

University of Canterbury news for Current

Water Markets Research Group

The Water Markets Research Group has continued with activities in 2011.

In February, John (“Fritz”) Raffensperger participated in the ConfereNZ Fresh Water Management Forum in Wellington. He gave a presentation on the risk-reducing implications of water markets. The audience participated in his demonstration of a spot market for water with ground water with a hydropower reservoir.

That work highlighted the need for improved software support for common pool water markets. The Group has employed a part-time programmer who is linking the various software pieces and developing user interfaces. The work is progressing.

In April, the University of Canterbury’s School of Business and Economics hosted Charles Plott from CalTech. Prof. Plott is an expert in experimental economics. Fritz is currently spending three months with Prof. Plott at CalTech as part of his sabbatical.

Ranga Prabandonie has finished her PhD research on nutrient trading and taken up a postdoctoral position in Australia. She recently published two excellent papers on how nutrient trading markets can be established. Our former postdoctoral researcher Rebecca Teasley has taken up a tenure-track position in water resources engineering at University of Minnesota—Duluth, and recently assisted us with heroic work on a groundwater model.

Antonio Pinto is nearing completion of his PhD with Tom Cochrane. Antonio has papers in preparation on markets for sediment and impermeable cover. Antonio’s work is especially interesting as it shows how to account for the uncertainty of rain events, while lowering the cost of flood damage. Stephen Starkey’s PhD is on urban water systems with Prof. Grant Read and Dr. Shane Dye. Stephen presented some of his work at the July IFORS Conference in Melbourne. We have just accepted a new Phd student, Indra Mahakalanda, who is planning to study the interaction of electricity and water markets.

The Group’s 2009 publication in *Operations Research*, "A Deterministic Smart Market Model for Groundwater", was a joint winner of the best paper of the Energy, Natural Resources, and Environment Section of the Institute for Operations Research and Management Science.

From July to September, Fritz spent three months in 2011 with the Department of Management Engineering at the Danish Technical University. This is part of a broader exchange relationship between U. Auckland, U. Canterbury, and three European universities on optimization and management sciences.

The Group welcomes visitors and can arrange meetings to suit a variety of interests. For further information contact Mark Milke (mark.milke@canterbury.ac.nz) or Fritz Raffensperger (john.raffensperger@canterbury.ac.nz).