

1st Southern Hemisphere International Rock Mechanics Symposium

ISRM Regional Symposium
16-19 September 2008
Perth, Australia

A review of the 1st Southern Hemisphere International Rock Mechanics Symposium by
Tony Meyers, Vice President (Australasia)



The First Southern Hemisphere International Rock Mechanics Symposium (SHIRMS) was organised by The Australian Centre for Geomechanics (ACG). It was co-chaired by the Director of the Centre, Yves Potvin, Arcady Dyskin (University of Western Australia), John Carter (University of Newcastle) and Rob Jeffrey (CSIRO Petroleum). It was sponsored by The Australian Centre for Geomechanics, CSIRO, The University of Newcastle and The University of Western Australia and it was supported by the International Society for Rock Mechanics (ISRM).

The event was attended by over 240 Rock Mechanics practitioners from the Mining, Petroleum and Civil disciplines. Attendees included industry practitioners, consultants, suppliers, academics, researchers and students. 27% of the attendees came from overseas including Canada, Chile, China, Croatia, Germany, Indonesia, Iran, Ireland, Japan, Kazakhstan, Malaysia, Netherlands, New Zealand, Norway, Poland, Russia, Singapore, South Africa, Thailand, Turkey, UK and USA.

According to Yves Potvin, "SHIRMS [was] a new initiative and its success [was] the result of an active involvement and outstanding contribution from a world wide authorship." Its aim was to "bring together rock mechanics researchers and practitioners from the main areas of earth sciences to exchange ideas and lessons learnt, and to develop further collaboration and synergies. It aimed to set the agenda for future research and operational directions and to ensure the ongoing viability of the mining and civil industries".

The Sheraton Hotel provided high standard facilities which included a main ballroom for the keynote presentations, two smaller rooms for parallel sessions and a room where the high standard meals were served and the booths for the sponsors were laid out.

The sponsors of the event were RioTinto, BHPBilliton, Geovert, Adam Technology, BOSFA, Coffey, CSIRO, Datgel Data Solutions, Geobruigg, Geofabrics Australasia, Geotechnical Systems Australia, Geomechanics International, Inflatable Packers International, Maccaferri and Rock Australia. Their generous support of this and other events was greatly appreciated, without it professional development in the Rock Mechanics discipline would be significantly stifled.

Two well attended pre-conference events were held prior to the main event "From Rock Mass to Rock Model" provided a forum for discussing the issue of modelling rock mass behaviour for the purpose of design. It provided a platform to critically examine the current state of practice and highlight shortcomings in the state of the art. The workshop involved introductory presentations and open floor discussions. Presenters included

- Peter Kaiser, Centre for Excellence in Mining Innovation, Sudbury, Canada;
- Peter Cundall, Itasca Consulting Group, Inc., USA;
- David Beck, Beck Arndt Engineering, Australia;
- Garry Mostyn, Pells Sullivan Meynink, Australia;
- Philip Pells, Pells Sullivan Meynink and the University of New South Wales, Australia;
- Steve Spottiswoode, CSIR, South Africa;
- Doug Stead, Simon Fraser University, Canada.

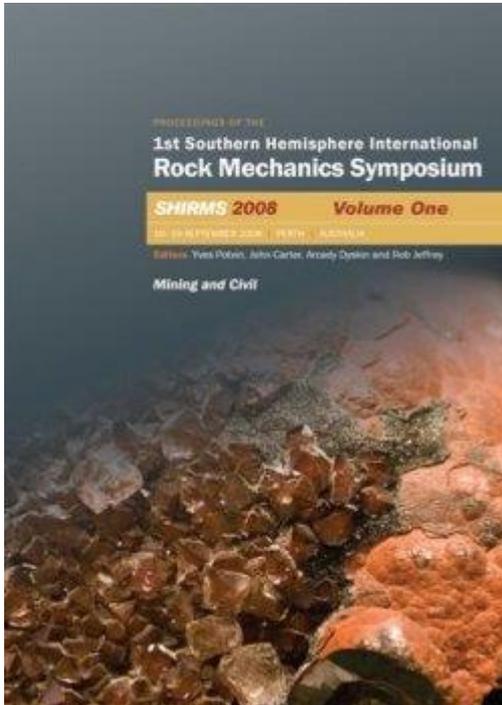
The two-day "Petroleum Geomechanics in the Value Chain" course was presented by Maurice Dusseault, Earth Sciences Department, University of Waterloo. It was intended for engineers, geoscientists and technologists involved in reservoir exploitation, drilling, exploration and other upstream activities. It provided an introduction to typical geomechanics issues arising in oil and gas development. The basic aspects of rock mechanics processes on reservoir development and management were presented in a clear manner and case histories from around the world were used to illustrate the discussions.

The main SHIRMS event was opened by Yves Potvin and Tony Meyers, Vice President (Australasia) of the ISRM who summarised the current Australian and International Rock Mechanics scenes, welcomed delegates to Perth and encouraged them to benefit from networking opportunities and the interdisciplinary spread of presentations. Eight excellent keynote presentations were given and/or prepared by

- Ted Brown (Australia) presented by David Starr; Estimating the Mechanical Properties of Rock Masses;
- Peter Cundall (USA); Quantifying the size effect of rock mass strength;
- Maurice Dusseault (Canada); Geomechanics and Transport Process in Petroleum Engineering;
- Peter Kaiser (Canada); Rock Mechanics Challenges in Underground Construction and Mining;
- Alex Mendecki (South Africa); Forecasting Seismic Hazards in Mines;
- Philip Pells (Australia); Assessing Parameters for Computations in Rock Mechanics;
- Sergei Stranchits (Germany); Acoustic Emission Analysis of Initiation and Propagation of Faults in Brittle Rock and Compaction Bands in Porous Rocks;

- Boris Tarasov (Australia); New Insights into the Nature of Shear Rupture in Pristine Rocks and Pre-Existing Faults.

102 papers were accepted for inclusion and these were presented in two glossy volumes; Volume 1: Mining and Civil and Volume 2: Fundamental and Petroleum. The presentations fell into the categories:



- Petroleum reservoir mechanics, injection, production, fractures and wellbore mechanics (14 presentations);
- Numerical modelling (11 presentations);
- Constitutive relationships and effective characteristics (9 presentations);
- Rock mechanics data (8 presentations);
- Slopes (8 presentations);
- Underground mining rock mechanics including seismicity (10 presentations);
- Risk, rockfall and ground support (6 presentations);
- Fracture, damage and yielding of rocks (5 presentations);
- Caving (5 presentations);
- Civil tunnelling (4 presentations);
- Rock foundations and subsidence (4 presentations);
- Seismicity in mining (4 presentations).

The diverse collection of papers and presentations covered a wide variety of aspects of Rock Mechanics. Their overall quality was excellent and many were enthusiastically received and generated lively discussion.

Thank you goes to the organisers of the event, the staff of the Australian Centre for Geomechanics, the presenters, authors, reviewers, sponsors and everyone who contributed to the successful event.