PhD Opportunity for APA/IPRS (or equivalent) applicants

Natural organic matter monitoring in a water supply catchment: Novel techniques, long term trends and impact on treatability

bioMASS Lab, UNESCO Centre for Membrane Science and Technology (School of Chemical Engineering), UNSW Water Research Centre (School of Civil and Environmental Engineering), Sydney Water Corporation and Water NSW

NOM treatment by water treatment plants is necessary to keep concentrations of potentially harmful disinfection by-products below those that could cause harm. It is well understood that natural organic matter (NOM) character as well as concentration impacts its treatability by water treatment processes and that concentration and character can change over time. In situ and on-line monitoring of both NOM character and concentration is therefore of benefit in any water supply catchment subject to NOM variability. However, the most appropriate monitoring method is a question that requires investigation. A PhD top-up scholarship operating and allowance is available for a successful APA/IPRS (or equivalent) applicant to conduct a PhD project on the topic: Natural organic matter monitoring in a water supply catchment: Novel techniques, long term trends and impact on treatability. The PhD is funded through an ARC Linkage grant (LP160100620) supported by the Sydney Water Corporation and Water NSW and seeks to evaluate novel in situ spectroscopic techniques both in the catchment and within water treatment plants to determine the most appropriate protocol for monitoring NOM changes relevant to treatment.

The research will be based at the bioMASS lab (http://www.biomass.unsw.edu.au/) in the UNESCO Centre for Membrane Science and Technology, School of Chemical Engineering, University of New South Wales, located in the eastern suburbs of Sydney, and will involve extensive collaboration with research partners, Sydney Water Corporation and Water NSW as well as the UNSW Water Research Centre. The research will be supervised by Dr Rita Henderson, details on whom can be obtained from http://www.biomass.unsw.edu.au/the-team/staff-students/dr-rita-henderson.

Applications are invited from graduates with a background in environmental or chemical engineering and a passion for working in the water treatment and quality field. Please submit your CV, transcripts and a cover letter to Rita Henderson (r.henderson@unsw.edu.au) before August 5th with subject line “ARC Linkage PhD Scholarship Application”, indicating the earliest date you can commence. We are looking for students to start in Session 1, 2017. Note that this PhD involves extensive field work therefore the candidate should have a full, clean driving license.

It is expected that the student apply for their own scholarship via APA or IPRS schemes (or equivalent) - https://research.unsw.edu.au/postgraduate-research-scholarships. The PhD scholarship is for a 3 year period (extendable to 3.5 years). Local students or residents will be preferred for the scholarships, but applicants from exceptional international students will be considered.

Adapting catchment monitoring and potable water treatment to climate change
LP160100620
Professor Gregory Leslie; Dr Rita Henderson; Professor Ashish Sharma; Professor Kenneth Grattan; Professor Tong Sun; Dr Peter Jarvis; Dr Heriberto Bustamante; Dr Peter Cox; Dr Bala Vigneswaran
Administering Organisation The University of New South Wales