



Workshop #3

Title: Workshop on Spall Prediction
Date: Thursday, 27 June 2013, 8:30 a.m. – 4:30 p.m.
Venue: The Westin Market Street, San Francisco
Cost: \$100 Lunch Included

Organized by:



ARMA (American Rock
Mechanics Association)



International Society for Rock
Mechanics

This workshop is part of the work of the ISRM Commission on Spall Prediction, the purposes of which are to develop suggested methods for damage initiation threshold detection; and to provide general guidance for the use of these thresholds in empirical, analytical and numerical prediction of ground behaviour in brittle rock masses at depth. The workshop will include guest presentations by international experts and will include significant question and discussion time for each speaker and for the general themes of general mechanics, laboratory testing, analysis methods, geological factors, applications and limitations.

Please join us in San Francisco for a lively discussion. Further information can be obtained from Mark Diederichs: mdiederi@geol.queensu.ca

PROGRAMME: Workshop on Spall Prediction Thursday, 27 June 2013

8:30 Start

BACKGROUND

5min M. Diederichs Welcome, Background and Symposium Agenda
25min **E. Hoek** **The Early Years – Rock Mechanics Testing and Understanding**
10min Questions and Discussion
25 min **D. Martin** **A Leap Forward - AECL-URL Retrospective**
10 min Questions and Discussion
10 min **M. Diederichs** **And Here We Are - The ISRM Commission and Mandate**
5 min Questions

10:00-10:15 Coffee

TESTING AND MODEL FUNDAMENTALS

20min **E. Ghazvinian** **ISRM SPalling Commission Report – Standardization of Routine Testing**
5 min Questions and Discussion
15min **L. Jacobsson** **Advanced Experimentation and Testing**
5min Questions and Discussion
15min **T. Siren** **Advanced Testing and Investigation**
5min Questions and Discussion
15min **M. Diederichs** **Empirical Methods and Continuum Models of Spall Behaviour**
5min Questions and Discussion
15min **G. Grasselli** and **A. Lisjak** **Discontinuum Modelling of Spall Behaviour**
5min Questions

12:00-1:00 Lunch - Provided

GEOLOGY (or SPALLING IS NOT JUST FOR GRANITE!)

5min D. Martin Afternoon introduction – Geology and Applications
15min **F. Amman** **Spalling and Damage in Shales**
5min Questions and Discussion
15min **S. Qi** **Spalling and Damage in Marble**
5min Questions and Discussion
15min **M. Hakala** **Spalling and Damage in Metamorphic Rocks**
5min Questions and Discussion
15min **M. Perras** **Spalling and Damage in Limestone**
10min Questions and Discussion

2:30-2:40 Coffee

APPLICATIONS AND COMPLICATIONS

15min **C. Langford** **Spall Prediction for Pillar Design and Reliability Analysis**
5min Questions and Discussion
20min **G. Barla** **Spalling and TBM Tunnelling**
5min Questions and Discussion
15min **M. Diederichs** **Spalling, Structural Interaction and Bursting**
5min Questions and Discussion

3:45-4:30 Panel

45min Where next – Panel discussion led by D. Martin and M. Diederichs

4:30 Closure