CSIRO | The University of Newcastle Australia | The University of Western Australia | ACG Australian Centre for Geomechanics — CSIRO | Curtin University | University of WA Joint Venture

LAST CALL FOR ABSTRACTS

ABSTRACT SUBMISSION DATE EXTENDED TO 3RD APRIL 2008

SHIRMS 2008

1st Southern Hemisphere International Rock Mechanics Symposium

16-19 September 2008
Sheraton Perth Hotel, Western Australia

The Australian Centre for Geomechanics (ACG), in collaboration with CSIRO Petroleum, The University of Western Australia and The University of Newcastle, looks forward to hosting the First Southern Hemisphere International Rock Mechanics Symposium (SHIRMS) to be held in Perth, Western Australia, 16 - 19 September 2008. Following the model of "NARMS" (North American Rock Mechanics Symposium) recently re-badged the "Canada-US Rock Mechanics Symposium", we aim to create a similar forum in our part of the world, involving the very active South American, South African, Asian, New Zealand and Australian rock mechanics communities.

SHIRMS will feature four main technical streams.

- Mining rock mechanics
- Civil rock mechanics
- Fundamental rock mechanics
- Petroleum rock mechanics

AUSTRALIAN CENTRE FOR GEOMECHANICS

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acginfo@acg.uwa.edu.au
www.acg.uwa.edu.au

KEY DATES

Submission of Abstract	**3 April 2008**
Paper Submission	**23 May 2008**
Pre-symposium Events	**14 - 15 September 2008**
SHIRMS 2008	**16 - 19 September 2008**

KEYNOTE SPEAKERS

Ted Brown, Peter Cundall, Maurice Dusseault, Peter Kaiser, Alex Mendecki, Philip Pells and Boris Tarasov to present keynote addresses at SHIRMS.

PRE-SYMPOSIUM EVENTS

FROM ROCK MASS TO ROCK MODEL

The ACG will present a pre-symposium workshop to be held at the Sheraton Perth Hotel on Monday 15 September 2008 (see inside back page for more details).

PETROLEUM GEOMECHANICS IN THE VALUE CHAIN

A pre-symposium short course to be held on Sunday and Monday 14-15 September 2008 (see inside back page for more details).

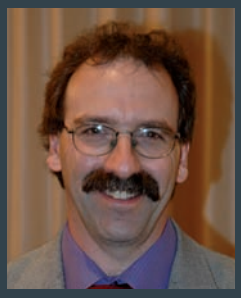
ISRM REGIONAL SYMPOSIUM

ISRM

www.shirms.com

SYMPOSIUM CHAIRS

Yves Potvin
Mining Rock Mechanics Chair
Australian Centre for Geomechanics, Australia



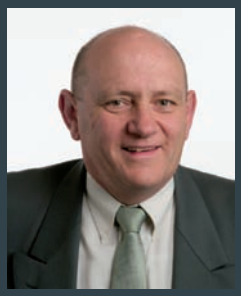
Yves Potvin is the current director of the Australian Centre for Geomechanics and since 1998, a professor at the University of Western Australia (UWA). Prior to joining UWA, Yves spent more than 10 years in the mining industry. He was previously the mining research manager at Mount Isa Mines in Queensland and the rock mechanics programme manager at the Noranda Technology Centre, Canada.

Yves' recent research work focus is on rockburst and mine induced seismicity, ground support of underground excavations and cave mining mechanics. Since 2004, Yves has co-edited three books and four conference proceedings.

Rob Jeffrey
Petroleum Rock Mechanics Chair
CSIRO Petroleum, Australia

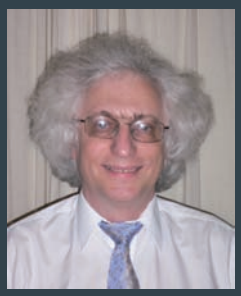
After completing his degree at the University of Arizona, Dr Jeffrey joined Dowell Schlumberger and worked at their Tulsa R&D Laboratory. While there he worked on developing improved modelling methods directed at improving hydraulic fracture treatments in coalbed methane wells. He joined CSIRO in 1989 and over the next few years carried out nine small-scale fracturing tests near underground coal mine sites in Australia which were eventually mined, with the propped fractures mapped. About 10 years ago, his group introduced hydraulic fracturing into mining for the purpose of inducing caving and preconditioning rock masses for caving. This technology is now being applied at several block caving mines around the world. He is currently working on a number of research topics that include hydraulic fracture growth in naturally fractured rock, modelling of T-shaped hydraulic fractures, stimulation of horizontal in-seam gas drainage holes by sand propped hydraulic fractures, and laboratory measurement of hydraulic fracture growth.

John Carter
Civil Rock Mechanics Chair
The University of Newcastle, Australia



John Carter is Pro-Vice-Chancellor, Faculty of Engineering and Built Environment at the University of Newcastle, and Consultant Director, Advanced Geomechanics Pty Ltd, a consultancy based in Perth, Western Australia. He was educated at the University of Sydney and Kings' College, London and he has held academic appointments at the University of Cambridge, University of Queensland, University of Sydney, Cornell University, and the Technical University of Graz. He is a former National Chair of the Australian Geomechanics Society, and is currently Vice-President of the International Society for Soil Mechanics and Geotechnical Engineering. He is a Fellow of the Australian Academy of Technological Sciences and Engineering and a Member of the Order of Australia.
John has more than 30 years experience in teaching, research and consulting in soil and rock mechanics and geotechnical engineering. His research interests include analytical and numerical modelling, soil-structure interaction, soft ground engineering, tunnelling and offshore foundations. He is the author of several hundred refereed technical papers covering a diverse range of topics from theoretical mechanics to experimental and geotechnical applications. He has consulted widely to industry on a range of projects including dam foundations, soft clay problems, offshore geotechnics, retaining walls, tunnels and buried structures.

Arcady Dyskin
Fundamental Rock Mechanics Chair
The University of Western Australia, Australia



Arcady Dyskin is a Professor at the School of Civil and Resource Engineering of The University of Western Australia, Chair of the Computational Mechanics Discipline Group and Head of Rock Mechanics Group. Arcady has 30 years of research experience. His areas of expertise span the fields of rock mechanics, fracture mechanics and the mechanics of solids. Arcady established a new research area in materials and structures based on topologically interlocking elements. His personal research has contributed to the areas of rock fracture mechanics, mechanics of heterogeneous materials and materials with microstructure and multiscale modelling.

Venue
Sheraton Perth Hotel
207 Adelaide Terrace
Perth, Western Australia, 6000
Phone: +61 8 9224 7777
Fax: +61 8 9224 7788
(Please refer to ACG's SHIRMS 2008 when making reservations).

Seminar Dinner
Wednesday 17 September 2008
Fremantle Town Hall, Fremantle
Pre-dinner drinks at 7:00pm, dinner at 7:30pm
Dress: smart casual

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SHIRMS 2008 SYMPOSIUM TECHNICAL STREAMS

MINING ROCK MECHANICS

Rock mechanics and ground control has become an important part of mining. It is the main tool used to control the geotechnical risks in mines, arguably one of the main risks as it affects profit and safety. In underground mines, these risks include rockfalls, rockbursts, collapses and loss of infrastructure. As Australian mining activities increasingly reach greater depths, the stress environments are generally higher and the geotechnical hazards are more elevated.

In deep underground mines, mining activities often proceed in failing ground. As a result, the rock surfaces exposed in the drives can become heavily fractured and large amounts of deformation can be experienced. When the rock mass is competent and stiff, mine induced seismicity and rockbursts can become a dominant issue.

In open pit mines, slope failures can destroy the value of a mining project. The traditional methods to assess deep slope stability are arguably inadequate as the replication of complex stress driven slope failures are still poorly understood.

CIVIL ROCK MECHANICS

Civil engineers frequently encounter rock and rock masses in many of their day-to-day design and construction activities. Whatever the challenge and whatever the scale of the proposed operation, our knowledge of the behaviour of the rock is often the key to obtaining the most economical solution to the given problem. The challenge of producing such solutions is magnified by the fact that each rock mass is unique, so that although common principles may be applied in each case, accurate characterisation of the rocks and geological structures that nature has provided on any given project is essential. It is intended that this symposium will bring together experts in the civil engineering applications of rock mechanics and rock engineering to share experiences and advance the state of knowledge in this key area of civil engineering endeavour.

FUNDAMENTAL ROCK MECHANICS

Fundamental rock mechanics plays an important role in addressing the issues of structural stability and the environmental effects of mining, petroleum, waste storage and geothermal projects. It provides an understanding of deformation and failure phenomena in rock masses and is crucial in their control. Alongside failure prevention, fundamental rock mechanics underpins the development of novel and optimisation of existing rock breaking and comminution techniques. While development of new experimental techniques and equipment is one of the directions in addressing these challenges, numerical simulation is now the method of choice. Accurate modelling of interaction between the openings, faults and other features is paramount to both ensure the safety of the structures and to minimise the environmental impact. SHIRMS will provide a forum for exchanging ideas and reporting recent developments in these and adjacent areas of rock mechanics.

PETROLEUM ROCK MECHANICS

Petroleum geomechanics forms a basis for design and construction of petroleum wells and in stimulation of the reservoir. Geomechanics is being increasingly used to achieve better, sustainable reservoir production performance and to address reservoir subsidence during production. Current prices for oil and gas have dramatically increased well completion activities in recent years, resulting in a corresponding increase in demand for petroleum geomechanics solutions. In response to these demands, research and development in the field of petroleum geomechanics has emphasised issues such as wellbore stability, in situ stress measurement, drilling mechanics and bit-rock interactions, poro-thermoelasticity, sand stabilisation methods, stimulation of naturally fractured reservoirs, hydraulic fracturing of low-cohesive sands, shale stability, reservoir compaction during production, and integration of new monitoring methods into drilling, stimulation, and production operations.

TOPICS

- New trends in data collection and 3-D ground/ deformation characterisation
- Rock mass classification, characterisation and behaviour
- Numerical modelling – continuum and discontinuum
- Numerical modelling – brittle fracture and damage
- Non-linear, brittle fracture and damage mechanics
- In situ stress and stress measurement
- Laboratory testing and coupled behaviour
- Natural and engineered slopes
- Dams and hydroelectric projects
- Tunnels and deep underground excavations
- Open pit mining
- Underground mining
- Rock support, ground control and blasting
- Petroleum and borehole geomechanics
- Emerging technologies
- Environmental geomechanics
- Hydraulic fracturing/stimulation
- Perforating
- Waste re-injection (drill cuttings and waste water)
- Reservoir compaction/subsidence
- Reservoir response to injection and production (naturally fractured reservoirs, fault reactivation, oil sands, monitoring)
- Sand production/sand control
- Wellbore stability and shale mechanics
- Drilling mechanics

Sponsorship

The symposium is an excellent platform to enhance your presence in the market and position your organisation as one of the leaders in the industry. Benefits include:

- Direct access to a niche target audience.
- Increased brand awareness.
- Achieving a high profile association with an innovative and credible industry event.

Event Changes

The Australian Centre for Geomechanics (The University of Western Australia) reserves the right to make changes to programmes and speakers, or to cancel events if enrolment criteria are not met or when conditions beyond their control prevail. Every effort will be made to contact each delegate if the event(s) is cancelled. Should the event(s) not be held for any reason, our liability is limited to the event fee.

SHIRMS 2008 INTERNATIONAL ORGANISING COMMITTEE& KEYNOTE SPEAKERS

KEYNOTE SPEAKERS

Ted Brown
Golder Associates Pty Ltd, Australia

Emeritus Professor E T (Ted) Brown is a graduate of the Universities of Melbourne (BE, MEngSc), Queensland (PhD) and London (DSc(Eng)). His major career appointments have been as Professor of Rock Mechanics at Imperial College, London, and as Senior Deputy-Vice-Chancellor of the University of Queensland, Australia. Since retiring in 2001, he has worked as a senior consultant to Golder Associates, a research consultant with the University's Sustainable Minerals Institute, and a company director.

Peter Cundall
Itasca Consulting Group, Inc., USA

Dr. Cundall is the chief developer of all Itasca software products. He has developed novel programs and techniques in numerical modeling that are applied widely in geomechanics, civil engineering and mining engineering. Dr. Cundall has a particular interest in micro-mechanical models of soil and rock, and is the originator of the distinct element method.

Maurice Dusseault
University of Waterloo, Canada

Maurice is a professor of geological engineering in the Earth Sciences Department, University of Waterloo. He does research in petroleum geomechanics (drilling, hydraulic fracturing, reservoir geomechanics), new production methods, and deep waste disposal. He has co-authored two textbooks and over 400 professional articles in conferences and journals, and works with industry as an advisor and instructor.

Alex Mendecki
ISS International Limited, South Africa

Alex is the managing director and head of research at ISS International Limited. His main research interest is monitoring seismic rock mass response to mining, specifically seismic hazard rating and the application of quantitative seismology to rock mass stability.

Boris Tarasov
The University of Western Australia, Australia

Boris graduated initially as a mechanical engineer with a particular interest in rocket engine technology (Russia, 1974). Since 1976 he is involved in rock mechanics. He spent twelve years working for Geomechanical Institute and the next 10 years for Mining University in Saint Petersburg, Russia. Boris came to Australia in 1998. His professional interest is experimental physics and rock mechanics, especially hard rock behaviour at conditions of great depth. He designed many unique testing apparatus to study this subject.

Phillip Pells
Pells Sullivan Meynink Pty Ltd, Australia

Peter Kaiser
Laurentian University, Canada

INTERNATIONAL ORGANISING COMMITTEE

Yves Potvin (Mining Rock Mechanics Chair) Australian Centre for Geomechanics, Australia
John Carter (Civil Rock Mechanics Chair) The University of Newcastle, Australia
Arcady Dyskin (Fundamental Rock Mechanics Chair) The University of Western Australia, Australia
Rob Jeffrey (Petroleum Rock Mechanics Chair) CSIRO Petroleum, Australia
Younane Abousleiman University of Oklahoma, USA
Will Bawden University of Toronto, Canada
David Beck Beck Arndt Engineering Pty Ltd, Australia
Robert Bertuzzi Pells Sullivan Meynink Pty Ltd, Australia
Barry Brady Condamine Engineering Consultants, Australia
Andrew Bunger CSIRO Petroleum, Australia
Oliver Buzzi The University of Newcastle, Australia
Alan Bye Sustainable Minerals Institute, Australia
Emmanuel Detournày University of Minnesota, USA
Phillip Dight Coffey Mining Pty Ltd, Australia
John Dudley Shell International Exploration and Production B.V., The Netherlands
Maurice Dusseault University of Waterloo, Canada
Andrey Eremenko Institute of Mining, Siberia Branch, Russia
Stephen Fityus The University of Newcastle, Australia
Klaus Gessner The University of Western Australia, Australia
Anna Giacomini The University of Newcastle, Australia
Chris Haberfield Golder Associates Pty Ltd, Australia
John Hadjigeorgiou Université Laval, Canada
Bruce Hebblewhite The University of New South Wales, Australia
Buddhima Indraratna The University of Wollongong, Australia
Antonio Karzulovic A. Karzulovic & Asoc. Ltda, Chile
Stanislaw Lasocki AGH University of Science and Technology, Poland
Peter Lilly CSIRO Exploration & Mining, Australia
Francois Malan Groundwork Consulting (Pty) Ltd, South Africa
Derek Martin The University of Alberta, Canada
Anthony Meyers Rocktest Consulting, Australia
Peter Mikula Mikula Geotechnics Pty Ltd, Australia
Shamil Mukhamediev Russia Academy of Sciences, Russia
John Napier CSIR, South Africa
Alison Ord CSIRO Exploration & Mining, Australia
Zhihua Ouyang Wuhan University of Science and Technology, China
Elena Pasternak The University of Western Australia, Australia
John Read CSIRO Exploration & Mining, Australia
Klaus Regenauer-Lieb The University of Western Australia & CSIRO, Australia
Cameron Schubert BHP Billiton, Australia
Daichao Sheng The University of Newcastle, Australia
Scott Sloan The University of Newcastle, Australia
Dick Stacey The University of the Witwatersrand, South Africa
Iain Thin BHP Billiton, Australia
Jody Todd BHP Billiton, Australia
Gerhard van Aswegen ISS International Ltd, South Africa
Michel Van Sint Jan Pontificia Universidad Católica de Chile, Chile
Terry Wiles Mine Modelling Pty Ltd, Australia
David Williams The University of Queensland, Australia
Robert Zimmerman Royal Institute of Technology, Sweden

Who Should Attend

This event has been extensively researched and designed for all mining, civil and petroleum rock mechanics practitioners, including operation and consulting personnel, scientists involved in rock mechanics research in their respective field of applications will be particularly interested in this symposium.

Networking

This ACG international event will attract some of Australia's most influential decision makers in the mining industry, research and government. This event provides ideal opportunities to network, such as morning and afternoon breaks and the symposium dinner.

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PRE-SYMPOSIUM EVENTS

FROM ROCK MASS TO ROCK MODEL

A pre-symposium workshop on rock mass modelling for geotechnical design

Monday 15 September 2008, Sheraton Perth Hotel, Western Australia

Course Coordinator: Johan Wesseloo, The Australian Centre for Geomechanics

The ACG will present a pre-symposium workshop that will provide a forum for discussing the issue of the modelling of rock mass behaviour for the purpose of design. With this workshop, the ACG aims to provide a platform to critically examine the current state of practice and highlight shortcomings in the state of the art. The workshop will take the form of introductory presentations and open floor discussions during the following sessions:

>> Case studies.
>> Deriving model parameters from field and laboratory data.
>> Mechanics of rock mechanics.
>> Philosophy for modelling of rock mass behaviour.
>> Model and method dependence of parameters.

CONTRIBUTING SPEAKERS INCLUDE:

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

PETROLEUM GEOMECHANICS IN THE VALUE CHAIN

A pre-symposium short course on petroleum geomechanics

Sunday and Monday 14 - 15 September 2008, Sheraton Perth Hotel, Western Australia

Course Presenter: Maurice Dusseault, University of Waterloo, Canada

The course is intended for engineers, geoscientists, and technologists involved in reservoir exploitation, but those involved in drilling and exploration and other upstream activity will also benefit. For those with a geomechanics (rock and soil mechanics) background, the course will serve as an introduction to typical geomechanics issues arising in oil and gas development. The basic aspects of rock mechanics processes on reservoir development and management are presented in a simple, clear manner, without complex equations. Case histories from around the world are used to illustrate the discussions.

The two-day course will provide you with a much better understanding of how rock mechanics knowledge can improve reservoir management decisions. The rewards from this knowledge will come to you and your company through reduced costs, problem avoidance, and even some new ideas in areas such as sand control and fracturing.

ROCK MECHANICS LAB TOUR OF THE UNIVERSITY OF WESTERN AUSTRALIA AND CSIRO PETROLEUM

Monday 15 September 2008

A free half-day laboratory tour has been organised of the UWA and CSIRO Petroleum laboratory facilities. This tour is available to SHIRMS 2008 symposium attendees only. The attendees will visit the UWA labs to see the centrifuge, stiff high-pressure triaxial static-dynamic loading frame and a blast simulator. The visit to the CSIRO site will include an overview of the triaxial shale characterisation and drilling mechanics projects. Refreshments will be served at CSIRO before the attendees return to the Sheraton Perth Hotel. The tour is limited to 20 participants.

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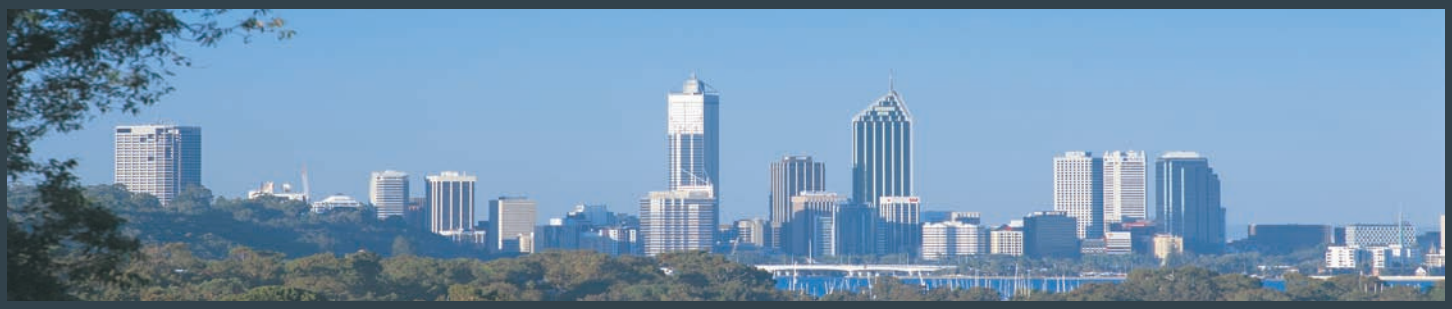
PERTH



Perth is a beautiful place to visit for business or pleasure. Delegates and their families may take time out to visit Kings Park for a panoramic view of the city or perhaps stroll into the city's vibrant shopping district. For the more adventurous, a trip to Perth's famous Indian Ocean, 15 minutes by car from the city centre, will be more enticing.

If golf or driving are more your style, the hotel can recommend a range of championship golf courses close by, or arrange for you to hire a car and cruise along the coast and café strips. There is plenty to see and do north to Hillarys and Mindarie Keys, or south to Cottesloe Beach, and the historic and exciting Port City of Fremantle, only 25 minutes away. A variety of tours depart daily from your hotel, or delegates can take advantage of the complimentary courtesy shuttle that departs from the hotel at regular intervals on weekdays and travels down St Georges Terrace to West Perth and returns to the hotel. Free public transport is also available on your doorstep. The ferry terminal is 1 km away where daily tours depart for river cruises, wineries, whale watching and Rottnest Island.

CALL FOR PAPERS AND ABSTRACT SUBMISSION

Intending authors are requested to prepare and submit their abstracts before Thursday 3 April 2008 to the ACG via acg@acg.uwa.edu.au. Abstracts are to be submitted in a Word document and should be limited to less than 500 words. The abstract is to provide a general scope of the work, a summary of the results, and the significance of the work and applications. It should also include the title, authors' affiliations, and the contact author's address, telephone and fax numbers and email address.

All accepted written papers will be peer reviewed and published in the 2008 1st Southern Hemisphere International Rock Mechanics Symposium proceedings. Maximum paper length is 12 A4 size pages. Authors will be notified of abstract acceptance via email in April 2008.

NOTE TO PROSPECTIVE AUTHORS

The language of the symposium will be English. Only abstracts written in publishable English will be considered. Abstracts will be selected based on technical merit and relevance to the symposium topics.

SHIRMS 2008 Expression of Interest

☐ Attendee

☐ Speaker

☐ Sponsor/Exhibitor

Name:_____

Position:_____

Organisation:_____

Address:_____

_____

Country:_____

Phone:_____

Fax:_____

Email:_____

Please submit your expression of interest to:
Josephine Ruddle
SHIRMS 2008 Event Manager
Australian Centre for Geomechanics
PO Box 3296 – Broadway
NEDLANDS WA AUSTRALIA 6009
Phone: +61 8 6488 3300
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www.acg.uwa.edu.au

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