



In 2017 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 in **Brisbane**.

Calendar details

Date:	Wednesday, 26 April 2017
Time:	15:00 to 16:00 PM
Venue:	The University of Queensland <i>School of Chemical Engineering</i> <i>AIBN, Level 1, Seminar Room</i>

Invited lecture

A/Prof. Siva Vanapalli

(Department of Chemical Engineering, Texas Tech University)

“Microfluidic devices for characterizing the rheology and tribology of complex fluids”

In recent years due to advances in materials and microfabrication technology, several microscale devices have been developed to characterize the flow properties of complex fluids. These miniaturized devices have significant potential to be used in various industrial and biomedical applications because of their small size, cost-effectiveness, ease of use and small sample volume requirements compared to their macroscale counterparts. In this talk, I will focus on several microfluidic devices developed in our laboratory for characterizing the rheology and tribology of complex fluids. I will discuss the fundamental principles underlying the operation of these microfluidic viscometers and tribometers, including their limitations. Results from these devices will be shown for complex fluids ranging from polymer solutions to biological cells. For certain systems, these novel devices lead to new insights, which are difficult to achieve using conventional techniques.

Speaker's biography



Dr. Siva Vanapalli is an Associate Professor in Chemical Engineering at Texas Tech University. He obtained his B.Tech from IIT Kharagpur and Ph.D. from the University of Michigan. He is currently the holder of the Bill Sanderson and the Ed & Linda Whitacre Faculty Fellowships at Texas Tech. His research interests are in the areas of microfluidics, complex fluids, cancer, healthy aging and technology development. He received the CAREER Award from the National Science Foundation and the Rising Star Award from the Cell & Molecular Bioengineering Group of Biomedical Engineering Society. He has published over 50 journal articles and developed several enabling microfluidic technologies, two of which have been licensed to start-up companies. To date he has mentored 8 Postdoctoral researchers, 14 PhD students, 38 undergraduate students and 3 high school students.

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