

Dear all

Two items for you this week:

- Congratulations to Dr Wenyan Wu from The University of Melbourne for being granted a Discovery Early Career Researcher Award (DECRA)
- Queensland Water Modelling Network Workshops in November

If you would like something included in this digest please email it to [office@mssanz.org.au](mailto:office@mssanz.org.au)

kind regards, Karen

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### **Australian Research Council Discovery Early Career Researcher Award (DECRA)**

Dr Wenyan Wu is a Senior Lecturer in Environmental Hydrology & Water Resources in the Department of Infrastructure Engineering, the University of Melbourne. Dr Wu has a background in environmental modelling and optimisation using numerical methods, with applications in planning and management of environmental (water) systems. Dr Wu has run sessions at several MODSIMs.

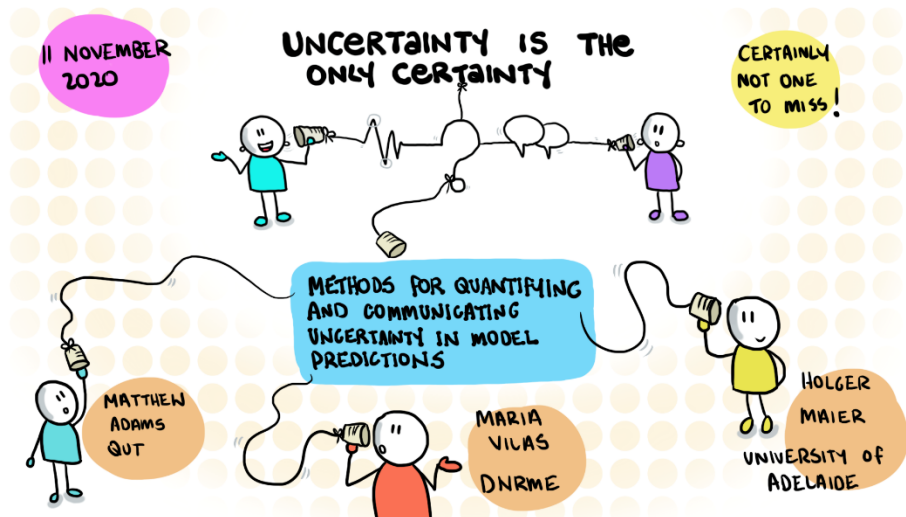
The project that has been accepted for a DECRA is titled *An adaptive, probabilistic optimisation framework for multiobjective reservoir operations under uncertainty*

This project aims to address a crucial water resources management problem: how to manage reservoirs under uncertainty. This project expects to develop an optimisation-based framework to improve the delivery of water resources from optimised reservoir operational strategies. Expected outcomes include an innovative tool for multiobjective decision-making under uncertainty, and robust operational strategies catering for real-world operational situations, including conflicting objectives, natural variability in system inputs, and future uncertainty due to climate change and population growth. The improved decisions will protect lives and assets, and postpone expensive infrastructure upgrades by maximising benefits from current systems.

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### **Queensland Water Modelling Network Workshops**

**Uncertainty is the only certainty: Strategies to tackle this dual technical and communication challenge in water modelling. Wednesday 11 November 12-1:30 pm (AEST, i.e. Queensland Time).** Cost \$15 (Free for students). Register <https://www.eventbrite.com.au/e/uncertainty-is-the-only-certainty-tickets-127299350785> Water sector professionals will be introduced to a variety of methods for quantifying, interpreting and communicating uncertainty in model predictions. The workshop will conclude by giving participants to opportunity to consider how evaluation of model predictions under uncertainty can be integrated into the modelling process for usage in present and future water modelling projects. Resources will be supplied to participants, to support future model uncertainty evaluation efforts after the event. *Presenters:* Matthew Adams- Lecturer in the School of Mathematical Sciences, QUT; Maria Vilas- Senior Scientist in the Department of Natural Resources, Mine and Energy, Queensland Government; Holger Maier- Professor of Environmental Engineering, The University of Adelaide.



This is the second in a series of three events on evaluating and communicating model performance for the Queensland Water Modelling Network <https://watermodelling.org/news/evaluating-and-communicating-models-and-model-performance> Final workshop 26<sup>th</sup> November – Workshop 3: *Communicating model performance for decision making*. Models are developed and applied to support decision-making. The problem is, all models are wrong, and only some are useful. How do you clearly communicate what your model can and can't do for decision-makers? In this LiveStream event, our panellists use their experience in the water sector to discuss how to reduce the risk of having a good model dismissed as useless, a bad model hailed as a success, or a useful model applied in the wrong ways. This panel discussion will follow a similar format to ABC's "Q&A", with panellists including Kate O'Brien (Associate Professor in Chemical and Environmental Engineering UQ), Tony Weber (Alluvium Consulting), David Hamilton (Deputy Director of the Australian Rivers Institute), Mark Baird (CSIRO Coastal Biogeochemical Modelling team lead), Angela Dean (QUT), Jo Burton (DES) and Paul Maxwell (Alluvium Consulting).

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