

**UniSA Visiting Distinguished Researcher Award presents a half-day Master Class by
Prof. Dr.-Ing. Jörg Krampe, Technical University of Vienna**

Title: *Energy considerations for wastewater treatment plants*

When: Monday 24th October 2016, 0915–1245 (lunch provided), building H, room H1-42, Mawson Lakes

Abstract: Energy use and optimisation has become a key aspect of modern day wastewater treatment and is highly topical in wastewater engineering and research. This half-day Master Class will focus on energy considerations of wastewater treatment plants, with a special focus on electrical energy use, electricity monitoring and conservation. Attendees will be introduced to the 'energy content' of typical municipal wastewater and how this energy can be recovered by various means. Relevant key performance indicators (KPIs) and performance 'benchmarks' related to energy use at wastewater treatment plants will be described and applied in the context of energy consumption and production during wastewater treatment. Other concepts related to energy optimisation from a sustainability perspective will be discussed, focusing on direct process greenhouse gas emissions like the potent greenhouse gas nitrous oxide.

Target audience: Higher degree research students (Masters and PhD); early career researchers with an interest in energy-efficient wastewater treatment

Assumed knowledge: Basic knowledge of modern day wastewater treatment processes and relevant parameters such as biochemical oxygen demand, population equivalent loading, energy metrics, etc.

Cost: Free



Presenter Bio: Jörg is a Dipl.-Ing. in civil engineering from the University of Hannover (Germany). He completed his Ph.D. in Civil and Environmental Engineering at the University of Stuttgart (Germany), where he then worked as a lecturer and researcher at the Institute for Sanitary Engineering, Water Quality and Solid Waste Management reaching the position of Head of Department of Wastewater Technology.

During 2008–2013, he was the Principal Wastewater Treatment Engineer at SA Water. In his role he focused on the process design and process optimisation of SA Water's wastewater treatment plants on a strategic level. In August 2013 Jörg returned to Europe to take over his current position as Professor for Water Quality at the Technical University of Vienna (TU Wien), Austria. Since October 2015 he is head of the Institute for Water Quality, Resources and Waste Management. He remains affiliated as Adjunct Assoc. Professor at the University of Adelaide.

Jörg's 20 years of work experience centre on biological wastewater treatment, aeration

technology, membrane technology, process optimisation and energy efficiency. He has a wide range of practical experience with different types of wastewater treatment plants, focused mainly on activated sludge and trickling filter technologies. He has experience in operator training in Germany and Austria and has presented special short courses for Turkish, Algerian and Chinese treatment plant operators.



Strictly limited to 40 people, so please register your attendance with Dr Michael Short by Wed October 19 michael.short@unisa.edu.au