

CWMR ENEWS

May 2008



SA Water Centre for
Water Management
and Reuse



Research news

Dr John van Leeuwen, CWMR UniSA, and **Dr Chris Chow**, SA Water AWQC, have submitted a joint application for an Australia-China Special Fund for S&T Cooperation with the State Key Laboratory for Environmental Aquatic Chemistry (SKLEAC). The application has been submitted to the Department of Innovation, Industry, Science and Research. If successful, funds will enable collaborative research on improve coagulant and coagulation techniques for algae/cyanobacteria and natural organic matter removals.

[\(See also Visitors to CWMR\)](#)

PhD student Usama Abu Risha and **Associate Professor Ian Clark** visited Dalhousie Springs in northern South Australia to collect groundwater samples for analysis. The results will help in understanding the recharge processes involved in this western part of the Great Artesian Basin.

[Sampling groundwater from mound
springs at Dalhousie Springs](#)





Siphonic roof drainage downpipe testing rig

In April a testing rig was built in order to assess the effect that air entrainment has on reducing the negative pressures induced in downpipes of siphonic systems. The downpipe testing period was conducted between 14th and 30th of April 2008. The project is managed by

Professor Simon Beecham and Terry Lucke, CWMR.

People

Dr Wang Dongsheng, Director of the State Key Laboratory of Environmental Aquatic Chemistry (SKLEAC), Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, has been awarded full Professorial Adjunct status with CWMR. Conferral of the adjunct status endorses on going research collaboration between RCEES, CWMR and AWQC to develop new water coagulants and to develop predictive models for application.

Dr Wang Dongsheng



Earlier this year Dr Van Leeuwen was awarded an adjunct professorship with the Chinese Academy of Science. This endorses an established cooperative agreement between the two groups.

Dr Wang Dongsheng's research interests are in the fields of aquatic chemistry, environmental engineering, and coagulation science and technology. He has contributions in the research of inorganic polymer flocculants (IPFs), aqueous chemistry of Al(III), Fe(III) and silica, coagulation chemistry and dynamics, floc structure and fractal aggregates, coagulation calculation model, water and wastewater treatment.

Currently his research focuses on the aquatic particulates and sediments, preparation, characterization and application of IPFs, and optimized coagulation

in safe water treatment as well, with 100 more peer-reviewed papers published, which appeared in the journals such as 'ES&T', 'JAWWA'.

Visitors to CWMR

CWMR Visitor, Assistant Professor Tao Li, from SKLEAC is currently in Australia working with Dr Chris Chow at the AWQC and with Dr John van Leeuwen on a project to develop on-line sensor capability and coagulation modelling for treatment optimization. Assistant Professor Tao will also spend time at University of South Australia to study modelling techniques that were developed through the CRC Water Quality and Treatment.



Assistant Professor Tao Li at Cleeland

Conference, Seminar and Workshop Presentations

Mr Rezaul Kabir Chowdhury, PhD candidate, CWMR will present a paper at the **American Society of Civil Engineers' World Environmental and Water Resources Congress 2008, 12-16 May, Hawaii USA** Titled:

Beecham, S. and **Chowdhury, R.K.** "Statistical Behaviour of Adelaide's Rainfall – Is Climate Change Detectable?"

Professor Simon Beecham and Terry Lucke will present a two-day short course on [Siphonic Roof Drainage Design](#) on 17 and 18 June, 2008

In addition Centre staff and students have recently given the following presentations:

Dr Guna Hewa chaired a session (D2- Sustainability on the 17th April) in 31st Hydrology and Water Resources Symposium 14-17th April. Prof. Simon Beecham also chaired Session A1.

Ah Rim Lee, PhD candidate, CWMR presented a paper at the 'Water Down Under' conference titled, *Sensitivity analysis and model calibration of the SWMM parameters in the perspective of low flows*, A.R. Lee, G. Hewa, D. Pezzaniti

Professor Simon Beecham was guest speaker at a UDIA seminar on [Urban Water Management, Harvesting and Reuse](#), 2 April

- He was an invited speaker to the Environmental Defenders Office Conference in March 2008, Water Sensitive Urban Design- Making every drop count <http://edosaconference.org.au/>
- In February, he presented on [Siphonic Roof Drainage Design](#) for the ICEWaRM seminar series

Dr John Argue consulted with Dr Kylie Hyde of Australian Water Environments (AWE) on 14 April, 2008, about 'Institutionalising WSUD in the Greater Adelaide Region' project as a Stakeholder. This resulted in a major submission highlighting the shortcomings of the Draft Framework and Technical Paper documents. The submission went to Dr David Kemp, Chair of the 'Institutionalising WSUD' Steering Committee.

Dr Ali Hassanli, Visiting Scholar from Shiraz University, Iran presented the following co-authored papers at the recent 2nd International Forum for Salinity- 31 March to 3 April 2008 in Adelaide.

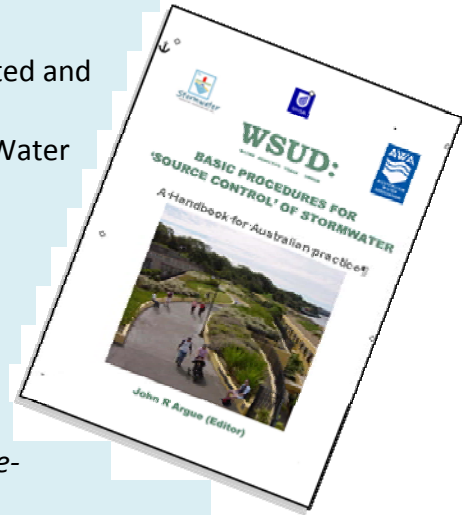
- **Hassanli, A.M.**, Ahmadirad, SH and Pezzaniti,D, The Effect of Municipal Effluent with Different Irrigation Systems on Soil Salinity and Sodicity in an Arid Region,
- **Hassanli** and Iman Saleh, I., Evaluation the effect of irrigation methods and water quality on soil salinity and moisture distribution in an arid area.

Publications

WSUD Handbook (*WSUD: basic procedures for 'source control' of stormwater - a Handbook for Australian practice*)

The **Fourth Printing - February, 2008** has just been completed and the first batch of books has been printed and is ready for distribution through our Principal Distributors - Australian Water Association and EA (Engineers Australia) Books. The new version includes some new material, particularly on –

- *stream morphology, environmental flows and natural catchment treatment processes*
- *strategies for preserving natural waterways in urbanising 'greenfields' catchments*
- *strategies for continued use of formal drainage networks without augmentation/enlargement despite re-development*
- *new material and references on stormwater quality treatment systems*



Dr Guna Hewa has co-authored the following papers:

Lee, A., **Hewa, G. A.** and Pezzaniti, D. (2008) Sensitivity of the SWMM parameters in the perspective of low flows. Full paper was been accepted to the Water Down Under 2008, 15-17 April, 2008 Adelaide

Nicholson, B. H. and **Hewa, G. A.** (2008) Evaluation of Flow Measurement Techniques in Dry Creek, South Australia. Full paper was been accepted to the Water Down Under 2008, 15-17 April, 2008 Adelaide.

Other

Mr Rezaul Kabir Chowdhury, PhD candidate at the Centre for Water Management and Reuse has been awarded a travel scholarship to participate in the NeWater-GWSP Summer School on "Managing Change: Tools and Methods for Adaptive River Basin Management" in Königswinter, Germany, 09 July – 19 July 2008

Summer school details: <http://www.newater.info/everyone/3112>

NeWater addresses some of the present and future challenges of water management. Details: <http://www.newater.info/everyone/1050>