The Southern African Institute of Mining and Metallurgy and
the South African National Institute of Rock Engineering
are organising the
6th International Symposium on
GROUND SUPPORT
in mining and civil engineering construction

30 March to 3 April 2008
Table Bay Hotel, V&A Waterfront · Cape Town, South Africa

Second Circular and Registration Form
Contents

INVITATION MESSAGE FROM THE ORGANISING COMMITTEE ........................................ 2
ORGANISING COMMITTEE ........................................................................................... 3
CONFERENCE SECRETARIAT ....................................................................................... 3
KEY DATES .................................................................................................................. 3
REGISTRATION FEES .................................................................................................. 3–4
CANCELLATION .......................................................................................................... 4
EXCHANGE RATE ........................................................................................................ 4
CONFERENCE VENUE ................................................................................................ 4–5
HOTEL ACCOMMODATION INFORMATION ................................................................. 5–6
SYMPOSIUM PROGRAMME ........................................................................................ 6–9
SOCIAL FUNCTIONS .................................................................................................... 10
POST-CONFEERENCE TECHNICAL VISITS .............................................................. 10–11
ACCOMPANYING PERSONS PROGRAMME ............................................................... 11–12
GENERAL INFORMATION
  Banking/Credit cards/Foreign exchange ................................................................. 12
  Car rentals ................................................................................................................ 12
  Climatic conditions ................................................................................................. 12
  Currency .................................................................................................................. 13
  Duty-free allowance ............................................................................................... 13
  Electricity supply .................................................................................................... 13
  Flight information .................................................................................................. 13
  Information desk .................................................................................................... 13
  Language ................................................................................................................ 13
  Lunches and refreshments ..................................................................................... 13
  Messages, telephone, facsimile and photocopying .............................................. 14
  Other accommodation ........................................................................................... 14
  Speed limits ............................................................................................................ 14
  Standard time ......................................................................................................... 14
  Tipping ...................................................................................................................... 14
  Tourism .................................................................................................................... 14–15
  VAT .......................................................................................................................... 15
  Waiver of liability ................................................................................................. 15

Second Circular
Invitation Message from the Organising Committee

The 6th International Symposium on Ground Support in mining and civil engineering construction is being organised jointly by the Southern African Institute of Mining and Metallurgy (SAIMM) and the South African National Institute of Rock Engineering (SANIRE). The symposium will take place in Cape Town. Previous symposia on this specialist subject have been held in:

- 1983 in Luleå, Sweden
- 1992 in Sudbury, Canada
- 1997 in Lillehammer, Norway
- 1999 in Kalgoorlie, Australia
- 2004 in Perth, Australia

Ground support is used extensively in both civil and mining environments, but commonly there is insufficient interaction between these two disciplines. In both fields significant developments in ground support take place regularly, and miners have much to learn from their civil colleagues and vice versa.

South Africa will be a great location for such interaction to take place—it is a country with a strong mining tradition and is also a country with a rapidly developing civil infrastructure. We invite participants from Southern Africa and other parts of the world to come and share their knowledge at this event.

Cape Town is a city in one of the most beautiful settings in the world, surrounded by beaches and mountains. The symposium venue will be the Table Bay Hotel, Victoria and Alfred Waterfront, a working harbour adjacent to the city centre.

Local technical site visits will be arranged. There will also be post-symposium visits to a deep-level mine and to tunnels and excavations for the Gautrain, the mass transit system that is under construction in the Johannesburg-Pretoria area.

We look forward to your participation in the symposium in 2008.

Dick Stacey and Francois Malan
Co-Chairmen of the Organising Committee

Organising Committee
T.R. Stacey and F. Malan (Chairmen)
A. Boniface J. Klokow
H. Bornman D. Minney
R. Carstens D. O’Connor
J.A. Cruise G.M. O’Ferrall
K. Havenga E.J. Sellers
N. Henderson D. Wilson
R. Johnson

Conference Secretariat
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The Southern African Institute of Mining and Metallurgy
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E-mail: elna@saimm.co.za · Web: http://www.saimm.co.za

Key dates
Pre-registration and cocktail party 30 March 2008
Symposium 31 March–2 April 2008
Technical visits 3 April 2008

Registration
Registration fees include attendance at the technical sessions, all refreshments and lunches at the symposium, and attendance at the cocktail parties.

Registration fees
Early bird registration fees (on or before 1 February 2008)
SAIMM/SANIRE Members or Presenting Authors R6 000.00
Non-Members R7 000.00
Students/Retired Members R1 800.00
**Registration fees (after 1 February 2008)**

SAIMM/SANIRE Members or Presenting Authors  R6 500.00  
Non-Members  R7 500.00  
Students/Retired Members  R1 800.00  

All prices include VAT. Tax invoices will be issued to all delegates.  
Please note that delegates will be permitted to attend the symposium only if their registration fees have been paid.

**Cancellation**

A 50% refund will be given for cancellations received before 3 March 2008. No refunds will be given for cancellations after 3 March 2008.

**Exchange rate**

The current exchange rate as at December 2007 is approximately US$ 1.00 = R6.80 and GBPE1.00 = R14.00.  
The present rate of VAT (value added tax) is 14%, which is included in the cost.

**Conference venue**

The symposium will take place at the Table Bay Hotel, which is located on Cape Town’s Victoria & Alfred Waterfront. The hotel straddles the antique breakwater and is an architectural masterpiece, capturing the essence of the enchanting Cape, the victorian elegance of yesterday, combined with the contemporary design of today. It is in perfect harmony with the backdrop of Table Mountain, the historic working harbour and the yacht bay.  
The interior of the Table Bay Hotel presents a kaleidoscope of impressions, from the European marble mosaic of the entrance court to the intricate parquet floor of the foyer framed by the full-scale drama of Table Mountain, with the activity of the harbour in the foreground.

The Table Bay Hotel is a premier conference centre and unequalled as an incentive destination for global achievers. Its status as a leading hotel of the world and its position at the hub of South Africa’s vibrant tourist and retail mall, the Victoria & Alfred Waterfront, perfectly positions the Table Bay Hotel as an event venue for international corporations.

**Hotel accommodation information**

The organisers have appointed Cruise South Africa to secure accommodation at a variety of hotels, as well as in different categories. Special rates have been negotiated (a minimum of 10 rooms is required to qualify for these special rates). A preprinted copy of the booking form for recommended hotels close to the symposium venue is included in this brochure. Delegates must complete and return the form together with the relevant deposit (in SA rands) directly to Cruise South Africa.  
Contact details: Tel: 27 21 782 0101 · Fax: 27 21 782 0441 · E-mail: amanda@cruise-sa.co.za

*The City Lodge Waterfront: R755 single, R985 double (Rates are quoted per room per night and include breakfast)*

This centrally located hotel is at the gateway to the V&A Waterfront, within walking distance of Cape Town’s CBD, close to the N2 motorway and 15 minutes from Cape Town International Airport.

*The Commodore Hotel: R1 250 single, R1 650 double (Rates are quoted per room per night and include breakfast)*

The Commodore Hotel is located at the V&A Waterfront.

*The PortsWood Hotel: R1 100 single, R1 500 double (Rates are quoted per room per night and include breakfast)*

The PortsWood Hotel is located next to the Commodore Hotel in the V&A Waterfront.

V&A Waterfront Hotel:

*Mountain facing: R2 095 single, R2 995 double*  
*Superior loft room: R1 810 single, R2 585 double (Rates are quoted per room per night and exclude breakfast)*

Four star luxury in the historic 1904 North Quay warehouse on Cape Town’s Waterfront with unrivalled views of Table Mountain.

The Cullinan Cape Town Waterfront Hotel:

*Standard room: R1 200 single, R1 500 double*  
*Superior loft room: R1 550 single, R1 850 double (Rates are quoted per room per night and exclude breakfast)*

The Cullinan is situated at Cape Town’s Waterfront.
The Breakwater Lodge:
*Prices vary between R455 and R640, depending on room choice (Rates are quoted per room per night and include breakfast)
Located a few minutes’ walk from the V&A Waterfront.
*Hotel prices subject to change in 2008.

Symposium programme
The technical programme consists of the following keynote address, as well as papers, which have been provisionally accepted:

Keynote Address: What happened to ‘Mechanics’ in Rock Mechanics and ‘Geology’ in engineering geology?
P. Pells, Australia

Ground support in Karstified conditions
J. Burke, UK

Use of a new Hoek-Brown prediction procedure for assessing ground support effectiveness and strength and post yield behaviour for rock masses at the extreme ends of the integrated GSI and UCS rock competence scales
T.G. Carter, M.S. Diederichs, and J.L. Carvalho, Canada

The removal and support of a deformed part of an operational shaft located in the Westonaria Formation Lavas at Gold Field’s Driefontein’s No. 4 (Ya Rona) shaft
F.J. Castelyn, S. Durapraj, H. Potgieter, and B. du Plessis, South Africa

A new rock bolt concept for underground excavations under high stress conditions
F. Charette and M. Plouffe, Canada

The use of voidfill barriers as an alternative grout pack support in platinum mine stoping
T. da Silva, South Africa

Failure of transversally isotopic rock material: effect of the layer orientation
B. Debecker, A. Tavallali, and A. Vervoort, Belgium

Cempacks: Stope and gully supports
L. Dison, South Africa

Filpak: Gully support in backfill stopes
L. Dison, South Africa

Support design using probabilistic keyblock methods
M. Dunn, P. Earl, and J. Watson, Australia

Rock mass dynamics in a deep level platinum mine
M. du Toit and G. Potgieter, South Africa

Field observations and numerical studies of horizontal stress effects on roof stability in US Limestone mines
G.S. Esterhuizen, D.R. Dolinar, and R.G. Gürtunca, USA

The application of new generation support products in a typical sub-level block cave mining method to reduce safety risks and enhance productivity
P.H. Ferreira, J. Steyn, and R.J. Gerber, South Africa

Future and potential in-stope rock support systems in conventional narrow vein stoping operations to reduce safety risks and enhance productivity
P.H. Ferreira, J. Steyn, and R.J. Gerber, South Africa

The ongoing evolution of stope support at Impala Platinum Limited
L.J. Gardner and N.D. Fernandes, South Africa

Optimum lead-lag distances in South African gold mines
O.D. Goldbach, T. Rangasamy, L.M. Linzer, M.O. Kataka, and S.M. Spottiswoode, South Africa

Support system performance under different corrosion conditions
J. Hadjiigeorgiou and J.F. Dorion, Canada

Development of a cement grouted rockbolting system for use in water-sensitive kimberlite
A.T. Harrison and D. O’Connor, South Africa

In-situ dynamic testing of ground support using simulated rockbursts
D. Heal and Y. Potvin, Australia

Palabora Mining Company; a large (32 000 tpd) block cave designed for a life of 20 years
R.C. Jaggard, South Africa

Proactive support design based on geotechnical and geophysical information
R. Johnson, South Africa

Ground support at Crocodile River Mine located in the Brits Graben of the West Limb of the Bushveld Complex
G. Judeel, South Africa
Rock engineering aspects of the Ingula Powerhouse caverns
G. Keyter, South Africa

Support coverage: an essential aspect of support design
J. Kuipers, South Africa

Investigation into floor bearing strength of Indian coal measure strata by finite element modelling
D. Kumar, India

Numerical modelling of tunnel liner and fracture interaction
F. Malan and J. Napier, South Africa

A numerical study of the shotcrete-rock interaction
L. Malmgren and E. Nordlund, Sweden

A metastable austenitic stainless steel smart material for roofbolt application in the mining industry
J.S. Moema, M.J. Papo, and R. Paton, South Africa

Static testing of shotcrete and membranes for mining applications
E. Morton, A. Thompson, and E. Villaescusa, Australia

Static and dynamic testing of steel wire mesh for mining applications of rock surface support
E. Morton, J. Player, and A. Thompson, Australia

The residual strength of a 2.5 m wide Bushveld Merensky Reef crush pillar
S.M. Mosomane, B.P. Watson, and J. Kuipers, South Africa

An approach to elastodynamic modelling of fault slip in the vicinity of tabular excavations
J. Napier and F. Malan, South Africa

Reinforcement support of concrete shaft lining in Westonaria formation lava in the Ezulwini vertical shaft system
W.D. Ortlepp, W.C. Joughin, and A.K. Ward, South Africa

The in situ performance of elongate support—myths and reality
P.S. Piper, South Africa

Dynamic testing of reinforcement systems
J. Player, E. Villaescusa, and A. Thompson, Australia

Rockbolt testing under dynamic conditions at CANMET-MMSL
M. Plouffe, T. Anderson, and K. Judge, Canada

Numerical modelling of blocky and stratified hangingwall behaviour
D.P. Roberts and B.P. Watson, South Africa

Development of fast setting pumped foamed cement packs
R. Smart and A.T. Harrison, South Africa

Investigation of the characteristics of thin spray liners (TSLs) and their use as an additional support medium in block cave mining
J. Steyn, R.J. Gerber, and A.T. Harrison, South Africa

Rock mass behaviour and support response in a longwall panel pre-driven recovery room
S.C. Tadolini and T.M. Barczak, USA

Probability distribution of rock properties: effect on the rock behaviour
A. Tavallali, A. Vervoort, and J. van Dyck, Belgium

Use of cable bolts for platinum mine stope support
L. van Aswegen and S. van Buuren, South Africa

Effect of stress path on fracture initiation and growth around circular openings
A. Vervoort, P. Ganne, and A. Tavallali, Belgium

Corrosion of rock reinforcement in underground hard rock mining excavations
E. Villaescusa, R. Gaine, and A. Tavallali, Belgium

The control of coalmine roof collapse using cuttable foamed concrete support columns
J.C. Visagie, South Africa

An effective face support system to minimize rockfalls
J.C. Visagie and N.D.L. Burger, South Africa

Immediate ground support after development or stope face exposure, can reduce and prevent falls of ground
B.J. Vorster, South Africa

Effectiveness of support systems employed in the Finsch Mine Block 4 Cave
A.D. Wilson, South Africa

Theory and reality in rock reinforcement and support practice
C.R. Windsor, Australia

Development of new modified cone bolts (MCBs) and applications in Canadian Mines
Y. Wu, D. Champaigne, M. Plouffe, and V. Falmagne, Canada
Social functions

Sunday, 30 March 2008
Registration
Delegates should register at the Table Bay Hotel, V&A Waterfront from 17:00–18:00. Drinks and snacks will be served during the course of registration in the exhibition area.

Monday, 31 March 2008
Networking and cocktail function
After the proceedings a cocktail party will be hosted in the exhibition area of the conference venue.
Please indicate your attendance on the registration form for catering purposes.
Cost: included in conference registration fee.

Tuesday, 1 April 2008
Networking and cocktail function
The Two Oceans Aquarium offers a spectacular setting with a difference. The Shark Tank venue enchants you as you share the company of ragged-tooth sharks, graceful rays and shoals of predatory fishes. The cocktail party will follow immediately after the proceedings.
Please indicate your attendance on the registration form for catering purposes.
Cost: included in conference registration fee.

Wednesday, 2 April 2008
Free evening.

Post-symposium technical visits

Thursday, 3 April 2008
Delegates should indicate which of the following technical visits they wish to attend. Prices to be confirmed.

CAPE TOWN TECHNICAL VISITS:
Chapman’s Peak
The visit will be to the slope stabilisation measures that have been implemented along Chapman’s Peak Drive: the half tunnel and its cable, rockbolt and shotcrete support, the rockfall shelters, and the catch fences. From here delegates will proceed to lunch at Vergelegen Wine Estate.

Du Toit’s Kloof Tunnel
A visit to the unlined north bore of the 4 km long Huguenot (Du Toit’s kloof) Road Tunnel. It is the designated emergency escape route for the operational (south bore) road tunnel. The focus of the visit is the ongoing geotechnical monitoring programme, which ensures the safety of this escape route. From here delegates will proceed to lunch at Vergelegen Wine Estate.

JOHANNESBURG TECHNICAL VISITS:
Delegates who wish to take advantage of the following technical visits in the Gauteng area, should make their own arrangements to fly from Cape Town on the evening of Wednesday 2 April and for their accommodation in Johannesburg.

Gautrain
A visit to the rapid rail project currently under construction in the Johannesburg-Pretoria area.

Deep-level gold mine
A visit to a deep-level gold mine, in the Johannesburg area.

Accompanying person’s programme
Cost to register and participate in the accompanying person’s programme is R3 420.00. This price is inclusive of all of the tours (except for the technical visits) and social functions.

The minimum number of participants to make this programme viable is six. A maximum of twenty participants has been catered for and registrations will be treated on a ‘first come, first served’ basis. Accompanying persons to meet at the symposium venue, in the foyer, at 09h30.

Monday, 31 March 2008
Winelands tour
A full-day tour to the Cape’s famous winelands.
Lunch and wine tasting at a wine estate.
temperatures of around 25°C. However, the night temperatures are lower, with a typical minimum of 18°C, and there is the possibility of some rain.

**Currency**

One rand (R) = 100 cents (c)

Notes: R200; R100; R50; R20; R10

Coins: R5; R2; R1; 50c; 20c; 10c; 5c

You are permitted to take R500 in SA rand notes out of the country; a levy is charged on the additional amounts.

**Duty-free allowance**

You may bring into South Africa the following:

- Wine - 2 litres
- Perfume - 50 ml
- Cigarettes - 400
- Spirits - 1 litre
- Tobacco - 250 g
- Cigars - 150

Please confirm these allowances at the airport of your departure.

**Electricity supply**

The electricity supplied in South Africa is 220 to 240V (50Hz)—3 x round pin 15 amp plug.

Hotels usually provide dual voltage 2-pin razor sockets (100-120V and 220-240V).

**Flights**

International flight times are available from the Airports Company of South Africa under Flight Info.

Tel: +27 (011) 921 6262 or Fax: +27 (011) 921 6385. Website: http://www.airports.co.za

**General information**

**Banking / credit cards / foreign exchange**

In all major centres in South Africa, there are banking institutions that are affiliated with international banks. Major credit cards are generally accepted throughout South Africa.

- American Express Tel: +27 11 359 0200,
- Diners Club Tel: +27 11 358 8400,
- Master Card and Visa Card Tel: +27 11 498 4699.

The following banks offer foreign exchange services: ABSA, First National, Nedbank and Standard. Bank and automatic teller machines (ATMs) are found in every city and in most towns. Several international banks have branches in the main cities. Most commercial banks are open from 09:00 to 15:30 on weekdays and 08:30 to 11:00 on Saturdays.

**Car rentals**

Avis Rent a Car—Central Reservations
Tel. (Intl): +27 11 923 3500, Fax (Intl): +27 11 923 3683, Toll-free: 08 000 21111

Budget Rent a Car—Central Reservations
Tel. (Intl): +27 11 392 3929, Fax (Intl): +27 11 392 3900, Toll-free: 08 600 16622

Europcar Interrent—Central Reservations
Tel. (Intl): +27 11 396 9000, Fax (Intl): +27 11 396 1406, Toll-free 08 000 11344

Imperial Car Rental—Central Reservations
Tel. (Intl): +27 11 453 0005, Fax (Intl): +27 11 453 6278, Toll-free 08 610 13100

As a rule, hired cars may not be driven across the border to other African countries.

**Climatic conditions**

The autumn weather in Cape Town during April is generally sunny and warm, with daytime temperatures of around 25°C. However, the night temperatures are lower, with a typical minimum of 18°C, and there is the possibility of some rain.

**Tuesday, 1 April 2008**

**Essential Cape Town**

Tour to a wine farm, Seal Island boat cruise (weather permitting), lunch and township tour.

**Wednesday, 2 April 2008**

**Shopping excursion**

Half-day shopping at Canal Walk and lunch.

**Lunches and refreshments**

The cost of the lunches, morning and afternoon refreshments during the symposium as well as the cocktail functions is included in the registration fee.
Messages, telephones, facsimile and photocopying

The information desk in the symposium office will take incoming messages for delegates. A facsimile transmission facility will be available. Delegates will be requested to pay for all outgoing calls. Photocopying facilities will be available at the Organiser’s office.

Other accommodation

A National Accommodation Guide, available from SATour head office and most tourism associations, has been compiled in accordance with SATour’s National Grading and Classification Scheme. The guide contains details of accredited guest and country houses, bed and breakfast accommodation, star-graded hotels, serviced self-catering accommodation and private game lodges. In addition to the star grading allocation (one to five stars), exceptional services, hospitality and other intangible benefits are awarded a bronze or silver classification. Tariffs range from as little as R120.00 to as much as R2 000.00 per person per day. See also: http://www.a-away.co.za; http://www.sa-venues.com

Speed limits

Freeways—120 km/h, urban roads—60 km/h. Drivers and all passengers must wear seatbelts. Drivers must carry their drivers’ licences at all times.

Standard time

Also known as Central African Time (CAT). There is no daylight saving in South Africa. Sunrise in April is 06:00 local time and sunset is at 19:00

CAT = GMT + 2 hours, or CET + 1 hour, or EST +7 hours.

Tipping

According to service, but as a guideline: restaurants and taxi drivers = 10%, porters = R5.00 per piece of luggage.

Tourism

South Africa is billed as being a world in one country, and has a huge variety of attractions, from its game reserves and scenic attractions to its vibrant cities. Contact Cruise South Africa on +27 21 785 6994 for details of the tours and special attractions on offer. They will also tailor any request.