Approximately 80 percent of total mining fatalities happened in underground coal mining operations were caused by gas ignitions. The mining industry is currently dealing with increasing growth in coal mining production and consequently higher rates of gas release during operations. Distributed, reliable, real-time, safe and accurate gas measurement systems with reasonable response time needs to be developed to minimise the risk of explosions. This research investigates potential fibre methane gas sensing heads in a laboratory environment for underground coal mines.

In his presentation, Mohammad Amanzadeh will outline his investigations and laboratory results on fibre optic based methane gas sensors as potential sensor heads to be used in underground coal mines. He will present a brief introduction to the current state of gas sensing in underground coal mines and their drawbacks. The proposed systems and its advantages along with the development details of three different candidate all-fibre sensor heads will be presented.

With support of CRC Mining, ACARP Queensland Quantum Optics Laboratory and UQ, Mohammad has obtained significant test results in which comparisons between different sensor heads will be discussed.

Mohammad completed a Bachelor degree in Electrical Engineering in 2009 in Iran. He completed his Master of Engineering in the field of Electrical Engineering in 2011 at The University of Queensland, Australia. Currently he is completing his MPhil degree thesis under supervision of Dr. Aminossadati.

When
Friday, 10 May 2013, 3-4pm

Where
50-N202
Hawken Building, St Lucia

School of Mechanical and Mining Engineering

All interested persons are invited to attend
The seminar is free of charge – no RSVP is needed
Enquiries – Phone 3365 3714