Magnesium (Mg) alloys are attractive for light-weight applications such as in the aerospace and automobile industries, due to their high strength-to-weight ratio.

However, the poor resistance of corrosion and stress corrosion cracking (SCC) limits their more wide-spread application. Therefore, it is necessary to better understand the mechanisms and the important factors, which control Mg corrosion and SCC.

**RHD Final Seminar Program**

This presentation will give an overview of the project on corrosion and SCC behaviour of Mg alloys. Firstly, the corrosion behaviour of a series binary solution heat-treated Mg alloy will be presented. Based on it, the SCC behaviour of these alloys will be discussed.

Furthermore, the corrosion and SCC behaviour of these Mg alloys after hot rolling will be discussed to better understand the mechanism and important factors of Mg alloy.

Finally, a model related to grain size and corrosion product film will be produced to explain the behaviour of corrosion and SCC of these alloys.

**Fuyong Cao**

Fuyong Cao started his PhD candidature in August 2011 under the supervision of Prof Andrej Atrens and Dr. Guangling Song. He has developed expertise in corrosion and stress corrosion cracking of magnesium, and advanced characterisation techniques, leading to 3 first-author papers published in leading international journals and 2 international conference papers and presentations.

**Date** Friday, 12th December 2014  
**Time** 3 - 4pm  
**Room** 49-502  
**Location** Advanced Engineering Building, UQ  
**School of Mechanical and Mining Engineering**  
www.mechmining.uq.edu.au

All interested persons are invited to attend. The seminar is free of charged.  
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