



The Australian Society of Rheology is presenting a national series of lectures, which is open to anyone interested in the flow and deformation of matter. The next event in the series will be held online.

## Calendar details

Date:	<b>Tuesday, March 1, 2022</b>
Time:	3:00 to 4:30 PM (Melbourne, Australia)
Event Registration Link:	<a href="https://www.eventbrite.com.au/e/australian-society-of-rheology-industry-lecture-1-march-2022-registration-265721358737">https://www.eventbrite.com.au/e/australian-society-of-rheology-industry-lecture-1-march-2022-registration-265721358737</a>

## Invited lecture

### Andrew Chryss

(Senior Research Engineer at CSIRO Mineral Resources, Clayton, Victoria)

**Presentation Title: Suspensions of disbelief: multi-phase pipeline transport research at CSIRO**

**Abstract:** Due to the importance for the mineral industry of suspension transport via pipeline it has been a topic of interest to researchers for several decades. It lies at an intersection of fluid dynamics, particle mechanics and (occasionally) rheology. Being a theoretically complex and experimentally demanding field, it has only been well understood for simple conditions or ephemerally described for flows of industrial interest. In short, research outcomes have been useful but patchy. CSIRO has historically been a significant part of the ongoing endeavour to describe suspension flows in a cohesive and applicable manner. Through early work on stabilised flows, later joint projects on concentrated suspension transport, to the current focus on turbulent non-Newtonian suspensions. Part of the current thrust involves developing new types of instrumentation. The data these devices can provide, combined with improved physical descriptions of solids distribution, may lead to a better understanding of what happens inside a suspension pipeline.

## Speaker's biography



Andrew Chryss is a chemical engineer who has spent far too much of his adult life in laboratories. Working at RMIT University in the Rheology and Materials Processing Centre (RMPC) and later at CSIRO Minerals he has studied the rheology of a wide range of materials from polymers to suspensions, worked in steady shear and extensional flow and applied the outcomes to pipes, ducts and channels. Currently he is a Senior Research Engineer at CSIRO Mineral Resources (Clayton). His personal obsession is with improving methods for multi-phase and complex fluids and developing new techniques for measurement and interpretation of normally intractable

materials.

*Enquiries may be directed to Dr Mark Coghill (Mark.Coghill@riotinto.com).*