

Modelling Group News

VOLUME 4

October 2014

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Fourth Edition and a new name

We have decided to rebrand the Modelling Special Interest Group (SIG) to just Modelling Group. The committee feels this is an easier and more approachable brand for us.

Committee Member Profile - Wioletta Straszak

I am Senior Hydraulic Modelling Engineer with Opus International Consultants. I am based in sunny Auckland, but undertake projects throughout New Zealand. I am qualified engineer with Master's Degree in Water Supply, Wastewater Treatment and Waste Disposal from the University of Zielona Gora (Poland) and Chartered Member of CIWEM (Chartered Institution of Water and Environmental Management). I have twelve years professional experience in both building services design and water and development of infrastructure management plans.

I immigrated to beautiful New Zealand in 2011, after spending over seven years in the UK, where I worked for RPS Water and Mott MacDonald holding positions as a wastewater flow survey engineer and hydraulic modeller.

I enjoy sharing knowledge and being involved in the wider modelling industry, hence my interest in the Water New Zealand Modelling SIG. Since joining the SIG in 2012, I held a few responsibilities. I am managing liaison with the New Zealand CIWEM network and I promote the Water NZ Modelling SIG through regional activities.

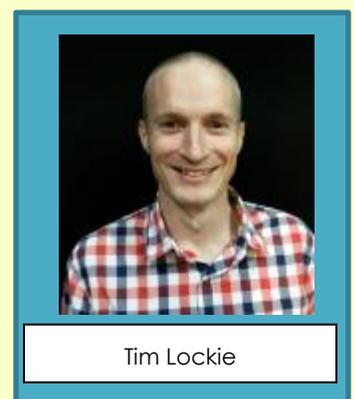
In my spare time I love to explore all that New Zealand has to offer, including gorgeous beaches, great coffee and an occasional red wine.



Committee Member Profile - Tim Lockie

I am a Chartered Professional Engineer at Watershed Engineering Ltd, based in Auckland. WSE is the New Zealand distributor for the Innovyze range of modelling products, and as such part of my job is assisting Innovyze's NZ users with software issues. In addition to this I have 15 years' experience in catchment management, urban drainage and flood management gained in New Zealand, USA and the UK.

I also have specialist expertise in hydraulic modelling of wastewater, stormwater and combined pipe networks, ranging from model build and calibration through to options studies and development of infrastructure master plans. I have been on the modelling SIG committee for 1 year. My specific roles have included organizing regional events for Auckland and attempting to develop Technical Notes.



Recent Events

Dunedin Regional Meeting

A regional meeting was held in Dunedin on the 3rd September. MWH kindly hosted the event and provided drinks and nibbles for the 18 people that attended. We had three presentations that evening; two from the Otago Regional Council (ORC) and the third from Jeff Booth Consulting.

Michael Goldsmith, the Manager Natural Hazards, gave a very interesting presentation on assessment of natural hazards for the Dunedin City District Plan review. The presentation has also been given jointly with Dunedin City Council (DCC) to various community boards and groups.

Jean-Luc Payan, also from the ORC, presented on the Water of Leith Flood Protection Scheme update, the section between the St David Street Bridge and the Union Street Bridge. This presentation provided context to a large project currently being undertaken within the University area of Dunedin. The presentation included many old photographs of historic flood events.

Vicki Koopal also presented on using models to aid flood protection rating reviews. This presentation showed the use of ICM to model the effect of having a stop bank verses not having one. The presentation included movies of the models outputs to show the areas flooding affected.



Photos:
Jean-Luc presenting
Dunedin Regional meeting group
Vicki presenting
Mike presenting



'The role of flood models in delivering flood risk reduction - a practical experience'

A regional meeting was held at the Tauranga City Council offices on Thursday 31st July where two presenters delivered an entertaining presentation on the Tauranga City Council city-wide integrated stormwater programme.

Models are being used to identify the prioritisation of flood mitigation works to deliver on required or desired levels of service. Part of the programme involves the development of a standardised set of stormwater models that cover the whole city. Several consultants are involved in the modelling, with quality assurance for all models being delivered to the required standard being ensured by a dedicated peer reviewer. This programme is not only about the delivery of up-to-date models that deliver on a synthetic rainfall event, but rather focuses on a range of other considerations to undertake risk reduction over time. This includes the utilisation of flood models to educate the public on the present risks, aid in concept visualisation for infrastructure improvements (including testing designs and delivery of levels of service), and considerations of planning and policy changes to ensure the risk does not increase.

The Tauranga Project also fits into a wider regional project being jointly delivered by the Bay of Plenty Regional Council, Western Bay of Plenty District Council and the Tauranga City Council. The joint project, the Regional Flood Risk Management Framework, is taking a regional look at flood risk and using a joint approach to provide for improved catchment management and risk reduction.

The focus of the presentation was on the outputs and uses of models to meet the ultimate objectives and included examples. The presenters also discussed lessons learnt through the process and why models and modellers are an integral part in delivering flood risk reduction. Additionally, a stark warning for modellers was provided that they need to be able to show that the best practice of the day had been used for the modelling in the event that the results were challenged in either the Environment or High Court.

The presentation was delivered by Campbell Larking, Senior Policy Planner (Tauranga City Council) and Mark Pennington, Senior Water Resources Engineer (Tonkin & Taylor). Campbell is the project manager for the Tauranga City Council, with Mark Pennington having been engaged to provide technical assistance to a specialist technical group tasked with the development of risk reduction following model completion. Campbell and Mark are also project team members of the Regional Flood Risk Management Framework. Jeff Booth Consulting Ltd provided the refreshments for the evening.



Water New Zealand – Modelling Stream September 2014



The one day Modelling Stream at the September Water New Zealand conference was a great success. The days programme included an excellent key note speech from Nick Brown one of our committee members, several interesting presentations, the Modelling Annual General Meeting, an update on progress with the Rainfall Runoff guidelines and finished with the Modelling Dinner and quiz.

The stream was well attended due to the interesting topics presented. The Modelling Committee would like to take this opportunity to thank all the presenters for their hard work in preparing an abstract, paper and presentation.

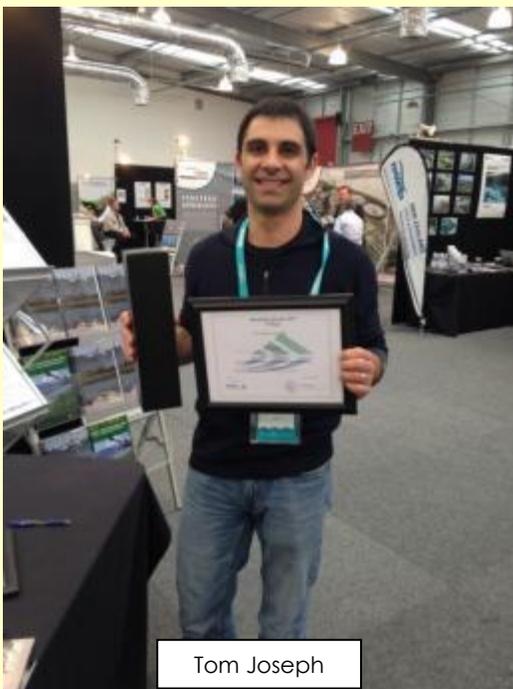
Each year the Modelling Stream awards some of their presenters with prizes. This year the following people were awarded for their excellent papers and presentations.

Tom Joseph (Mott MacDonald) and Luke Sutherland-Stacey (Sutherland-Stacey Consultants Ltd), who presented on the day and also Nathan Donald (Mott MacDonald, Geoff Austin University of Auckland) for their paper entitled 'OVERCOMING SPATIAL-TEMPORAL RAINFALL VARIATION USING RAINFALL RADAR'.

Anna Marburg and Ryan Orr (GHD Limited, Christchurch) for their interesting paper and presentation entitled 'SURFING THE WAVE: USING SOCIAL MEDIA TO GATHER USABLE DATA ON FLOOD EXTENTS'.

Another paper that was presented in the modeling stream was 'THE USE OF HYDRAULIC TRANSIENT MODELLING IN THE DESIGN OF RESILIENT PIPELINES' by Alistair Hancox and Grant Pedersen (Harrison Grierson Consultants Limited). In the main conference awards Alistair Hancox and Grant Pedersen won the Third prize for the Hynds Paper of the Year Awards which was presented in the Awards Gala Dinner. Alistair also won the ProjectMax Young Author Prize for the same paper, this too was presented at the awards gala dinner.

The Modelling Stream concluded with the usual Modelling Dinner and Quiz. There were six teams and four quiz rounds were played between courses. The quiz became very competitive with a few teams within points of each other. A bonus 10 points was offered to any team who would all get up at the front and dance to PSY 'gangnam style', Murray Gibb and his team 'Waterless Expatriates' which included the conference keynote speaker, Hon Karlene Maywald, Chair of the Australian National Water Commission took up this change and as a result won the quiz night!



Tom Joseph



Anna Marburg



Nick Brown – Key note speaker



Alistair Hancox and Grant Pedersen



Ann Pugh



Julius Tjong



Suzana Shipton



Mark Pennington



Anna Marburg and Ryan Orr



Tom Joseph and Luke Sutherland-Stacey

Modelling Dinner and Quiz



DHI NEW ZEALAND CELEBRATES THEIR 10TH YEAR ANNIVERSARY IN CONJUNCTION WITH THEIR ANNUAL USER GROUP MEETING



DHI has had an office in New Zealand for 10 years. The global company has also been actively involved in managing the flow and improving the quality of water around the globe for 50 years.

This was celebrated recently during DHI's User Group Meeting (UGM), held at Wellington's Royal Society of New Zealand. Delegates from all around New Zealand came together at the UGM to learn and share their water modelling knowledge.

Erland Bo Rasmussen, Executive Vice-President of MIKE by DHI, travelled from Denmark to meet users, and to share some of DHI's history with the delegates in attendance. One of the presenters, Unitec's Gregory De Costa saw real tangible value in this year's UGM.

"MIKE11 and MIKE URBAN sessions were excellent. Our students give us extremely positive feedback and want more of it".



Another delegate, Dayanada Kapugama, of Tauranga City Council, also enjoyed the balanced mixture of training and presentations. "The 2014 MIKE by DHI was a valuable opportunity to keep pace with the developments in modelling".

As well as having a lot of fun at the 50th celebratory dinner, delegates attended training sessions on MIKE 21 Flexible Mesh and GPU accelerated modelling; urban drainage modelling with MIKE URBAN; and fully integrated catchment modelling with MIKE SHE.



Upcoming Events

Modelling Group Symposium 2015



Modelling Group
WATER NEW ZEALAND

Water NZ Modelling Group Symposium 2015

The West Plaza Hotel, Wellington

18-19 March 2015



All modellers, engineers and environmental practitioners in the fields of stormwater, wastewater and water supply modelling are encouraged to attend.

Sessions will include keynote speakers, presentations and forums.

The symposium is non-software specific.

A Modelling dinner will be held on the Wednesday night.

The Modelling Group is currently looking for abstracts. A paper will not be required; a 500 word abstract will need to be submitted for review and then a presentation prepared for the day.

Abstracts

Abstracts may be submitted to amy.aldrich@waternz.org.nz before 30th January 2015.

Simply email your 500 word (max) abstract in MS Word format along with the title of your presentation, author (s), organisation (s), contact details. If successful attend on the day with your power point presentation.

Accommodation Offer

Accommodation at the West Plaza for the nights of Tuesday 17th March and Wednesday 18th March 2015 are being offered at \$155 per room, per night. Quote reference: #359511 when booking.

Find out more about the Modelling SIG refer to our website

<http://www.waternz.org.nz>

Important Dates

Abstracts due
30th January 2015

Registration Opens
1st December 2014

Early Registration closes
20th February 2015

Modelling Group Symposium
18-19th March 2015

Registration

Earlybird (before 20th February):

Member \$400

Non-member \$560

After 20th February 2015 \$560

Practitioners travelling from
Australia \$400

**All prices are exclusive of GST*

For registration or further information
please contact Amy Aldrich

E: amy.aldrich@waternz.org.nz

P: +64 4 495 0894

More upcoming events

Innovyze User Group Meetings New Zealand

Jeff Booth Consulting Ltd will be holding their Innovyze User Group Meetings in Wellington on 17th to 19th November 2014 which will cover the topics of water supply, collection systems and asset management. This event will update users on recent software updates, as well as provide an opportunity to hear case studies from the industry.

More information available via jbcl@xtra.co.nz

Joint Conference - NZ Hydrological Society, NZ Freshwater Sciences Society and the IPENZ Rivers Group



The banner for the 2014 Water Symposium 'The Final Frontier' features the text '2014 WATER SYMPOSIUM' in large blue letters, followed by 'Integration: 'The Final Frontier'' in black. Below this, it says 'NOV 24 - 28 / MARLBOROUGH CONVENTION CENTRE' in red. On the right side, there are logos for the 'JOINT CONFERENCE FOR THE New Zealand Hydrological Society', 'New Zealand Freshwater Sciences Society', 'IPENZ Rivers Group', and the 'rivers GROUP' logo.

There will be plenty of presentations and talk on modelling related activities.

See here for info: <http://www.2014watersymposium.co.nz/>

MIKE FEFLOW and MIKE SHE

DHI are running two free training events on the Sunday before the conference: one in groundwater modelling with MIKE FEFLOW software; and one in integrated catchment modelling with MIKE SHE. Could be of interest to some of the SIG members.

See here for details: <http://www.2014watersymposium.co.nz/programme/training/>



The banner for the Stormwater Conference features a large orange water drop icon with a green leaf inside. To the right of the icon, the text reads 'Water New Zealand's Asia Pacific Stormwater Conference' in white, followed by 'STORMWATER' in large yellow letters, and '20 - 22 MAY 2015, AUCKLAND' in orange. At the bottom, it says 'Liveable Cities, Liveable Communities' in white.

www.stormwaterconference.org.nz/



Modelling

WATER NEW ZEALAND | SPECIAL INTEREST GROUP

Water New Zealand's Modelling SIG - Auckland Regional Meeting

The Water NZ Modelling SIG invites interested parties to attend an informal get together. Come along for a presentation preceded by light refreshments, followed by discussions whilst meeting other professionals with common interests.

Presentations:

- **Application of Partial Duration Series (PDS) in Analysis of Extreme Rainfall in New Zealand** - Associate Professor Asaad Y. Shamseldin, FHEA Deputy Head (Research), Department of Civil and Environmental Engineering The University of Auckland
- **Wastewater Network System Performance Analysis: What is "Average" Rainfall?** - Nathan Shaw from Stategy² Ltd.

View the abstracts [here](#).

Venue: OPUS International Consultants Limited, The Westhaven, 100 Beaumont Street, Auckland

Date: Wednesday 12 November 2014

Time: From 5:30pm for 6:00pm start

RSVP by Friday 7 November
E: info@wse.co.nz
P: 021 326 979

*Please forward to anyone you know who may be interested – all welcome

<http://www.waternz.org.nz/>