

iah Australian National Chapter NSW Branch

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Tuesday 11 February 2014 5:30 pm to 8 pm

Parsons Brinckerhoff offices

Ernst & Young Centre
Level 26, 680 George Street, Sydney CBD
For late arrivals, please phone Ellen Kwantes on 0434 996 372 for access

IAH NSW proudly presents a talk by **George Mathews**, a Senior Researcher at the Control and Signal Processing Research Group

Data-Centric Groundwater Modelling: Quantifying Uncertainty in Groundwater Predictions'

The quantification of uncertainty in predictions made for groundwater systems is an important consideration for the sustainable management of these vital resources.

The Data-Centric Groundwater Modelling research project is a collaboration between Department of Primary Industries – particularly the NSW Office for Water – and National ICT Australia (NICTA), Australia's Information and Communications Technology Research Centre of Excellence.

A key aim of the project is to improve the way uncertainty is quantified for predictions made for dynamical groundwater systems. This is being achieved by developing new techniques that can combine information extracted from data and expert opinions in a direct probabilistic fashion. The techniques fall broadly into three areas: small scale geological modelling and hydrogeological upscaling; stochastic groundwater flow modelling and data assimilation; and methods to quantify the value of future data gathering activities in reducing uncertainty.

This talk will introduce the Project and the techniques currently under development, highlighting where they differ from existing approaches. In addition, preliminary results of applying these new techniques to different scenarios will be covered.

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