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President's Corner



The weakest link

My wife, Angelique, and I do tandem road racing as a means to keep fit and spend time together. However, for us to compete, we need to make sure that we can operate as a functional team. As it is difficult to communicate with one another when racing, it is important to know each other's strengths, weaknesses and limits.

For 2016, the industry has thus far suffered 21 fatalities, of which 9 were fall-of-ground related (excluding the Lily Mine disaster). Ore extraction is reliant on face availability, skilled workers to deliver the planned production, and experts to ensure that production can be achieved safely and optimally. Our Rock Engineering departments fulfil many responsibilities, including design, implementation, coaching, monitoring, auditing and developing of new systems and strategies. In an ever-changing mining environment, we have to integrate all of these areas to prevent potential system failures at the mining face. This predominantly entails a policing function, through auditing compliance. However, rock "Engineering" is reliant on information from the face, albeit sometimes with resistance from a crew to install a support item to the required standard.

As with tandem racing, it is not just about the bike, it is more about how you operate the bike as part of a team to achieve the best results. In our role within a Rock Engineering department, we have to operate as a functional and integrated team. We need to remember that the weakest link in a chain is actually the strongest component, as it can break it.

Michael du Plessis - SANIRE President

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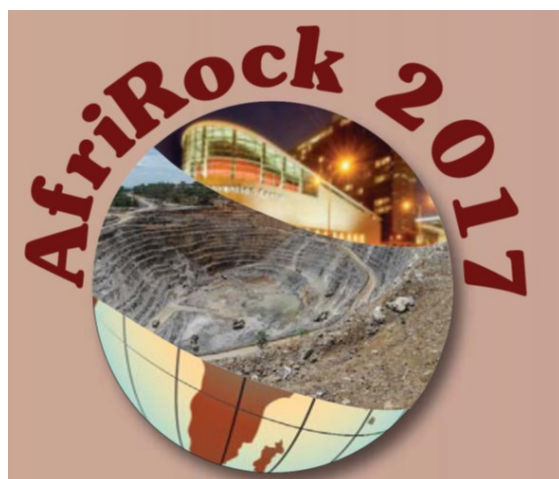
30 North Reef Road, Germiston
1429, South Africa
+27 11 878 6800
www.rockbolt.com

ISRM International Symposium

'Rock Mechanics for Africa'

Dates: 02-07 October 2017

Venue: Cape Town Convention Centre, Cape Town, South Africa



The 2017 ISRM International Rock Mechanics Symposium is to be held in Cape Town. The conference theme is "Rock Mechanics for Africa".

Prior to the conference, the ISRM Board, Council and Commission meetings will take place. Technical visits are being arranged for after the conference.

The Symposium is being organised by the Southern African Institute of Mining and Metallurgy (SAIMM) and the South African National Institute of Rock Engineering (SANIRE). Individuals are invited to submit papers for the Symposium. Titles and short abstracts (no more than 500 words) should be submitted in English.

Topics:

Fracture and damage of rocks	Deformation of rock
Numerical modelling	Ground consolidation
Constitutive models	Specialised blasting to minimise rock damage
Rock mechanics data	Testing Methods
Instrumentation and monitoring	Rock mechanics in underground mines
Petroleum rock mechanics	Slope Stability
Ground Support	Caving mechanics
Subsidence	Design of tunnels and caverns
Risk in Rock Engineering Design	Mechanics of Fracking
Crustal stress and earthquakes	Mine Seismicity and Rockbursts
Radioactive waste disposal	Underground nuclear plants



Keynote Speakers:

Luís Lamas

Dick Stacey

Nick Barton

Nielen van der Merwe

Sergio Fountara



For more information about AfriRock 2017, please contact:

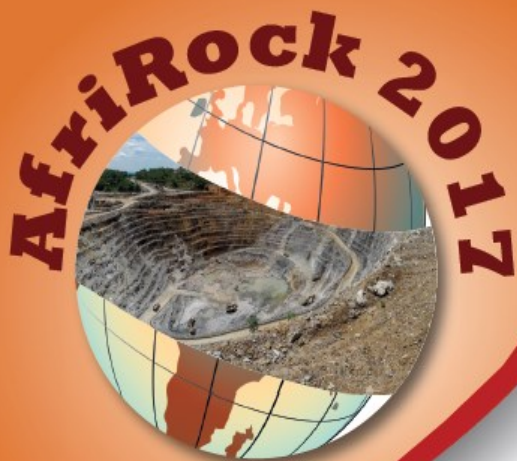
Raymond van der Berg

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Email: raymond@saimm.co.za

Webpage: <http://www.saimm.co.za/saimm-events/upcoming-events/afrirock-2017>



ISRM International Symposium 'Rock Mechanics for Africa'

2-7 October 2017
Cape Town Convention Centre, Cape Town



BACKGROUND

The first African Regional Rock Mechanics Symposium is to be held in Cape Town 2017. Mining has traditionally been a mainstay of African economies, while Oil and Gas industries are rapidly growing throughout Africa. Infrastructure is being developed to support these industries. Rock engineering design is and therefore will continue to be essential for the growth of the continent.

EXHIBITION/SPONSORSHIP

Sponsorship opportunities are available. Companies wishing to sponsor or exhibit should contact the Conference Co-ordinator.

WHO SHOULD ATTEND

- Rock engineering practitioners
- Researchers
- Academics
- Mining engineers
- Civil engineers
- Petroleum engineers
- Engineering geologists.

TECHNICAL VISITS

The following technical visits are proposed for the conference:

- Chapman's Peak
- Structural Geological
- Platinum Mine
- Deep Gold Mine
- Diamond Mine.



TENTATIVE PROGRAMME

Sunday 2/10/2017	Monday 3/10/2017	Tuesday 4/10/2017	Wednesday 5/10/2017	Thursday 6/10/2017	Friday 7/10/2017
ISRM Board Meeting	ISRM Commission Meetings	Technical Session Morning Refreshments Technical Session Lunch Technical Session Afternoon Refreshments Technical Session			Technical Visits
	ISRM Council Meeting				
Board Dinner	Council Reception	Function	Conference Opening	Conference Dinner	

For further information contact:

Raymond van der Berg, Head of Conferencing
SAIMM, P O Box 61127, Marshalltown 2107
Tel: +27 (0) 11 834-1273/7 · E-mail: raymond@saimm.co.za
Website: <http://www.saimm.co.za>



SAIMM
THE SOUTHERN AFRICAN INSTITUTE
OF MINING AND METALLURGY

First Announcement and Call for Papers

AfriRock 2017

ISRM International Symposium
'Rock Mechanics for Africa'

2–7 October 2017 · Cape Town Convention Centre, Cape Town

Call for papers

CALL FOR PAPERS

The Symposium is being organised by the Southern African Institute of Mining and Metallurgy, and individuals are invited to submit papers for the Symposium. Titles and short abstracts (no more than 500 words) should be submitted in **English** to Head of Conferencing, Raymond van der Berg, via e-mail: raymond@saimm.co.za

Enquiries may be made at: Tel: +27 11 834-1273/7

Facsimile: +27 11 838-5923 or

E-mail: raymond@saimm.co.za

Website: <http://www.saimm.co.za>

TOPICS

- Fracture and damage of rocks
- Numerical modelling
- Constitutive models

- Rock mechanics data
- Deformable rock
- Instrumentation and monitoring
- Ground consolidation
- Specialised blasting to minimise rock damage.

KEY DATES

- | | |
|-------------------------|----------------------------|
| 3 October 2016 | Submission of abstracts |
| 10 October 2016 | Acceptance of abstracts |
| 13 January 2017 | Submission of final papers |
| 2–7 October 2017 | Symposium |

The Southern African Institute of Mining and Metallurgy

Head of Conferencing, Raymond van der Berg

AFRIROCK 2017

P.O. Box 61127, Marshalltown, 2107, Tel: +27 11 834-1273/7

THE DETAILS OF THIS FORM CAN BE E-MAILED TO: raymond@saimm.co.za
 or FAXED TO: +27 11 838-5923 / 833-8156

☐

I am interested in attending the conference

☐

I intend to submit an abstract of the proposed paper entitled:

Title of paper:

Personal Details: Name

Address

Tel: Fax:

E-mail:

BRANCH Meetings—Gauteng

SANIRE Gauteng Branch Year End Function—3 December 2015.

Gauteng Branch Teaches the Ropes!

SANIRE Gauteng Branch's 2015 year end function taught about 20 SANIRE members "the ropes" at the CSIR's Rope Testing facility, located in Sunnyside, Johannesburg.

The function started at the Groundwork Consulting offices with the usual jovial banter amongst peers, while sipping on cold drinks and dreaming of the snacks (that the Branch Treasurer forgot to organise). Surprisingly, beer and wine only started flowing later, after 11 am.

First on the agenda was a guided tour of the CSIR's Rope Testing facility, located only a quick stroll away from Groundwork's offices.

The CSIR is the recognised custodian of in-service mine rope technology and performs the bulk of the statutory tests required for hoist ropes in the mining industry. As a National Key Point, the CSIR wire rope testing laboratory also maintains the largest historical database of rope tests in the world.

http://www.csir.co.za/wire_rope_testing/index.html

Our host, Mr Gert Coertzen, spoke with passion about the history and heritage of the CSIR's rope testing facility. Common services provided by the facility include the following



- Destructive testing of hoist ropes for the mining industry
- Bending tests and torsion tests on wires
- Rope fatigue tests
- Rope fracture tests.

For each hoist rope tested, mines are provided with a detailed report that includes the breaking force and an assessment of the condition of individual strands and wires at the point of failure. The report also alerts the mines to rope characteristics that breach, or are about to breach, accepted performance standards; for example, a breaking force that is 90 % or less than the new-rope breaking force. An assessment of corrosion and general rope lubrication is also provided.

The laboratory is an advanced technology facility, housing state-of-the-art wire rope testing equipment. The machines used in the destructive testing of steel wire ropes have capacities ranging from 2 kN for small diameter ropes to 15 kN for ropes up to 160 mm in diameter.

Members were taken aback by the sight of massive load testing machines first commissioned in the 1920s and still in operation today. There are no 100 ton limits here, with machines capable of operating to testing loads in the mega Newtons! Interest was sparked by a 100-year-old 1000 tonnes large pattern compression testing machine, suited to static destructive testing of full-sized pack support products.



The tour of the rope testing facility was followed by a demonstration of destructive testing of both mine poles and tendon support units, using Groundwork's own testing facility. Groundwork also shared some new research being conducted into defining an applicable loading rate downgrading factor for use in South African platinum mines.

A well-deserved lunchtime dop 'n tjoep was followed by a technical presentation by event sponsors, Tunnel Guard.

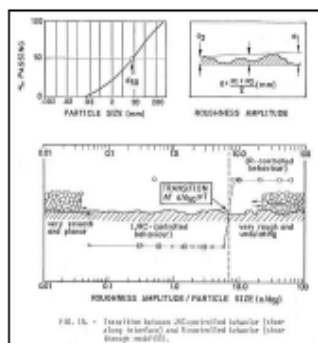


An eventful and informative end to a long and busy year – all thanks to the hosts Groundwork Consulting and the CSIR rope testing facility, as well as event sponsors Tunnel Guard. SANIRE Gauteng Branch would like to extend a hearty invitation to all SANIRE members to join us for our planned 2016 technical day/evening line up.

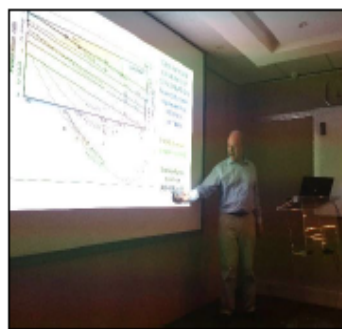
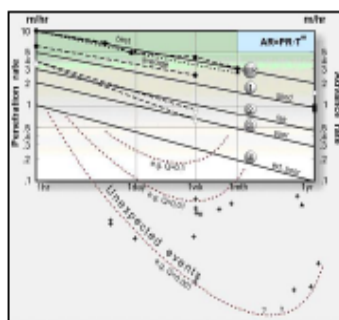


Newsbrief - 36th Gauteng Branch Technical Evening

The Gauteng Branch of SANIRE was extremely fortunate to host Dr Nick Barton, one of the fathers of Rock Mass Classification systems, for the 36th Technical Evening held at SRK House on the 5th of April 2016. In the spirit of promoting the advancement of Rock Engineering through education, Dr Barton's guest appearance brought us back to the ongoing quest to develop, research and explore techniques for providing engineered solutions to rock engineering problems in the industry. Dr Barton's extensive work has influenced – and continues to influence – practically every avenue of geotechnical studies for mining and civil engineering projects. For a full account of his work, his website www.nickbarton.com contains a list of publications and downloadable copies of selected articles.



For the technical evening, Dr Barton presented two lectures, titled "Shear Strength of Rock, Rock Joints and Rock Masses: Problems and Some Solutions" and "TBM Prognoses for Open-Gripper and Double-Shield Machines: Challenges and Solutions for Weakness Zones and Water". In these talks, Dr Barton explained how, by using particular criteria, pitfalls of non-linearity and multi-stage testing for shear strength and cohesion of rock joints should be guarded against. While on a different note, using the influence of weakness zones and water to estimate TBM advance rates in terms of utilization time, was presented. Both lectures are available through the SANIRE website.



To do the presenter justice, a record branch attendance of approximately 75 people was achieved. There was a fair representation of specialists within the geotechnical industry; amongst those that attended were mining geotechs, civil engineers, engineering geologists, academics, and project managers. Rounding off the evening in true style, attendants engaged in a GSI (General Sobriety Index: phrase credits to Alan Naismith), at the Room and Pillar bar, for snacks and drinks. Thank you to everyone who attended.

Here's looking forward to the next evening which will be hosted at the Wits University Underground Mockup facility with New Concept Mining.

Prince Mulenga - SRK Consulting; SANIRE Gauteng Branch Secretary
 Selected images sourced from www.nickbarton.com



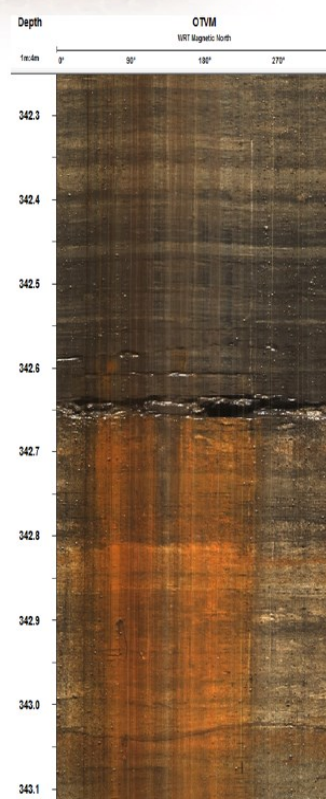
WIRELINER WORKSHOP

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Experience is the key element in log data capture operations. Wireline Workshop's management has 70 years of experience in logging mineral mining and exploration boreholes throughout the world.



Email: John@wirelineworkshop.com. Phone: 012 205 1115. Mobile: **060 778 3996**

Newsletter Advertising



The **SANIRE** Committee has decided to increase the advertising opportunities for suppliers who would like to market their business and products in the Rock Talk.

The table below indicates the prices for different size advertisements as well as bookings for the future.

Please contact Paul Couto for more details

Paul.couto@harmony.co.za / paul.coutopm@gmail.com

Type of advert	Rates (Excl. VAT) Solus, Casual	Availability per newsletter	Select Publication Issue (Mark with x)	
			July 2016	November 2016
Square (Not front page)	R 1 000	4	1 Booked	1 Booked
Skyscraper (Front page)	R 4 000	1		
Full page (Middle)	R 8 000	2		

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Par1 Bolt



MP1 Bolt



Vulcan Bolt



Bishop Bolt



MG-Bolt

RT Cable Anchor



Self Locking Cable Anchor



GREEN STORY

How not to get too hot.....

Globally, 2015 was the warmest year on record, with world temperatures exceeding the long-term average based on documented measurements taken since 1880. The previous record year was 2014, and 2010 before that.

Supported by scientific evidence suggesting a link to greenhouse gases in the atmosphere, climate change officially became the subject of international negotiations almost twenty-five years ago – the first agreement to co-operate dates back to 1992 in Rio de Janeiro. Between then and now, the world has generated almost as much carbon as it did during the preceding century.

SANIRE is an active organisation, with over five hundred members and seven branches. It engages in a number of activities that generate greenhouse gases, ranging from council meetings to symposia and conferences, which require members to travel large distances in their private vehicles. Public transport is not an option in most cases, and driving a car to get one person from point A to B is a rather inefficient mode of transport: Typically, it means moving a ton of steel and plastic just to move a hundred kilos of flesh and bone.

“The problem with climate change is that it’s very large, and as individuals we seem quite small against it. It is easy for people to feel disempowered” (Bill McKibben)

The way forward has to be somewhere along the lines of: Think global, act local! In order to contribute to a solution and to reduce SANIRE’s carbon footprint, a set of ‘green rules’ were drafted by Council and subsequently adopted at the 2009 AGM. Implemented from the following financial year, these rules reduced the electricity consumption at SANIRE’s office, lowered the use of printing paper and hopefully led to more members offering lifts and sharing their driving when attending meetings and conferences. The green rules, by the way, also spelled the end of bottled water at SANIRE organised events (see *ABOUT-US* on www.sanire.co.za).

Starting in March 2011 with the planting 120 indigenous trees at three rural schools near Sun City, a number of initiatives have taken place which were organised by local SANIRE branches. Not all of these were successful in terms of the long-term survival of the trees planted. It turned out that young trees have natural enemies: goats, sheep, cattle, children looking for weapons, etc.

SANIRE is now inviting ideas for suitable greening initiatives or any other offset project to reduce its carbon footprint. Suggestions should be forwarded to the Free State and the Western Bushveld branches who have offered to take the lead in the current financial year. A total of R15 000 has been allocated in the 2016 budget for this purpose.

Those interested in the topic of climate change can follow any of the roughly 139 Million links suggested by Google when searching for the topic, e.g. https://en.wikipedia.org/wiki/Climate_change

For specifics on historic temperature changes, see <https://www.ncdc.noaa.gov/sotc/global/201513>

Tree planting demonstration by Sammy Mashaba from Food and Trees for Africa (Oct. 2011)



122 trees around three schools near Sun City (March 2011)



*M. Stander addressing pupils at Fikadibeng Prim School
near Potchefstroom (March 2014)*



SANIRE Birthday's

On behalf of all the SANIRE Members and Council we would like to wish the following members a very happy birthday.....



MAY

MDG Salamon	P Mpunzi
A van Schalkwyk	S.F. Potgieter
JV James	T A Selengoane
Prof M F Handley	Y Jooste
TRM Molikeng	PM Couto
DC Oldroyd	T Dlokweni
DE Scholtz	SE Ntshabele
M Chatfield	N Nyamsi
JM Oelofse	JN Dodds
J C Visagie	T Petzer
C.E. Smith	LL Ditlopo
W Holtzhauzen	T Itholeng
B van der Kevie	A Williams
RIL Ferreira	SK Mosotho
W Zirima	T van Aard
EJ Sellers	SE Madonsela
MM Sibiya	H Netshifhire
FM Motebang	LN Mtonxa
AH Olivier	MB Kekana
JP rangwaga	R van Heerden
DM Raby	AP Boaduo
FPJ Steenkamp	SP Matewe
M Bester	

JUNE

Jl Kwofie	SC Sibilanga
OB Barker	P Matjeka
GH Brinch	J M Muaka
PJ Lotter	JP Jonker
WA Naismith	WL van Aarde
SC Hageman	A Lamprecht
P Brenchley	MCB Stander
JC de Villiers	G Maphanga
ES du Toit	IJ Smit
JC Pretorius	N.K. Mabaso
JD Smith	M Zwane
JF Chen	R Malogwa
RM Carey	FJ Rheeder
J Moller	HM Mohlala
FRP Basson	T Walsh
DR Fenn	TW Chauke
JJ van Staden	M Coetzee
P Akanyang	NA Nkosi
AWJ le Roux	JM Matsobane
AV Visser	BB TATI
RP Matlou	A Laurens
CT Jooste	
F Joel	

JULY

A Boniface	LS Ledwaba
C Grobbelaar	MR. Mehdi Nasiri
UWOL Vogler	JA Louw
JB Scheepers	MC Segoete
JA Potgieter	JA Maritz
DEK Mulville	MA Mwape
RC Mynhardt	HC van Rensburg
DM O'Connor	F Lloyd-Mills
JW Latilla	D Ratsaka
JJ Geyser	T Mokele
OJ van der Merwe	SR Moate
M Makajane	WL Janse van Rensburg
LG Skorpen	MPS Pretorius
T Mokoena	FP Nhlapo
CJ van der Nest	LC Lochner
LJ Scheepers	T Ranyakane
PC Cronje	S.Z. Ndlovu
TJ Chauke	PR Shiri
DJ Peters	J du Toit
RR Lousteau	DS Govender
PY Tshilumba	M Modika
K Nei	JA Mclean
TI Khomalo	GBN Nkosi
DH Mossop	EJ Hattingh
P Ndaba	GW Rabey
TDG Mathews	JP Gouvea

ISRM News

New developments

- Malaysia has been approved as a new national group of the ISRM.
- The European Rock Mechanics Symposium – EUROCK 2018 – has been approved as an ISRM Regional Symposium. The conference will take place in Saint Petersburg, Russia, in May 2018.
- The Shaoxing International Forum on Rock Mechanics and Engineering Technology has been approved as an ISRM Specialized Conference. The conference will take place in Shaoxing, Zhejiang, China, from 31 October to 1 November 2016.

Board meeting and workshop

The ISRM Board held a full-day meeting in Zagreb, Croatia, on 2 March 2016. The meeting was hosted by the Faculty of Civil Engineering, University of Zagreb. During the Board meeting, representatives of National Groups from the region introduced their activities to the Board members.

On the day after, 3 March, the ISRM Workshop Rock Mechanics and Rock Engineering, "Theoretical advances, investigation techniques and design" was held. The workshop, chaired by Prof. Ivan Vrkljan, was hosted by the Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb, and organized by the Croatian Geotechnical Society and the ISRM.

The workshop consisted of 22 presentations on the following topics: Rock mass/rock joints parameters relevant for designing; Critical review of laboratory and field tests; In situ stress measurements; Back analysis in rock engineering; Rock engineering in Eurocode 7; Design methodology in rock engineering; Rock mechanics for mining and petroleum engineering; Damages caused by natural phenomena; and Case histories. Handouts of all the presentations can be downloaded from the site of the Croatian Geotechnical Society.

Lectures were given by all Board members, Dr Nick Barton as a special guest, and ten lecturers from the region (Bosnia and Herzegovina, Croatia, Hungary, Russia, Serbia, Slovenia, and Switzerland).

The Workshop was attended by 148 participants from 26 countries, including the Board members.

Online lectures

A new Online lecture was presented on the 15th of March and is available for viewing or downloading on the ISRM website. 13th ISRM Online lecture: Prof. Peter Kaiser. "Challenges in rock mass strength determination for the design of underground excavations."

ISRM Conferences

Event title	Start date	End date	Country
7th In-Situ Rock Stress Symposium - an ISRM Specialised Conference	2016-05-10	2016-05-12	Finland
RocDyn 2 - 2nd International Conference on Rock Dynamics and Applications - an ISRM Specialised Conference	2016-05-18	2016-05-19	China
GEOSAFE: 1st International Symposium on Reducing Risks in Site Investigation, Modelling and Construction for Rock Engineering - an ISRM Specialized Conference	2016-05-25	2016-05-27	China
EUROCK 2016 - The 2016 ISRM International Symposium - Rock Mechanics & Rock Engineering: From Past to the Future	2016-08-29	2016-08-31	Turkey
2nd International Specialized Conference on Soft Rocks	2016-10-06	2016-10-07	Colombia
ARMS 9 - the 9th Asian Rock Mechanics Symposium - ISRM Regional Symposium	2016-10-18	2016-10-20	Indonesia
VII Brazilian Rock Mechanics Symposium: Rock Mechanics and Rock Engineering Innovation for Sustainable Development - an ISRM Specialised Conference	2016-10-19	2016-10-22	Brazil
Recent Advances in Rock Engineering - RARE 2016 - an ISRM Specialised Conference	2016-11-16	2016-11-18	India
EUROCK 2017 - ISRM European Regional Symposium	2017-06-20	2017-06-22	Czech Rep.
1st African Regional Rock Mechanics Symposium - The 2017 ISRM International Symposium	2017-10-02	2017-10-07	South Africa
EUROCK 2018 - an ISRM Regional Symposium	2018-05-22	2018-05-26	Russia
ARMS10 - the 10th Asian Rock Mechanics Symposium - ISRM Regional Symposium	2018-10-01	2018-10-01	Singapore
ISRM 14th International Congress on Rock Mechanics	2019-09-20	2019-09-27	Brazil

PERSONALITY OF THE QUARTER



Philosophy of Life:
*"If you work hard,
 there must always be
 time to play hard."*

Full name: Kevin Richard Brentley

Position: Rock Engineer

Company: Brentley, Lucas and Associates

Organisations: SANIRE, ISRM, SAIMM

Date and place of birth: 22 August 1960, Born in Johannesburg

Education: Matriculated at Milner High School, Klerksdorp; MSc Engineering, Wits University

First Job: Learner Official at Buffelsfontein Gold Mine. (Know of a few other learner officials who became rock engineers from the same period and stable – good times)

Personal Best Achievement/s: Eating "pap and gravy" for the first time at the age of 20, a few shaft pillar extraction's and other designs, a few hair-raising mountain bike and canoeing expeditions, and starting a microbrewery with Jacques Lucas and Ben Regal

Philosophy of life: If you work hard, there must always be time to play hard

Favourite food/drink: Definitely not "pap and gravy". A well-aged rump steak and a bottle of red wine

Favourite sport: Mountain biking and watching 20/20 cricket

**“Ask
questions. If
you do not
understand or
know how to
apply
something,
ASK.”**

1. How did your career in the mining industry begin and where are you now?

Started as a learner official on Buffelsfontein Gold Mine in January 1981. (One of the few English-speaking learner officials who did not play rugby). Was promoted to production shiftboss in 1983. In November 1985, realized that production was not for me and joined the Rock Mechanics Department on Buffels as a learner strata control officer. I obtained my COM Rock Engineering certificate in May 1986 and joined Elandsrand Gold Mine (Anglo American in those days) as a Rock Mechanics Officer. During 1988, moved back to work for Gencor at St Helena Gold mine as a senior Rock Engineer. Worked on most of Gencor's mines in the Free State and ended up on Beatrix as the Rock Engineering Manager. In November 1995 I joined Harmony Gold Mining company as the Group Rock Engineer, after which in 1997 started Brentley, Lucas and Associates with Jacques Lucas.

Somewhere I found time to complete the COM advanced Rock Engineering certificate and a GDE in Mineral Economics, which was later converted to a Master's in Engineering.

2. Why did you choose rock engineering?

I enjoy mining, but to put it bluntly, hated the production side. Had two options on the technical side, being rock engineering and ventilation. The rest is history.

3. Please tell us a bit more about your career journey.

I worked for and alongside some pioneers in the rock engineering field in the earlier days of my career. To name a few – Roger More O'Ferrall, Ben Kotze, Nielen Van Der Merwe, and the late Dave Ortlepp and Martin Pretorius. I have also worked with some interesting characters, but it would be wise to not mention names. For me as a person, rock engineering has changed dramatically over the past 10 to 30 years and this is what makes it “lekker”.

4. In your opinion, what are some of the challenges that the fraternity is currently facing?

One of the major challenges at present is the lack of fundamental research and the funding thereof in the rock engineering field. There is some research on the go out there, but at the moment, it is fragmented and uncoordinated.

5. What are some areas that you believe will become of increasing importance in the near future of the rock engineering discipline?

To ensure that the future younger rock engineering leaders/managers on the operations not only have proper technical skills, but are able to manage, communicate and lead from the front.

Find a way to solve the problem surrounding fundamental research, as mentioned in 4 above.

6. What advice would you offer people aspiring to be in your position?

You need to understand your field of expertise well. Rock Engineering can sometimes be like a “selling game”. If you are not competent in your game, you could lose.

Ask questions. If you do not understand or know how to apply something, ASK.

7. Who is your role model/mentor?

This could be quite controversial – Lance Armstrong.

8. What is the best advice you have ever been given?

If you have money to pay a gardener, you are not spending enough on your mountain bike.



SANIRE History

When it all began....

The official launch of the South African National Institute of Rock Engineering took place at a function held on 6 July 1999 at the Wanderer's Club in Johannesburg. At the launch, the out-going Chairman of SANGORM, Dr. Güner Gürtunca, reported on his period of chairmanship from February 1994 to July 1999. His report was followed by an address from SANIRE's first president, Dr. Nielen van der Merwe.



Photo of the launch show Roger Johnson, Güner Gürtunca, Dick Bakker and Matthew Handley.

At the time, Dr. van der Merwe expressed his feelings with some relief: "After so many years of talking about things like the image and professional standing of rock engineers in South Africa, SANIRE is now a reality." But he also cautioned that the Institute does not turn us into instant professionals. Professional behaviour reflects an individual's approach to his work, an attitude that is reflected in the quality of work and the integrity that the individual displays.



Photo: Nielen van der Merwe

He also remarked that, with the new Institute, we have a baby in our arms and what we do now will have a major influence on how this person will behave in maturity.

At its formation, SANIRE Council allowed all previous SANGORM memberships to be transformed to SANIRE until 31 December 1999, without paying additional fees. At the time, there was a large number of associate members and rather few corporate members. Raising this issue was a Concerned from Johannesburg, who wrote to the Editor of the SANIRE News questioning how many corporate members actually voted in favour of the transition. The President replied to ensure maximum participation the proposed change was publicized by means of a road show. In the end, less than half the corporate members voted by post and e-mail, but this was still better than had voting been conducted at the AGM.

Looking at the SANGORM / SANIRE from today's position, the decision to professionalize the association was the right thing to do. SANIRE has a dedicated Council, seven branches and a growing member base, having increased from around 300 in mid 1999 to 574 currently. It is in a financially sound position to provide services to its members and is directly or indirectly represented in a number of stakeholder organisations such as the CoM's RETC, SAIMM, SANCOT, SAICE, ECSA and the MQA committee.



Compiled by F Essrich

YOUNG MEMBERS FORUM



What?

- Based on the RockBowl Canada even with a South African twist.
 - Two divisions with a possible third division (depending on time)
- ⇒ Premier Division
- ⇒ First Division
- ⇒ Seniors/ Veterans

Who?

- Premier Division - Rock Engineers (under 35)
- ⇒ COMRMC
- ⇒ Under 35
- First Division – Strata Control Officers (under 35)
- ⇒ COMSCC
- ⇒ Under 35
- Veterans - Rock Engineers and Strata Control Officers (over 35) (OPTIONAL RESPONSE)
- ⇒ COMRMC, COMSCC
- ⇒ Over 35

When and Where?

SANIRE Symposium 2016 , evening before the Symposium, possibly also including a dinner.

**Coming
soon..... with
more details**

2016



SANIRE 2016



Team name	
Company/ Organisation	
Branch	
Branch Chairman	
Young Members Representative	

Members	Name	Company/ Organisation	Email	Gender (M/F)
Captain				
Member 1				
Member 2				
Reserve				

*Please make sure you are sending with this form all documents requested in item 3.e. of the RockBowl 2016 Regulation.



SANIRE 2016



Questions template for database

Team name:	
Email:	

#	Question	Answer	Type	Category	References
1	What is the name of the current president of the ISRM?	Xia-Ting Feng	Non-technical	Trivia	https://www.isrm.net/
2	The methods used for the rock mass classification apply various characteristic parameters of rock and massive. What is the common parameter between RMR ratings – Bieniawski Rock Mass Rating and Barton Q-System, Lien and Lundie	RQD-Rock Quality Designation	Technical	Characterization & Classification	Bieniawski Z.T. (1999). Engineering rock mass classification. A complete manual for engineers and geologists in mining, civil and petroleum engineering. John Wiley & Sons.
3					
4					
5					
6					
7					
8					
9					
10					



SANIRE

Free State presents:

Strata Control Mini-Symposium

9 June 2016

**Diggers Inn, Welkom
08:30 to 15:30**

**Entrance: Free
Exhibition space available at
R1000/stall (3m x 3m)**



**Prizes for the 3 best Strata Control
Presentations**

**1st Prize—Tablet
2nd Prize—Voucher
(Incredible Connection)
3rd prize—Voucher
(Incredible Connection)**

**Contact:
Juan Little 076 703 6751 (info)
JC Pretorius 083 455 8351 (stalls)**

ROCK STAR OF THE QUARTER



Philosophy of Life:

*“Never stop
learning in life
and always try to
better yourself”*

Full Name: Buntu Bantu Tati

Position: Rock Engineering Officer

Company/Organisations: Impala Platinum

Date and Place of Birth: 29 June 1988

Education: BSc (Hons) Mining Engineering degree

First Job: Mining Engineering in Training (Impala Platinum)

Personal Best Achievement/s: BSc Mining Engineering degree, Rock Breaker Qualification, Strata Control Qualification, Management Advance Programme Qualification, and of course, COM Rock Mechanics Ticket

Philosophy of Life: Never stop learning in life and always try to better yourself

Favourite Food/Drink: Beef lasagne and Castle-Lite

Favourite Sport: Basketball, Football, and Rugby

*“Work hard, be
focused and
disciplined.”*

1. How did your career in the mining industry begin and where are you now?

My career began as a Mining Engineer in Training in Impala's graduate streamline programme. I'm currently a Rock Engineer at one of the Impala operational shafts.

2. Why did you choose Rock Engineering?

I took a keen interest in the subject during my university studies. I was particularly fascinated by how people could be sent kilometres down into the ground with thousands of tonnes of rock above heads and they live to tell the tale. Who could be responsible for such a task?

3. Please tell us a bit more about your career journey?

Well, after completing my universities studies in 2010, I applied to Impala Platinum for a place in their graduate development programme. At the time, I was not aware that their Rock Engineering Department was looking for new graduates to take into their streamline. Having taken a keen interest in Rock Engineering and performing really well in it during my university studies, it became apparent to me that Rock Engineering would be a great place and opportunity for me to kick-start my career in the mining industry. After successfully completing their interview process, I began as a Mining Engineer in Training and worked my way towards obtaining my Rock Breaker certificate. 8 months into the programme, I obtained the Strata Control Certificate and worked as a Strata Control Officer on various shafts, gaining a lot of valuable experience. In November 2015 I then obtained my COM Rock Mechanics Ticket and I'm currently a Rock Engineer at one of the Impala shafts.

4. In your opinion, what are some of the challenges that the fraternity is currently facing?

The mining industry is in a major crisis, with commodity prices at an all-time low, lacklustre economic growth, and uncertainty in water and electricity supplies. This will surely add pressure on mining houses to find innovative solutions to ensure safe, cost-effective production. Our function as a discipline will therefore be more heavily relied upon to come up with solutions to advance the industry beyond its current status.

5. What are some areas that you believe will become of increasing importance in the near future of the rock engineering discipline?

Research, research and more research and development. The mining industry has made a lot of progress in technological advances to ensure safe production; however, far too many people still continue to lose their lives. South Africa produces far too few (about 1/8th) scientists, researchers and PhDs, compared with our European and emerging nation counterparts who have far better safety stats. If we are to make meaningful contribution to solving safety-related problems, Rock Engineering Professionals in particular need to take their levels of expertise further.

6. What advice would you offer people aspiring to be in your position?

Work hard, be focused and disciplined.

7. Who is your role model/mentor?

I look up to many individuals that I see as my role models and/or mentors. I believe people are different and offer different experiences, expertise and knowledge. I therefore rely on everyone who influences my life, as they play very important roles in shaping and moulding the person I am.

8. What is the best advice you have ever been given?

Work hard and never give up. Set your mind towards something and you will achieve.

Rock Engineering History

There is, of course, evidence of mining in Southern Africa, stretching back a great many centuries, but concentrating for the time being on gold discoveries by Europeans on the Witwatersrand during the nineteenth century, we find many stories of gold finds dating back to long before the official discovery in 1886. Not many of these find support in the written archives, though. A Dutch hunter, Karel Kruger, is purported to have found gold on the Witwatersrand while on an expedition in 1834, and to have taken some samples back to Cape Town. Two years later, on his return to the interior to hunt and follow-up on his gold find, he and most of his party were massacred by tribesmen close to where Potchefstroom stands today.

But perhaps the history of modern gold mining on the Witwatersrand should begin with mention of an intrepid South African prospector and miner who was involved and present at all three of the major gold rushes of the nineteenth century on three separate continents, thereby providing perhaps a singular and a unique South African link between the gold strikes of Clementine's Forty-Niners on the Klondike, Matilda's Waltzers in Victoria, and Sarie's Suitors on the Witwatersrand. Pieter Jacob Marais was born in the Cape in 1827 and, as a young man who had barely attained his majority, sailed in 1849 from Cape Town, via Liverpool, to San Francisco to try his luck in the Californian gold rush. (Incidentally, save for some cash, he was also to lose most of his worldly belongings in the first great fire of San Francisco in October 1850, providing a further, albeit tenuous, link with seismic phenomena that have plagued mines in more recent times).

He was obviously an adventurer because, on hearing of the rich strikes in Ballarat and Bendigo in 1851, he was off again, this time as a United States citizen, sailing to Australia in 1852. His pickings on the Victoria diggings were, however, somewhat lean, and, on learning of the resurgent excitement surrounding copper finds in Namaqualand from some South African travellers in Melbourne, he completed his around the world expedition by returning to South Africa in 1853. After some months spent on the copper fields near the present-day towns of Springbok and O'OKiep, he found his way, towards the end of

1853, across the not-yet independent Orange Free State to the newly independent South African Republic on the other side of the Vaal River, joining other prospectors that were already criss-crossing the Transvaal in search of sudden, if not easy, wealth at that time. (One should remember that in those days there was little in the way of distractions, like Teasers, to divert or deter prospectors from their ambition or dream of making their fortune – perhaps for the same reason).

One of these was a successful, accomplished and well-off, but elderly, Welshman named John Henry Davis, who, during his lifetime of extensive travel, had, amongst other wide-ranging activities, explored diamond and gold deposits in Brazil. In the 1840s he immigrated to the Cape with his family. Subsequently, in 1852, a year earlier than Marais, he was also drawn by the lure of riches, firstly to the copper rush in Namaqualand, and then soon thereafter to the Transvaal. On the farm Paardekraal, where Krugersdorp now stands, he found significant quantities of gold or gold-bearing rock. Although not recorded, it is very possible that these came from the conglomerate reefs of the Witwatersrand, and, if this is so, he was perhaps the very first person, besides the dubious claim of Karel Kruger, to discover the gold of the Main Reef series. However, when he showed his samples to the Volksraad in Potchefstroom, the wily President Andries Pretorius, anticipating, fearing and avoiding the fate that was later to befall President Paul Kruger, saw to it that Davis was paid \$600 for his gold and told leave the country forthwith. So Davis returned to the Cape to live out the remainder of his long life in relative obscurity in Paarl. (Much later, his great-grandson, Roland Davis, became the Town Treasurer of Springs, a town founded on the very gold deposit that his great-grandfather had discovered).

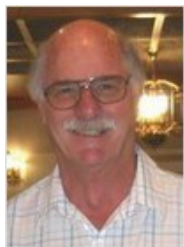
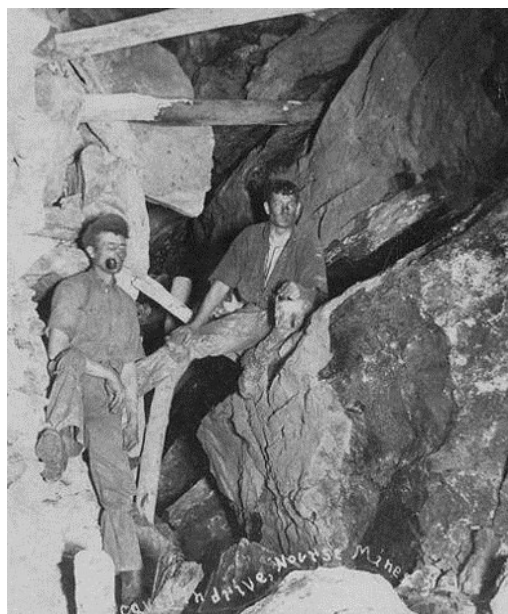
About a year later, having crossed into the Transvaal, Marais started fossicking in the Jukskei and Crocodile rivers to the immediate north of the Witwatersrand ridge, finding small traces of gold, sufficient only to whet his appetite. Nevertheless, the ever-wary Volksraad in Potchefstroom, having become aware of his activities, summoned him to give account of his findings. He must have made a good impression, because at the end of 1854, unlike their treatment of Davis, the Volksraad granted

Marais the right to prospect for gold in the Republic on their behalf, but swore him to absolute secrecy should he find anything – literally on pain of death. Mining Commissioners were appointed in the districts of Potchefstroom, Rustenburg, Zoutpansberg and Lydenburg, to whom he was required to report any and all discoveries in the strictest confidence.

It seems, however, that Marais' prospecting fire was starting to dim. He spent the next year on long wagon journeys that combined trading and prospecting activities, and which reached as far north as the Zoutpansberg. He was also involved in local Boer affairs, and in November 1855 was around to help Paul Kruger and Hans Nel remove the slain body of Piet Grobler from the mouth of the cave during the massacre at Makapanspoort. This episode spelled the end of his prospecting days, for he returned to the province of his birth before the end of that year to open a shop in Dordrecht, where he died as a relatively young man ten years later, not surviving to see his thirty-ninth year, or the discovery of diamonds the year after, nor the establishment of the world's largest goldfield, of which he had tried so hard to be a part, and which, despite the muzzle of silence put upon him by the authorities, was precipitated in part by the news of his discoveries, revealed by others, that spread rapidly around the world.

Although he was not directly responsible for importing any particular prospecting or mining technologies to this country, Marais' passage around the world and across three oceans mirrored the slightly more drawn-out journey of the claim system that characterised the early diamond and gold digging operations in South Africa, and that persists in modified form to this day. The system was carried, virtually unchanged, by nomadic and migrant miners from its centuries-old origins in medieval Spain, across the Atlantic to Mexico and California, and then across the Pacific to Australia, and finally from there across the Indian Ocean to South Africa.

There is one further anecdote that links this pioneer of the early gold rushes of the mid-1850s directly with the present era. Before leaving the Transvaal, Marais was asked by his friend, Lieutenant Vincent Lys, father of Godfray Lys (the step-nephew of Harry and Fred Struben), to join him in exploring an exposure of 'pudding stone' that he had come across, and had determined by crushing and panning to be gold-bearing. The circumstances surrounding the occurrence were that, on a trip from Pietermaritzburg to Pretoria, while crossing the Witwatersrand in the vicinity of where the future Witwatersrand Gold Mining Company (Knights) was to be established, some of these 'pudding stone' boulders were used in the effort to extricate Lys's wagon that had become bogged down in a marsh (later called Lys's Vlei). Marais declined the invitation, thereby hastening his premature withdrawal from participation in the discovery of the Main Reef and untimely exit from the historical record. But it is very likely that the elder Lys can also be regarded, along with Davis, as a contender for recognition as an early discoverer of the Main Reef Zone. The connection with the present is that Marais was a friend of the elder Lys, whose son in later life related the story to his young friend at the time, Eric Rosenthal, who, as the senior member of the Springbok Radio quiz team 'The Three Wise Men', related the story as an old man in the 1950s to his young listeners who, as old people today, can still recall the story first-hand, so to speak.



*This story was written by Dave Arnold.
Please feel free to contact Dave with any
historical stories for the next edition.*

davmae@iafrica.com

Future Education

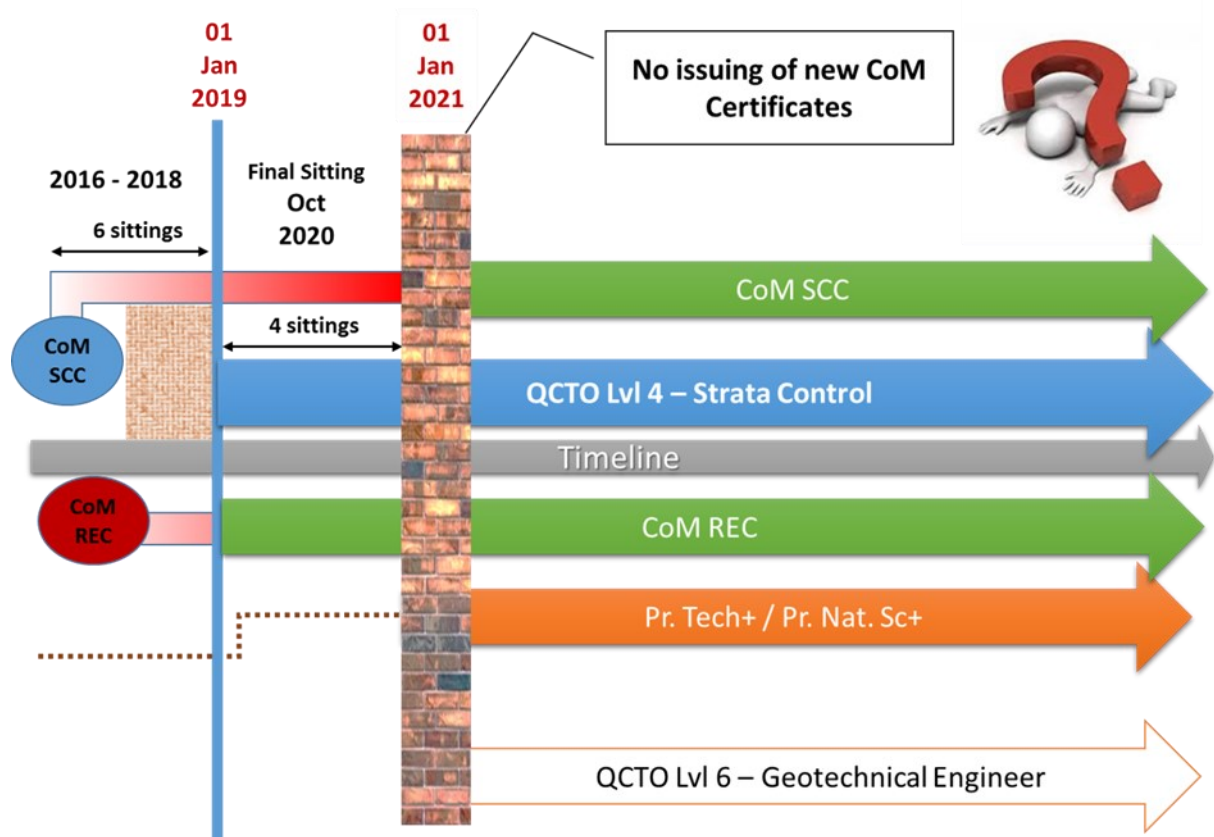
Rock Engineering practitioners – beyond the 2018 deadline

For a long time now, and more so in recent months, the growing concern about the phasing out of the current Chamber of Mines certificates in Rock Engineering has raised some eyebrows, with the registration cut-off of 2015 and examination deadline of 2018. It was with new flair and urgency that the 2015-17 SANIRE Council (through the FUTURE EDUCATION portfolio) joined forces with the two other disciplines also affected by this decision (MINE VENTILATION SOCIETY & SOCIETY OF MINE SURVEYORS) to meet the Chamber and highlight concerns on closing the registration for candidates at the end of 2015. This fruitful meeting resulted in the re-opening of the registration for 2016 to allow entry into the current process, pending the outcome of a meeting scheduled with the CEO of the Chamber, at which the 2018 deadline will be again discussed.

This meeting yielded an extension of the deadline for both the registration (Aug 2018) and final exam sitting (Oct 2020) for all three disciplines. It was made clear that as this was the third extension granted, this would also be the last. The permission granted then, of course, comes on top of specific barriers that need to be overcome prior to 2020 in order to ensure, firstly, a sustainable solution to a qualification going from 2020 and beyond, and secondly, a seamless transition from the current system to the new.

The development of the new qualification in Rock Engineering will also see some changes to designation(s). In future, the now-known 'Rock Engineer' will be called a 'Geotechnical Engineer'. This is in line with international designations, as currently only South Africa uses the term 'Rock Engineer'. This will also fit into the understanding in Civil Engineering of applying knowledge and engineering to natural sand and rock environments.

A schematic is presented below to allow a 'quick pic view' of the timelines for the phasing out and in of the various "qualifications".



The registration for the process is open until Dec 2018. This will allow for six (6) more open sittings under the current system. Once the registration process has closed, the candidates in the pipeline have four (4) more attempts available to obtain the certificates, after which the new qualification needs to be completed. People entering the discipline during 2019 and later would need to complete the qualification ensuring a pipeline of qualifications when the Chamber's current window of opportunity is closed in 2020. This applies to both the strata and rock engineering certificates.

Observer – The Level 3 qualification for Observer in Hard Rock has been registered with the Quality Council for Trades and Occupations (QCTO). This is required by people working as observers in the Hard Rock environments. (*Not indicated in the schematic).

CoM Strata Control Certificate – Three Level 4 qualifications (Strata Control for Hard Rock, Massive Mining, and Coal) has been registered with QCTO, with a fourth qualification (Surface) pending. All strata control officers would need the new qualification for 2021 and beyond.

CoM Rock Engineering Certificate – In order to practise as a geotechnical engineer (pending approval of the proposed legislation changes), one would need to be in possession of the current CoM certificate (either one of the four) obtained at the latest during the 2020 October examination, or be registered at either ECSA or the Natural Science Council (with work experience on the type of mining), or lastly, be in possession of the Level 6 QCTO qualification.

As the Competence certificates from Chamber will be discontinued, the need for legislation updates and reviews are under way. As mentioned in the schematic, the proposed legislation changes will then allow practitioners three options to legally apply their services at a mine. These routes are – registered professional through either the Engineering Council or Natural Science Council, the current CoM certificate, or the new qualification, if and when available.

The advice from Council would be to get yourself into the system, prepare with due diligence and complete the certification as soon as practically possible. If you are planning to wait for the new format of acknowledgement, don't. If you are planning to pass the last sitting, change your timelines. Never leave your studies to the last minute. Set your goals straight and meet your target. Call is Call.

“Anything less than a conscious decision to the important will lead to a subconscious decision to the unimportant” – Stephan R Cowey

One of the barriers that would also need to be overcome is that of finding candidates who could assist in the development of the Level 6 qualification and assessment tools. As Chamber has a record of past papers and SANIRE has a well-accepted curriculum and set of learning material, packaging this into the new format shouldn't be an issue. However, the involvement of so many other entities (SANIRE, CHE, MQA, QCTO, COM) results in long lead times between approvals of various milestones along the way for registration of learnerships.

The second would then obviously be service providers to the candidates for presenting the qualification. As we are led to believe that the process is relatively easy, SANIRE (Future Education) would like to urge potential service provider to get in contact and get their company names on the list, so that when the process of registering the providers starts, they can be informed.

For any enquiries or getting your name on the volunteer list or providers seeking assistance, please contact the portfolio holder Jannie Maritz (jannie.maritz@up.ac.za).

ROCK Ed - Upcoming COM Exams and Examiners

Exams

Strata Control Met	10 May 2016	11 October 2016
Strata Control Coal	10 May 2016	11 October 2016
RMC Paper 1	10 May 2016	11 October 2016
RMC Paper 2	11 May 2016	12 October 2016
RMC Paper 3.1	12 May 2016	13 October 2016
RMC Paper 3.2	12 May 2016	13 October 2016
RMC Paper 3.3	12 May 2016	13 October 2016
RMC Paper 3.4	12 May 2016	13 October 2016

Examiners

Strata Control Met	Yolande Jooste/ Dave Arnold
Strata Control Coal	Marc Henderson/ Dr Bernard Madden
RMC Paper 1	Jeanne Walls/ Halil Yilmaz
RMC Paper 2	Bertus vd Kevie/ Pieter Greyling
RMC Paper 3.1	Marius Stander/ Wynand Bester
RMC Paper 3.2	Wikus Mahne/ Dr Bernard Madden
RMC Paper 3.3	Jaco Le Rous/ William Joughin
RMC Paper 3.4	Desmond Mossop/ Peter Terbrugge



SANIRE

SOUTH AFRICAN NATIONAL INSTITUTE OF ROCK ENGINEERING

Vision: To promote the interests of a vibrant South African Rock Engineering Fraternity

Mission: SANIRE promotes the advancement of the Rock Engineering discipline through the following objectives:

- ◆ Encouraging interest and the advancement of education in Rock Engineering
- ◆ Maintaining professional practice and high standards of ethics
- ◆ Encouraging networking; Collaboration and information exchange
- ◆ Identifying, promoting and facilitating rock engineering related research

Values:

- ◆ **Honesty**
- ◆ **Integrity**
- ◆ **Professionalism**
- ◆ **Accountability**
- ◆ **Transparency**

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EDITORS CORNER

This is your newsletter and I would like to hear from you.

*If you have any information or stories that we can use, please submit them via
email to*

paul.couto@harmony.co.za or paul.coutopm@gmail.com

Your feedback will be highly appreciated.

Paul Couto

