



River Modelling for Decision Makers:

IWA World Water Congress Workshop



Workshop Chair: Tony Weber,
National Leader, Water Modelling, Alluvium

Tony is one of Australia's leading practitioners in the catchment modelling and water quality field. Joining Tony are: Geoff Podger, CSIRO, Michel Raymond, Seqwater and Pradeep Sharma, MDBA.

Modelling is fundamental to achieving sustainable restoration and management of river basins. This workshop is aimed at water resources decision-makers, particularly in policy, technical and management roles. It will address current best practice in river models, problems and, solutions. Participants will gain understanding on best use of models especially regarding predictive analyses.

Opening Speech: Darryl Day,
Executive Director Water Research, NT Dept Mines & Energy



Darryl has more than 30 years experience in the water and energy sectors. As Chair of the IWA Australian Committee, Darryl led the successful bid for the IWA's 2016 World Water Congress in Brisbane. Since 2009 Darryl has been the Co-Chair of the Programme Committee for the Singapore International Water Week. Based in Darwin, Darryl heads the Industry Advisory Committee for the School of Engineering at Charles Darwin University. Darryl is the Deputy Chair of ICE WaRM.

Workshop Details:

- When:** 9.00 - 3.30pm, Sunday 9th October 2016
- Where:** Brisbane Convention & Exhibition Centre
- Cost:** See below pages, discounts for Congress delegates
- Included:** Workshop Notes, Morning Tea, Lunch
- Register:** On attached Reg Form- see section 11.
- Contact Trevor:** +61 8 8236 5208, tpillar@icewarm.com.au

What will be covered?

- Why are river models needed for river management?
- Which are the principal river model applications?
- What do managers need to know about models?
- Best practice river modelling
- Scenario planning
- Case studies – the Manager's model for the River Murray
- How to select a fit-for-purpose model
- How to get a model running in your organisation
- What data is needed
- How to interpret model results
- Modelling teams vs external consultants
- Flood damage reduction planning & analysis
- Stochastic streamflow generation program
- Watershed hydrology
- River hydraulics

This is a Pre-Congress Workshop for:

Who should attend?

People working in:

- Private, public and consulting agencies
- Local, state and Commonwealth Government agencies
- Engineering, environment, agriculture, farming, irrigation, education, research and mining sectors
- Water authorities and power utilities



River Murray Online

What will we learn?

- Understand the range of contemporary river models available
- Appreciate the strengths and limitations of river models
- Find out how much you really need to know
- Learn how to get the model you really need
- Work out what you need e.g. specialist staff, data, consultants
- Learn how to assess model results



World Water Congress & Exhibition

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Shaping our water future





ICE WaRM

International Centre of Excellence
in Water Resources Management



Presenters include:



Tony Weber, Alluvium

Tony is one of Australia's leading practitioners in the catchment modelling and water quality field. Prior to joining Alluvium he worked at BMT WBM for 13 years where he led the water quality discipline across their Australian operations. Tony has over 27 years' experience in the water industry delivering a range of catchment modelling, water sensitive urban design, integrated water management, water quality and stormwater management projects. Tony was also a member of the

MUSIC urban stormwater model development team, and is a leading proponent of the Source modelling framework in Australia. Tony was awarded the 2012 Fellowship for the Modelling and Simulation Society of Aust and NZ. In 2009, Tony was invited to become a Visiting Fellow at the iCAM unit, part of the Fenner School in ANU and is a member of the Urban Water and Catchment Source Scientific Expert Panels for Healthy Waterways. He was also nominated as one of the top 10 Water Leaders in Australia by WME Magazine in 2013.



Geoff Podger, CSIRO

Geoff is a Senior River Modeller and Principal Research Scientist at CSIRO Geoff has significant experience in hydraulic and hydrologic modelling. With 22 years experience in hydraulic and hydrologic modelling, Geoff also has nine years experience in coastal engineering and 13 years experience in river basin management and planning. Geoff has been involved in the implementation and development of numerous hydraulic and hydrologic computer models and is the

principal author for the Integrated Quantity and Quality Model (IQQM). Geoff was responsible for the implementation of the Mekong river basin model from Chiang Saen to the Mekong Delta. This project is part of the Mekong River Commission's Water Utilisation Program Part A (WUPA) funded by World Bank. Geoff Podger coordinated the modification of around 70 different river models, many developed by Queensland, New South Wales, Victoria and South Australia, for integration into a dynamic model of the entire Murray-Darling Basin. Geoff plays a significant part in developing the next generation of Australian hydrological models.



Michel Raymond, Seqwater

Michel is the Operations Engineer at Seqwater. Michel has an extensive career in a wide range of water engineering roles including: Senior Principal Engineer: URS Corporation, Senior Water Engineer: Kinhill Engineers, Water Engineer: CMPS&F Engineers, Water Engineer: Cameron McNamara.



Pradeep Sharma, MDBA

Pradeep is Senior Director Water Resources with MDBA and has over 30 years experience in water resources planning and management in Australia and India. His area of interest is application of systems engineering techniques to water resources issues. He has played a significant role in modelling studies for various policy developments and implementation of a number of key initiatives in the MDB such as Salinity and Drainage Strategy, Basin Salinity Management Strategy, setting up of Murray models for Cap implementation, The Living Murray and development of the Basin Plan. Prior to joining the MDBA he was project manager for the IQQM software development and its implementation to the river systems of NSW. In India, for over 10 years he was involved in optimisation and simulation methods for Decision Support Systems development, reservoir operations, river basin planning and environmental impact assessment of water resources.

Ways to Register:

1. On attached Registration Form- see section 11.
2. Contact Trevor Pillar:
+61 8 8236 5208, tpillar@icewarm.com.au

What's included

- Presentations by experienced water professionals
- Course notes - hard copy and electronic
- Tutorials, discussions
- Linking with other industry professionals
- Small group size to allow greater interaction
- Catering: lunch, morning tea



River Murray Online

"Without water, the economy dries up... Almost half the global economy and more than half the world's population will be exposed to severe water scarcity by 2050, unless more sustainable water resource management practices are adopted."

International Food Policy Research Institute (IFPRI) and Veolia Water

ICE WaRM University Shareholders:



ICE WaRM is a member of:



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DELEGATE REGISTRATION

1. Delegate Details

Family name		Prof / Dr / Mr / Ms / Mrs (please indicate)	
First name (for badge)		Male / Female (please indicate)	
Company / organisation / university			
Position		<input type="checkbox"/> if YWP (age 35 and under)	Date of birth (optional) dd / mm / yyyy
Mailing address		<input type="checkbox"/> if Presenter	Paper ID Number
City	State	Post code	Country
Nationality (as on passport)		Telephone	Mobile
Fax		Email address (to confirm your registration)	
LinkedIn Address		Twitter Account	

2. Your Profession

Your organisation (please ONE)

<input type="checkbox"/>	Consultancy / Contracting
<input type="checkbox"/>	Educational institution / University
<input type="checkbox"/>	Government
<input type="checkbox"/>	Large water-using industry
<input type="checkbox"/>	Manufacturer / Supplier
<input type="checkbox"/>	NGO
<input type="checkbox"/>	Regulator
<input type="checkbox"/>	Research / Analytical lab
<input type="checkbox"/>	Utility
<input type="checkbox"/>	Other (please specify) _____

Primary work role (please ONE)

<input type="checkbox"/>	Administrator
<input type="checkbox"/>	Communicator
<input type="checkbox"/>	Engineer / Technical
<input type="checkbox"/>	Human resources
<input type="checkbox"/>	Manager
<input type="checkbox"/>	Policy advisor
<input type="checkbox"/>	Product developer
<input type="checkbox"/>	Researcher / Scientist
<input type="checkbox"/>	Sales & marketing
<input type="checkbox"/>	Student
<input type="checkbox"/>	Other (please specify) _____

Education (please ONE)

<input type="checkbox"/>	PhD
<input type="checkbox"/>	PhD student
<input type="checkbox"/>	Master degree
<input type="checkbox"/>	Bachelor degree
<input type="checkbox"/>	Undergraduate student
<input type="checkbox"/>	Other (please specify) _____

3. Privacy

When you register, we will add your details to the IWA database. We respect your privacy and will remove your details from the database if you ask us to. After the event we would like to send you information on future related conferences, seminars and exhibitions.

If you **do not** wish to receive this information please .

Participants are aware that their image and/or voice may be photographed, recorded or filmed throughout the duration of the congress. They hereby assign to the IWA, with the signature of this form, the right to use, reproduce and disseminate the images, and recordings by all means, both known and unknown, using all media, for an unlimited term and free of charge, for non-commercial purposes.

4. Visa Information / Invitation letter

Visa Information

An invitation letter will be provided to all delegates once full payment of registration fees is received. All visitors to Australia require a visa or ETA (Electronic Travel Authority) to enter Australia. For more information on applying for a visa please visit <https://australianvisaauthority.org/visa-info/>

Invitation letter

- If you pay delegate registration in full, you will automatically receive an invitation letter.
- If you pay a non-refundable deposit of €50 for your delegate registration, we will send you an invitation letter as soon as we receive your deposit.

We will send you the invitation letter by email.
Please if you would like a printed version of the letter sent by post.
Postage charges apply.

5. Accommodation

For accommodation options and air travel requests, please visit www.worldwatercongress.org or contact

OZACCOM+

Email: ozaccom@ozaccom.com.au

Address: PO Box 104, RBH Post Office

QLD 4029, Australia

Tel: +61 7 3854 1611 (GMT+10)

Fax: +61 7 3854 1507

7. Registration

Please if applicable.

I wish to pay my registration fees in full now.

Please fill in your registration fee in the price calculator (item 11)

Please if applicable.

I cannot pay my delegate registration fee in full before having obtained a visa to enter Australia and wish to pay a non-fundable deposit of €50 to obtain an invitation letter in advance. The balance of my registration fees will be paid when I have obtained a visa and, depending on when that is, will determine the delegate registration price. The €50 deposit will be deducted from this price. Please fill in the deposit fee of €50 in the price calculator (item 12).

6. Membership

Discounted registration is only applicable for current, paid IWA individual members and employees of IWA corporate members. Are you an individual member of IWA?

Yes / No (please indicate)

If yes, please quote the membership no.:

Is your company / organisation a corporate member of IWA?

Yes / No (please indicate)

If yes, please quote the membership no.:

If no and you wish to apply for membership and get a registration discount, please circle the category to which you wish to subscribe to. The IWA Membership Department will contact you to confirm your membership.

<http://www.iwa-network.org/membership.php>

Membership type	High-income	Low-income / LIC
Individual (1 year - 2016)	€103	€52
Individual (2 year - 2016 /17)	€186	€94
Student / retired (1 year - 2016)	€51	€37
Student / retired (2 year - 2016 /17)	€92	€66

Subtotal 1:

8. Registration Fees

	Early Bird fee applies until June 30, 2016		Regular fee applies from July 1 to October 8, 2016		Onsite fees applies from October 9, 2016 onwards		Amount
	Early Bird	Early Bird LIC	Regular	Regular LIC	Onsite	Onsite LIC	
Presenter - IWA member	€825 (1)	€525 (1, 3)	-	-	-	-	
Presenter - non-member	€1.000	€625 (3)	-	-	-	-	
Presenter - student	€475	€350	-	-	-	-	
Delegate - IWA member	€925 (1)	€600 (1, 3)	€1025	€675(1, 3)	€1150	€750 (1, 3)	
Delegate - non-member	€1125	€700 (3)	€1250	€775 (3)	€1375	€850 (3)	
Delegate - Student	€525 (2)	€400 (2, 3)	€600 (2)	€450 (2, 3)	€675	€500 (2, 3)	

Subtotal 2:

All registration prices above include attendance at the welcome reception; congress sessions; exhibition; and lunches, morning and afternoon teas. If you are a Young Water Professional (YWP), the workshop on Sunday is also included.

1. Membership of IWA will be verified and membership status is not transferable. If the member number supplied above is incorrect no discount will apply.

2. Student-rate conditions apply. While collecting your badge, you will be asked to show your student ID.

3. LIC means low-income country. For a complete list go to <http://www.iwa-network.org/downloads/MEMBERSHIPINFORMATION.pdf> and scroll down to the bottom of the page.

9. Social Functions

Event	Date	Venue	€ delegate	€ extra person	Nr. of persons	Amount
Opening Ceremony & Welcome Reception	Sunday, 09 October	Brisbane Convention & Exhibition Centre	<input type="checkbox"/> Please <input checked="" type="checkbox"/> if attending	€ 20		
Brisbane Night	Tuesday, 11 October	Queensland Gallery of Modern Art Precinct	<input type="checkbox"/> Please <input checked="" type="checkbox"/> if attending	<input type="checkbox"/> Please <input checked="" type="checkbox"/> if attending		
Brisbane Night Dinner	Tuesday, 11 October	South Bank's Restaurants	€ 27	€ 27		
Gala Evening	Thursday, 13 October	Brisbane Convention & Exhibition Centre	€ 25	€ 100		

Subtotal 3:

Special dietary requirements

Special dietary requirements (please if applicable) Vegetarian Halal Other (please specify) _____

10. Technical Tours

	Date	Price	Nr. of persons	Amount
Commonwealth Games 2018 Venues	14.10	-		
Gold Coast Desalination Plant and The Smart Water Research Centre	14.10	-		
Maleny Sewage Treatment Plant and Irrigated Wetlands	14.10	€ 75 per person		
Queensland Urban Utilities Innovation Centre Tour	14.10	€ 75 per person		
Seqwater Catchment Management Program - Pine Valley Catchment	14.10	-		
Western Corridor Recycled Water Scheme	14.10	-		
Wivenhoe Dam and Mt Crosby Water Treatment Plant Tour	14.10	-		
Protecting Moreton Bay, North Stradbroke Island	14.10	-		
Urban Renewal, Norman Creek Catchment	14.10	-		
A walking tour of Southbank, a water smart precinct	11,12,13.10	-		
A walking tour of Southbank, a water smart parkland	11,12,13.10	-		
A walking tour of Brisbane - Australia's New World City, Southbank and Roma Street Parklands	14.10	-		
Building a Flood Resilient Brisbane	14.10	-		

Please note numbers to tours are limited and bookings will be taken on a first in basis.

Subtotal 4:

11. Pre-congress Training*

	Date	Category	Price	Selection
Modelling Activated Sludge Plants	Saturday 8 and Sunday 9	IWA member	€350	
		non IWA member	€400	
		IWA LIC + Students	€200	
		non IWA LIC + Students	€250	
River Modelling for Decision Makers	Sunday 9	IWA member	€250	
		non IWA member	€360	
		IWA LIC + Students	€200	
		non IWA LIC + Students	€290	
Reverse Osmosis Membrane Desalination (IDA Desalination Academy)	Sunday 9	IWA / IDA member	€400	
		non IWA member	€450	
		IWA / IDA LIC member + Students	€375	
		non IWA LIC + Students	€400	
NRW Assessment and Management in Low and Middle Income Countries	Sunday 9	IWA member	€160	
		non IWA member	€200	
		IWA LIC + Students	€110	
		non IWA LIC + Students	€150	
Crisis Management at Water Utilities: Concept, Preparedness and Latest Technology Development in Decision Support System using Artificial Intelligence	Sunday 9	IWA member	€55	
		non IWA member	€70	
Assessing Climate and Energy Performance of Water and Waste Water Utilities	Sunday 9	IWA member*	€70	**
		non IWA member*	€90	**

* Once your participation is confirmed

** Please X to indicate interest

Subtotal 5:

*The pre-congress trainings have minimum and maximum numbers and will be subject to cancellation if registrations are too low by mid September.

12. Learning and Professional Development

Please to indicate interest

	Date	Time	Room	Selection
Global Water Shapers: a Networking Event to Start the Congress & Make the Most out of the Congress: First Time Attendees	Sunday 9	12:30 - 15:30	room M3/4	
Building Leadership in the Water Sector	Monday 10	10:30 - 12:00	room 13	
How to Influence the Water Sector with Your Story: Blog Writing	Monday 10	12:30 - 15:30	room 13	
The Art of Scientific Publishing for Scholars	Tuesday 11	13:30 - 15:00		
Building Leadership in the Water Sector (repetition)	Wednesday 12	10:30 - 12:00		
How to Bring Your Idea to the Market	Wednesday 12	13:30 - 15:00		
Water Career Opportunities and Development	Wednesday 12	15:30 - 17:00		
How to Engage Stakeholders in the Water Sector	Thursday 13	13:30 - 17:00		

13. Accompanying person

If applicable.

The details requested are required to issue a badge for an accompanying person, in order to attend the social functions and technical tours in number 7 and 8. Kindly note that accompanying persons are not allowed to participate in the congress working sessions.

Family name:

First name (for badge):

Mobile number:

E-mail address:

14. Total price calculator

	Amount
Delegate Registration deposit (see item 6)	
IWA Membership subtotal 1	
Delegate Registration subtotal 2	
Social Function tickets subtotal 3	
Technical Tour tickets subtotal 4	
Pre-congress Training subtotal 5	
Amount due:	

15. Payment Details

Please your method of payment:

Bank transfer (€)

BENDIGO AND ADELAIDE BANK LIMITED

The Bendigo Centre, Bath Lane
Bendigo, Victoria, Australia 3550
Swift code: BENDAU3B
BSB / Branch Number: 633-000

Beneficiary Account Name: Ozaccom Pty Ltd

Beneficiary Account Number: EUR0257

Paying by bank transfer: when your payment has been processed, please forward a copy of the bank transfer receipt by email to ozaccom@ozaccom.com.au or fax to +61 7 3854 1507 so that we can identify your payment.

Bank fees may be charged by the remitting and/or intermediary bank(s); IWA will not be responsible for any bank fees charged. Please ensure your bank includes all bank fees; if they do not, when you register onsite you will need to pay all bank fees charged.

Bank draft (€)

made payable to **OZACCOM PTY LTD** in euros (€).

Credit card

AMEX VISA MASTERCARD

I authorise IWA to charge the total amount shown above on the credit card, details of which are provided below. My signature is for authorisation.

Credit card number:

Expiry date:

Security number*:

Name on card:

Signature:

*Security number / CCV:

AMEX: 4-digit code found on the front of card.

Visa & Mastercard: 3-digit code found on the rear of card.

IMPORTANT INFORMATION

1. Registration Terms & Conditions

01. Applications for registration must be in writing. Telephone registration will not be accepted.
02. All prices quoted in this form are in euros (€). Payment must be made in euros. Any bank transfer fees and charges are the responsibility of delegate.
03. Registration can not be confirmed until payment has been received.
04. Credit card payments will appear on your credit card statement with "International Water Association, London" as the merchant.
05. Photocopies of bank drafts cannot be accepted as payment.
06. International Water Association (IWA) membership is not transferable.
07. If you are unable to attend you may nominate another person as a substitute. You must do this in writing.
08. There is no refund for non-attendance except as outlined in the cancellation policy.
09. All tours will only operate if the minimum number of participants is reached. Congress organisers reserve the right to cancel if this minimum number is not reached; in which case, a refund will be made.
10. Children must be accompanied by a parent or guardian at all times. The parent or guardian assumes all risks and responsibility for the safety of their children. Parents, please note: the social functions have not been planned with children in mind.
11. The congress organisers have made every effort to ensure the accuracy of details in this form at the time of printing but reserve the right to alter or delete items from the programme or services as circumstances require.
12. Congress organisers are not liable for any claims, damage or expense arising out of cancellation, disruption, changes or limitations to the programme or services as a result of any circumstances outside their control including weather, terrorist event, travel restrictions, visa refusals, or biological or health hazard or event.
13. Delegates are advised to arrange their own travel insurance to cover medical expenses, cancellation and all other risks. The congress organisers, their officers and employees are not liable for, and the delegate releases them from, any liability for claims, damage or expense whether in respect of personal injury, death, loss or damage to the delegate or partner(s).
14. Instructions and other provisions in the registration form, including the cancellation policy, are part of these registration conditions.
15. The IWA World Water Congress & Exhibition 2016 is a collaborative undertaking between the International Water Association (IWA) and the Australian Water Association (AWA).

2. Payment deadlines

Your delegate registration payment must be received in full by the date to qualify for these rates otherwise full rates will automatically apply:

- Early Bird discount rates registration closes 30 June 2016
- Regular registration closes 8 October 2016
- No registrations will be processed after 8 October 2016. After that date, onsite registration rates will apply.

3. Cancellation Policy

- All cancellations must be made in writing. Telephone cancellations will not be accepted.
- Delegate registration cancellations received after 1 August 2016 will receive a refund minus a 25% administrative fee and any bank service charges. No refunds will be made after 9 September 2016.

Please sign here

Please process my registration as completed on pages 1–4. I have read and agree to the conditions and cancellation policies.

Please sign here _____

Name of the person who signed _____

Place and Date _____

Return all the 4 pages to:

OZACCOM+

Email: ozaccom@ozaccom.com.au

Address: PO Box 104, RBH Post Office
QLD 4029, Australia

Tel: +61 7 3854 1611 (GMT+10)

Fax: +61 7 3854 1507

Enquiries:

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