

CHARLES DARWIN UNIVERSITY

# PROFESSORIAL LECTURE SERIES

## **Polymers, Tablets and Tissue – The Third Way in Spectroscopy for Process Monitoring**

**Professor Suresh Thennadil**

Director of the North Australian Centre for Oil and Gas  
Charles Darwin University

5:30 pm – 7:00 pm

Tuesday 10 November 2015

Nitmiluk Lounge, Level 4, Parliament House, Darwin

**RSVP:** Friday 6 November 2015 E. [cduevents@cdu.edu.au](mailto:cduevents@cdu.edu.au) T. 08 8946 6554

### **Lecture abstract**

In the last three decades there has been an increasing interest in developing near infrared (NIR) technology for process monitoring and in point-of-care and non-invasive medical diagnostics. Given that progressively smaller, cheaper and robust NIR instruments are available and the rich physical and chemical information contained in the NIR spectra, this technology offers great promise for a wide range of applications.

This lecture will discuss the range of these NIR spectra applications not only in the chemical industries, but also in its wide range of applications in medical diagnostics, fruit and vegetable grading, characterising pharmaceutical suspensions for monitoring quality, and potentially counterfeit drug detection.

The development of these techniques is important for many industries such as oil and gas, mining and even the agricultural industry. Process monitoring techniques are not only important for process control and optimisation, but also for condition monitoring, which can be vital to give adequate warnings in cases of malfunction due to deterioration of equipment.



**Professor Suresh Thennadil** joined CDU in October 2014 as Professor and Discipline Leader in Chemical Engineering, and Director of the North Australian Centre for Oil and Gas. His research interests include process analytics, spectroscopy-based instruments for online monitoring and medical diagnostics, light scattering, chemometrics and multivariate data fusion techniques. He has developed highly inter-disciplinary, industry focused research programs with a range of global companies in the chemical sector, such as BP, Shell, Pfizer, National Nuclear Laboratories BASF and Fuji Film as well as leading academic and research institutions across Europe. He has held a senior lectureship at the University of Strathclyde (Glasgow), a five-year EPSCRC Advanced Research Fellowship at the University of Newcastle upon Tyne and six years at Instrumentation Metrics Inc. (Arizona). He is co-inventor of 10 patents and has published about 30 refereed articles.

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