CSIRO” activities, including the “Wealth from Waste” Stream in CSIRO’s Water for a Healthy Country Flagship and CSIRO’s Energy Transformed Flagship. In 2005, he joined the Alternative Transport Fuels Project as the team’s senior economist and international analyst, and he began to search for novel pathways for wastewater streams. He now leads that project.
## Preliminary Program - Monday 1 August 2011

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<tr>
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<td>Keynote Session</td>
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<tr>
<td>1000 - 1030</td>
<td>Morning Tea</td>
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<tr>
<td>1030 - 1200</td>
<td>Theme: Performance of WSP</td>
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<tr>
<td>Eleanor Retton-Clare van der Linde, University of Leeds, UK</td>
<td>Nitrogen</td>
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<tr>
<td>Alexander Aponte R, Universidad Del Valle, COLOMBIA</td>
<td>MODELLING OF BACTERIAL SULPHATE REDUCTION IN ANAEROBIC PONDS: KINETICS INVESTIGATIONS</td>
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<tr>
<td>Marcos Von Splering, Federal University Of Minas Gerais, BRAZIL</td>
<td>Evaluation of environmental conditions associated with Nitrogen removal in a series of maturation ponds treating anaerobic effluent</td>
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<tr>
<td>1200-1300</td>
<td>Lunch</td>
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<tr>
<td>1300-1500</td>
<td>Theme: Performance of WSP</td>
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<tr>
<td>Sonia Heaven, Civil Engineering &amp; Environment, UK</td>
<td>Use of QUAL-W2 to model waste stabilisation pond performance in seasonal climates</td>
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<tr>
<td>Andrea Alvarado, DIUC - Universidade De Cuenca, ECUADOR</td>
<td>CFD analysis of Sludge Accumulation and Hydraulic Performance in UCUBAMBA WSP (CUENCA, ECUADOR)</td>
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<tr>
<td>Rafael Bastos, University Of Vicosa, BRAZIL</td>
<td>Statistical Characterization of Raw Wastewater and Pond Effluent Quality Parameters</td>
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<tr>
<td>Mohammadmahmoud Alqadi, National Water Company, SAUDI ARABIA</td>
<td>Design of facultative wastewater stabilization ponds in arid regions</td>
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<tr>
<td>1500-1530</td>
<td>Afternoon Tea</td>
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<tr>
<td>1530</td>
<td>Theme: Performance in WSP</td>
</tr>
<tr>
<td>Rejane Costa, Federal University Of Santa Catarina, BRAZIL</td>
<td>Treatment of sanitary landfill leachate in ponds system under different operational conditions</td>
</tr>
<tr>
<td>Howard Pearson, State University Of Paraiba, BRAZIL</td>
<td>Kinetic modelling of E. coli and enterococci disinfection in wastewater maturation ponds: Effect of physicochemical parameters</td>
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<tr>
<td>1630-1730</td>
<td>Colloquium (Performance in WSP and Biology)</td>
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Preliminary Program - Tuesday 2 August 2011

<table>
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<tr>
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<tbody>
<tr>
<td>0900 - 0950</td>
<td>Keynote Session</td>
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| V. M. Godinho  
Ufmg, BRAZIL | OCCURRENCE AND DECAY OF PATHOGENIC BACTERIA IN A SYSTEM COMPRISED BY A UASB REACTOR AND POLISHING (MATURATION) PONDS IN SERIES |

<table>
<thead>
<tr>
<th>1000 - 1030</th>
<th>Morning Tea</th>
</tr>
</thead>
</table>
| Theme: WSP Case Studies  
Case Studies 1 | Theme: WSP and sustainability issues - carbon, energy & exploitation of biomass |
| Dominic Kerr  
North East Region Water Corporation, VIC | Bernadette Picot  
Université Montpellier 1, FRANCE | IS LAGOON EFFLUENT DISCHARGE TO WATERWAYS SUSTAINABLE?  
BIOGAS PRODUCTION FROM ANAEROBIC POND IN BURKINA FASO |
| Felicity Rodrick  
RMIT University, VIC | Howard Fallowfield  
Flinders University, SA | EXPERIENCE WITH AN ALGAL ONLINE ANALYSER FOR DETECTING MICROCYSTIS AERUGINOSA IN LAGOON-TREATED EFFLUENT  
PROXIMATE COMPOSITION AND ANAEROBIC DIGESTION OF ALGAL SOLIDS GENERATED FROM A SMALL COMMUNITY WASTE STABILIZATION POND SYSTEM IN SOUTH AUSTRALIA. |
| Humphrey Archer  
Beca Infrastructure Ltd, New Zealand | Peter Cruddas  
Cranfield University, UK | CHRISTCHURCH WASTE STABILISATION POND UPGRADE  
ENGINEERING ANAEROBIC PONDS FOR TREATMENT OF TEMPERATE WASTEWATER |

<table>
<thead>
<tr>
<th>1200-1300</th>
<th>Lunch</th>
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</thead>
</table>
| Theme: WSP Case Studies  
Smaller Communities | Theme: Public Health Microbiology |
| Neil Buchanan  
Flinders University, SA | V. M. Godinho  
Ufmg, Brazil | THE DISINFECTION PERFORMANCE OF 2 WASTE STABILISATION PONDS IN THE BAROSSA VALLEY REGION OF SOUTH AUSTRALIA.  
ESCHERICHIA COLI MEASUREMENTS BY FLUORESCENT IN SITU HYBRIDIZATION AND CHROMOGENIC SUBSTRATE TECHNIQUES IN A SYSTEM OF PONDS IN SERIES |
| Charles Banks  
School Of Civil Engineering And The Environment, UK | Howard Fallowfield  
Flinders University, SA | SEASONALLY LOADED WASTE STABILISATION PONDS: SEMI-CONTINUOUS DISCHARGE FROM TWO PONDS  
DIE-OFF RATES FOR E.COLI HELD IN THE DARK |
| Nancy Comar  
Flinders University, SA | Yacouba Konate  
International Institute For Water And Environmental Engineering Ouagadougou, BURKINA FASO | NUTRIENT AND BOD5 REMOVAL FROM 2 WASTE STABILISATION PONDS IN THE BAROSSA VALLEY REGION OF SOUTH AUSTRALIA.  
OCURRENCE, REMOVAL AND ACCUMULATION IN SLUDGE OF PROTOZOAN CYSTS AND HELMINTH EGGS IN ANAEROBIC POND OF BURKINA FASO |
| Charles Banks  
School Of Civil Engineering And The Environment, UK | Neil Buchanan  
Flinders University, SA | SEASONALLY LOADED WASTE STABILISATION PONDS - A NOVEL APPLICATION FOR INTERMITTENT DISCHARGE  
THE DISINFECTION PERFORMANCE OF A HIGH RATE ALGAL POND |

<table>
<thead>
<tr>
<th>1500-1530</th>
<th>Afternoon Tea</th>
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</thead>
</table>
| Theme: WSP Case Studies  
Case Studies 2 | Theme: Public Health Microbiology |
| Andres Alvarado  
DIUC - Universidad De Cuenca, ECUADOR | Natalie Bolton  
Flinders University, SA | BIokinetic Modelling of a WSP in combination with a Rigorous, Yet Simple Mixing Model  
Mechanisms of Sunlight Inactivation of Common Microbial Indicators in WSPs |
| David Sweeney  
Power and Water Corporation | Louise Weaver  
Institute Of Environmental Science & Research Ltd | A Risk Based Approach to Improve Monitoring and Performance of Remote Waste Stabilisation Ponds  
Virus Removal By WSP â€” Light-Independent Mechanisms |
| Humphrey Archer  
Beca Infrastructure Ltd, New Zealand | Rafael Bastos  
University Of Vaícosa, Brazil | Desludging Ponds In New Zealand  
Quantitative Microbial Risk Assessment Applied to Irrigation of Salad Crops With Waste Stabilization Ponds |

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<thead>
<tr>
<th>1630-1730</th>
<th>Colloquium (WSP Case Studies and Public Health Microbiology)</th>
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Preliminary Program - Wednesday 3 August 2011

<table>
<thead>
<tr>
<th>Time</th>
<th>Theme: WSP and sustainability issues - carbon, energy &amp; exploitation of biomass</th>
<th>Theme: WSP and their integration with other treatment technologies</th>
</tr>
</thead>
</table>
| 0900 - 1030 | Juan Pablo Silva Vinasco  
Universidad Del Valle, COLOMBIA  
INFLUENCE OF PHOTOPERIOD ON CARBON DIOXIDE, AND METHANE EMISSIONS FROM TWO PILOT-SCALE WASTE STABILIZATION PONDS | Viviane Velho  
Ufsc, Brazil  
STABILIZATION RESERVOIRS AS A POLISHING TECHNOLOGY FOR PIGGERY WASTEWATER FROM STABILIZATION PONDS |
|          | Chris Pepperell  
GHD, VIC  
AN IMPROVED METHOD FOR ESTIMATING FUGITIVE METHANE EMISSIONS FROM WASTEWATER TREATMENT LAGOONS | Rejane Costa  
Federal University Of Santa Catarina, Brazil  
MATUREMENT POND AND ROCK FILTER FOR POST-TREATMENT OF FACULTATIVE POND TREATING PIGGERY WASTEWATER |
| 1030 - 1100 | Juan Pablo Silva Vinasco  
Universidad Del Valle, COLOMBIA  
ESTIMATION OF GREENHOUSE GAS EMISSIONS BY STATIC CHAMBERS IN STABILIZATION PONDS: THE MIXING EFFECT | Servio Cassini  
Univ Federal Es, Brazil  
SLUDGE PRODUCTION IN ANAEROBIC POND TREATING SEWAGE, ALGAL AND PHYSICO-CHEMICAL SLUDGE FROM POLISHING SYSTEM OF FACULTATIVE POND. |
| 1200-1300 | Rupert Craggs  
Niwa, New Zealand  
ALGAL LIPID PRODUCTION IN WASTEWATER TREATMENT PONDS | Marcos Von Sperling  
Federal University Of Minas Gerais, BRAZIL  
IMPORTANCE OF THE AMMONIA VOLATILIZATION RATES IN SHALLOW MATURATION PONDS TREATING UASB REACTOR EFFLUENTS |
|          | Ben Van Den Akker  
Water Research Centre, University Of New South Wales  
BRING BACK THE PONDS? SUSTAINABILITY AND HEALTH IMPLICATIONS OF PROCESS UPGRADES | Servio Cassini  
Univ Federal Es, BRAZIL  
PHYTOPLANCTION ANALYSIS AND NUTRIENTS IN WASTEWATER TREATMENT SYSTEM WITH ANAEROBIC REACTOR (ABR) AND POLISHING POND WITH PHYSICO-CHEMICAL SLUDGE PROCESSING |
|          | Alexander Aponte R.  
Universidad Del Valle, COLOMBIA  
THERMAL VARIATIONS IN SECONDARY PILOT-SCALE FACULTATIVE PONDS: CAN WE SAY SOMETHING ON PONDS ENERGETICS |  |

1500-1600  
Colloquium (WSP Sustainability and WSP Technology)

Conference Colloquia

There will be a unique opportunity to participate in a Colloquium at the end of each theme session. The Colloquia will be facilitated discussion of the papers presented and will include for example emerging research needs, implications for system design, operation, performance and regulation relevant to the theme session. The main objective of the Colloquium is to encourage you, the conference participant, to engage in wider discussions of issues relevant to the respective themed sessions.
Post Conference Technical Tour
Thursday 4 August 2011

Many metropolitan and rural South Australians depend upon waste stabilisation ponds for their sewage treatment.

Tour 1: Bolivar Wastewater Treatment Plant

Time: 0900 – 1300
Cost: $50 – Limited to 40 delegates
Dress: Casual/comfortable, closed toe shoes

Visit the 150ML/d Bolivar wastewater treatment plant to the north of Adelaide. The plant incorporates an activated sludge plant, 350 ha of lagoons and dissolved air flotation-filtration into its wastewater and reuse treatment scheme. Separated solids are anaerobically digested and the methane used for onsite electricity generation.

Tour 2: Adelaide Hills and the Barossa Valley

Time: 0900 – 1700
Cost: $60 – Limited to 40 delegates
Dress: Casual/comfortable, closed toe shoes

Tour 2 will visit the smaller community wastewater management schemes which receive wastewater from domestic on-site septic tanks into community managed central lagoons. The tour will visit sites were the treated effluent is used for irrigation of horticultural crops and grape vines in the wine growing regions in the Adelaide Hills and the Barossa Valley. The tour will include lunch in the Barossa Valley and time to sample the produce!

The tour routes will enable participants to be dropped off at the airport on return to Adelaide.

Stabilisation Ponds Conference Dinner

Date: Tuesday 2 August 2011
Time: 1830 – 2200
Venue: Stamford Grand Adelaide (Ballroom)
Cost: $100 per person

The Conference Dinner will be the social highlight of the conference allowing delegates the opportunity to network whilst enjoying a two course meal served with beverages.

Social Program

Stabilisation Ponds Conference Dinner

Date: Tuesday 2 August 2011
Time: 1830 – 2200
Venue: Stamford Grand Adelaide (Ballroom)
Cost: $100 per person

The Conference Dinner will be the social highlight of the conference allowing delegates the opportunity to network whilst enjoying a two course meal served with beverages.

Registration Information

Early bird registration closes on Friday 27 May 2011 AEST. All fees are quoted in Australian dollars (AUD) and are inclusive of 10% GST.

Registration Fees

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<tr>
<th>Registration Details</th>
<th>Early Bird Rate</th>
<th>Standard Rate</th>
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<tr>
<td></td>
<td>Until Friday 27 May 2011 (AEST)</td>
<td>Saturday 28 May until Friday 29 July 2011 (AEST)</td>
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<tr>
<td>Full Registrations</td>
<td></td>
<td></td>
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<tr>
<td>IWA or AWA Member</td>
<td>$900</td>
<td>$1100</td>
</tr>
<tr>
<td>Non Members</td>
<td>$1100</td>
<td>$1300</td>
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<tr>
<td>Full Time Student</td>
<td>$500</td>
<td>$600</td>
</tr>
<tr>
<td>IWA Member Developing Country</td>
<td>$600</td>
<td>$800</td>
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<tr>
<td>Day Registrations</td>
<td></td>
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<tr>
<td>Per day</td>
<td>$500</td>
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Registration for full time students must be accompanied by a photocopy of a student card or letter from the University/College declaring full time student status.

Please visit the conference website for information relating to IWA developing countries.

Registration Inclusions

Full Registration
- Attendance at conference sessions (Monday 1 August – Wednesday 3 August 2011)
- Satchel, including program, book of abstracts, USB containing full papers and list of participants
- Morning tea and Lunch (Monday – Wednesday)
- Afternoon tea (Monday and Tuesday)
Day Registration
Day registrants will be entitled to the following on the day(s) chosen:
• Attendance at conference sessions
• Satchel, including program, book of abstracts, USB containing full papers and list of participants
• Morning tea and lunch (Monday – Wednesday)
• Afternoon tea (Monday and Tuesday)
NB: Even if registering for more than one day, only one satchel and contents will be issued per delegate.

Method of Payment
Payment of fees must accompany all registration forms. Registrations will not be confirmed until payment is received. Payment can be made by the following methods:
1. Credit Card: Visa, MasterCard and American Express. Diners Club is not accepted.
2. Personal or Company cheque (Australian delegates only) made payable to Australian Water Association
3. International Bank Draft in Australian Dollars drawn on an Australian bank and branch made payable to Australian Water Association
4. Bank transfer: Please transfer funds in Australian dollars to Australian Water Association Ltd
   BSB: 062104 Account Number: 00146396
   Bank Name: Commonwealth Bank of Australia
   Bank Address: Artarmon NSW
   Swift Code: CTBAAU2S

Cancellation of Registration
Cancellations must be notified in writing to the Australian Water Association. Cancellations received before Friday 27 May 2011 will receive a full refund less a $200 administration charge. Refunds will not be issued for cancellations received after Friday 27 May 2011. Substitute delegates will be accepted without charge.

Registration Desk
The registration desk will be located outside the Ballroom at the Stamford Grand Adelaide
Opening Hours:
Monday 1 August 0730 – 1730
Tuesday 2 August 0800 – 1730
Wednesday 3 August 0800 – 1600
Staff will be onsite Thursday 4 August to assist delegates attending technical tours.

Accommodation
Accommodation rates at the Stamford Grand Adelaide start at $185 per night for conference delegates. For additional accommodation options and to book please visit the accommodation section on the website.

Travel and Transport
Adelaide’s international and domestic terminals are located 10 kilometres from the central business district, approximately 15 minutes by motor vehicle. For more information please visit the Adelaide Airport website: www.adl.com.au.

Taxis
As a general guide, a taxi fare from Adelaide Airport to Stamford Grand Adelaide accommodation is approximately $30.

Public Transport
A public transport bus service is also available via Adelaide City through to the north/eastern suburbs, with connections to rail and other bus routes. Visit www.adelaidemetro.com.au.

Airport Shuttle
Skylink Airport Shuttle specialises in providing a regular scheduled bus service between Adelaide Airport, Keswick Interstate Railway Terminal and the Adelaide CBD with set-down and pick-up from most major city hotels. It operates every day of the year except Christmas Day. For further information, visit www.skylinkadelaide.com.

Visas
All travellers to Australia, other than Australian and New Zealand citizens, are required to obtain a Visa to travel to Australia. The Business Visa allows people attending conferences and meetings in Australia to make a short visit of up to three months. For more information visit the Department of Immigration and Citizenship website at www.immi.gov.au or consult your travel agent.

Contact Us
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