



Modelling Symposium

Seeing the Unseen: The Value of
Modelling our Water

12 - 13 March 2024 | Ōtautahi Christchurch

Previous Chairs of the Modelling Group

Steve Joynes 1999-2001



Tony Miller 2001-2003



Ian Garside 2003-2005



Keith Woolley 2005-2007



David Ward 2007-2009



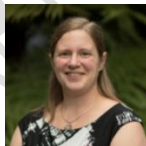
Marcel Bear 2009-2011



Brian Robinson 2011-2013



Louisa Sinclair 2013-2015



Jeff McLean 2015-2017



Vicki Koopal 2017-2019



Nadia Nitsche 2019-2021



Fiona Macdonald 2021-2023



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Keynotes



Ian Garside

Ian Garside is a founder member of the Water New Zealand Modelling SIG and has over 35 years of international experience in the water industry, the vast majority of which has been in New Zealand.

Ian's background in modelling stems back to the 1980s where he was involved in pioneering work on Urban Pollution Management, providing mitigation from intermittent discharges from wastewater networks in the UK. He brought this experience to bear in New Zealand leading significant project for Watercare known as Project Storm. Project Storm laid the foundation for the Central Interceptor which is currently being constructed.

Ian is currently chair of the Water New Zealand Conference and Expo technical committee, a role that he has held for over a decade and is an honorary life member of Water New Zealand

Ian is a current director and shareholder of ProjectMax and the AssetLife Alliance group of companies. Recently Ian has been assisting the National Transition Unit of the DIA in the management of several projects in the asset management stream.

Ian will be speaking about the genesis of the Modelling SIG in the 90s and reflecting on its achievements over the years and finally will pose a challenge to its current members.



Rob Bell

Rob Bell has 42 years' experience in coastal and estuary engineering, risk from coastal hazards, the impacts of climate change on coastal lowland communities and infrastructure and adaptive planning for climate adaptation (including managed retreat).

Rob, formerly with NIWA, was the Lead Author of the 2017 coastal guidance for local government published by NZ's Ministry for the Environment for planning adaptation to climate change and contributed to the latest revision. The guidance pivots around the Dynamic Adaptive Pathways Planning approach to deal with the deepening uncertainty from coastal climate impacts.

Rob was a Contributing Author for the IPCC Working Group II 6th Assessment Report on climate change impacts for Australasia (2022). He has been involved in assessments of several coastal infrastructure projects where sea-level rise is an emerging issue, compounded with river flooding and stormwater runoff. He has explored ways to incorporate an adaptive paradigm into the delivery of infrastructure and utility services.

Rob is a certified Resource Management Act Hearings Commissioner and Chartered Professional Engineer (Environmental).



Lara Taylor

Kairangahau Māori

E Oho! Awakening Aotearoa. Saying no to status quo. Enabling holistic governance & mgt for te taiao via Tiriti-centric research, planning, & strategy.

My research is currently focused within three of the National Science Challenges. I co-lead a project "Enabling Kaitiakitanga and Ecosystem-based Management" in Sustainable Seas with Dr Dan Hikuroa alongside Desna Whaanga-Schollum, one in the Resilience Challenge regarding Resource Management reforms, and ensuring they are fit-for-OUR-purpose and will enable Māori, hapū, whānau 'resilience' as determined by us, and am working with Tina Porou and Pia Pohatu in Our Land and Water to support Māori landowner implementation of Te Mana o te Wai.

In 2018 I completed the Ka Eke Poutama: Rangatahi into Governance and Leadership training. I am now a Trustee on one of our Ahu Whenua land blocks which lies on our tupuna awa, the Waikato; a Komiti member of Papa Pounamu - the Special Interest Group for Māori Planners and Practitioners; and a Komiti member of the International Scientific Committee on Cultural Landscapes Committee on Indigenous Knowledge and Perspectives; advisory to the World Heritage Centre, UNESCO. I have been our Ngāti Tahu iwi representative for almost ten years on the Contact Energy Ohaaki Powerstation Peer Review Panel.

Programme – Welcome Function

For those of you who are in Christchurch on Monday 11th March there will be a welcome function at the Quality Elms Hotel, Restaurant from 5.30pm. Drinks and nibbles will be supplied.

Programme – Day One 12th March

8.15

Registration and
Welcome
Refreshments

8.45

Welcome and opening
remarks

9.00

Rob Bell

Climate-change impacts and implications for 3-waters and how hazard modelling and risk assessments can support an adaptive approach of networks and systems

9.45

Michael Arthur - Urban Stormwater Modelling Guidelines

10.15



10.30

Antoinette Tan

Flood storage optimisation in the Ōpāwaho / Heathcote Upper Storage

11.00

Scott Zhang
Waikato River Stop Bank Failure Modelling for Rangiriri West – 450-year

11.30

Andrea Pozo
Hybrid modelling for rapid flood scenario assessment

12.00



12.45

Ian Garside
25th Anniversary Perspectives

1.15

Bertrand Salmi
NRC Regionwide Modelling - 3 years on

1.45

Ben Caldwell
How much seawater will be in our wastewater networks?

2.15

Graham Moralee
Evidence over Emotion - the Value of Modelling Storm Overflow

2.45



3.00

Site Visit

Move to bus for departure at 3.15pm
Bromley Wastewater Treatment Plant

or

3.00

Workshop 1

Simulation, modelling and analysis of the living water system:
Improving our beneficial return on investment.

Michael Barry - Tuflow

or

3.00

Workshop 2

Integrated Catchment Technology

Matthew Piggott - Autodesk

5.00

Day One Concludes

6.00



6.30



At the conference dinner we will invite our sponsors to say a few words



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Programme – Day Two – 13 March

8.15

Registration and Refreshments

8.30

Wioletta Gilfoyle –
Day 2 opening

8.35

Lara Taylor

9.15

Andrew Sherson

Sub-catchment vs Rain on Grid why should we care.

9.45

Dan Johnson and Jeanette Tucker

Integrating modelling and GIS for smarter renewals planning

10.15



10.30

Michelle Mak and Tim Lockie

Deriving PS Discharge Volume: A Case Study in Tauranga

11.00

Marcel Bear

30 years of water supply modelling, what do I know

11.30

Brendon Schicker

Wellington Water Live Modelling

12.00



1.00

Emily Lane

Complex Workflow for National Flood Assessment

1.30

Tim Preston

What's next for Christchurch surface water modelling? (Schema 2.0)

2.00

Martin Nguyen

Estimating uncertainty in flood model outputs using machine learning

2.30

Harm van Oorschot

Put your money where the benefit is

Voting opens for best presentation

3.00



3.15

Closing remarks and best presentation awarded

3.30

2024 Symposium closes

Committee



Fiona Macdonald

Principal - Flood Risk



Wioletta Gilfoyle

Principal Three Waters Consultant

Modelling Group Chair



Rene van Lierop

Associate - Land & Water



Mike Dunstone

Senior Water Network Planner



Peter Kinley

NZ Water Lead



Cheryl Bai

Principal - Hydraulic Modelling
Delivery



Alistair Osborne

Senior Hydraulic Modeller

Deputy Chair Modelling Group



Elliot Egan

Senior 3 Waters Engineer



Paul Haddon

Principal Hydraulic Engineer



Kirsten Henden

Senior Stormwater Modeller



Ajay Desai

Principal Three Waters Engineer

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