



Calendar details

Date:	Tuesday, 4 May 2021
Time:	03:00pm – 04:00pm (Melbourne, Australia)
Event Registration Link:	https://www.eventbrite.com.au/e/australian-society-of-rheology-industry-lecture-4-may-2021-registration-150416964189

Invited lecture

Presenter: Dr Catherine Rees

(Melbourne Water - Sewage and Waste Treatment Research Manager)

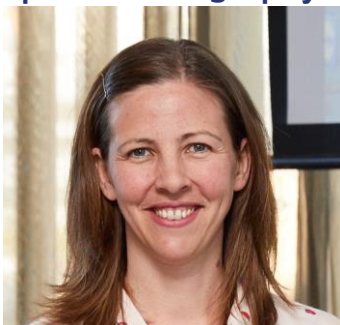
Presentation Title: Multiple applications of rheology in sludge processing

Abstract: Sewage sludge is the heterogeneous mixture of solid components separated from (largely) domestic wastewater that is digested, transported and thickened as part of Melbourne Water's wastewater treatment process. It is comprised of residual biological material used in the treatment of wastewater, untreatable solids such as sand, cellulose from toilet paper and other residual solids.

While the water content can be as high as 97%, these materials exhibit non-Newtonian behaviour, are shear thinning with thixotropic properties. MW sludges exhibit a yield stress above around 3 % solids, and rheological properties change with time throughout the treatment process due to digestion and associated changes in chemical composition.

Melbourne Water has a significant interest in rheology of sewage sludge due to the impact of these varying properties on key processes of flow and dewaterability. In this presentation, several practical applications of rheology to sewage sludge process design and operation will be discussed.

Speaker's biography



Dr Catherine Rees is a Research Manager at Melbourne Water, where she is tasked with identifying knowledge gaps associated with wastewater treatment processes. She builds and manages research teams and networks from across Australia, and internationally, to generate the knowledge required by Melbourne Water to manage emerging risks and/or issues, or to harness new opportunities.

Catherine has a Bachelor's degree and PhD in Chemical Engineering and 15 years of industry experience. She is a former chair of the Policy Subcommittee of the Australian Water Association's Victorian Branch.

Catherine has a wide range of interests and skills including design and implementation of novel processes, process improvement, environmental risk management, as well as new applications for robotics and artificial intelligence.

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