

ROCK*talk*

Volume 10, Issue 3 | October 2024



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- SANIRE Annual General Meeting
- Treasurer's Column
- SANIRE Banquet Highlights
- Education Blog
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- RockTalk- The next rock star

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EDITOR



Fezekile Mosiane

SANIRE would like to hear from you. If you have any information or content, you would like us to include in the next newsletter, please submit them via email to Fezekilem@Dwarsrivier.co.za and Prudence@SAIMM.co.za Remember to visit all our media platforms.

PRESIDENT'S CORNER

Dear SANIRE Members

We have reached the end of Q3 2024, and it has been another productive year for SANIRE. However, there's no time to coast, as Mr. Petrie Wessels (SANIRE's Theory Education Portfolio Holder) and his team of examiners are gearing up for their busiest period with the upcoming Strata Control Certificate (SCC) and Rock Mechanics Certificate (RMC) examinations in October 2024.

For your reference, here's a list of the main attractions and events hosted or facilitated by SANIRE throughout the year:

- 1 April 2014 – Change of Administrator (MPAS to SAIMM)
- 5 April 2024 – FOGAP Day of Learning
- May 2024 – MinCo SCC/RMC Examinations
- 13-14 June 2024 – SANIRE Symposium & RockBowl
- 29 August 2024 – SANIRE Annual General Meeting (AGM)
- 27 September 2024 – SANIRE EBB Gold Day
- 28 September 2024 – SANIRE Banquet
- October 2024 – MinCo SCC/RMC Examinations.

The SANIRE AGM was held at the Johannesburg Country Club, and for the first time an annual report was compiled for members. In addition, a number

of sponsors attended and donated funds to the event in support of SANIRE. The membership fees for 2024-2025 were proposed by Mr. Sifiso Mashile (Honorary Treasurer) and were approved by the majority of the members in attendance (66%). I wish to thank everyone who attended including the members, the sponsors, the council members who presented and of course our willing and able administrator Prudence, and the support team from the SAIMM.

The SANIRE banquet was held at Emperors Palace and was very well attended. The formalities included the announcement of the winners of the SANIRE awards for 2023-2024. A full report on the banquet is provided below by our newsletter editor, Ms. Fezekile Pearl Mosiane.

The venue and dates have been announced for the first full international conference in rock mechanics since 2017 - AfriRock 2025 Pioneering Progress: The Future of Rock Engineering (an ECSA validated CPD activity). The goal of AfriRock 2025 is to provide an international forum for presenting and discussing the latest advancements in rock mechanics and geotechnical engineering. The key dates are:

- Abstract submission deadline – 27 January 2025
- Paper submission deadline – 3 March 2025

Let's continue driving innovation, collaboration, and excellence in rock engineering as we close out the year on a high note. Take care and stay safe!

Kevin Le Bron

SANIRE ANNUAL GENERAL MEETING

Dear SANIRE Members

The SANIRE AGM was held on the 29th of August 2024 at the Johannesburg Country Club.

The Eastern Bushveld Branch held their second branch/technical meeting on the 30th and 31st of July at Mogalakwena Mine in Mokopane.

During the technical visit, our hosts took us to the open pits and explained the history as well as the current operations, challenges and future planned expansions of the mine.

During the second day, we were entertained with insightful discussions on topical matters as well as allowing the large group of attendees to mingle and catch up. Our annual golf day was held on the 27th of September 2024 at Highland Gate Golf and Trout Estate. Till next time.

Looking ahead, we aim to balance technical and supplier presentations, and we invite the Rock Engineering community to contribute. We particularly urge Strata Control Officers and Observers to present, extending beyond just Rock Engineers. Branch meetings serve as ideal venues to sharpen presentation abilities, build confidence, and absorb wisdom from industry experts. We advocate for active

engagement over mere presence. The branch would also like to thank all event sponsors: SMS Mining, Leica Geosystems, Videx, Badger, MSP, Minova, Mohlalefi, WIMICO, KHUTSMO, and Gosiam Mining.

EBB Committee is thrilled to build on our now established and very popular annual Highland Gate golf event. Expect a day filled with spa indulgences, and stalls offering coffee and ice cream, ensuring enjoyment for all. Early booking is recommended to secure your spot. You might even catch a glimpse of Ernie, or at least his portrait adorning the walls.

Our 2nd branch meeting took place at Mogalakwena, re-engaging our branch's northern members. A technical tour offered valuable insights into massive mining operations.

I urge everyone to attend, contribute, and actively participate in the SANIRE Eastern Bushveld Branch meetings, and to keep your membership current. I urge all members to ensure SANIRE membership is fully paid and in good standing.

On the 13th of April 2024, the Eastern Bushveld Branch along with Booyssendal Platinum Mine, held a preparation training session for the Strata Control Practical Exams that were conducted on the 16th of May 2024 at Glencore. Below are photos taken during the training session. Sixteen candidates attempted the Strata Control Practical exam, with only one successful candidate obtaining his Strata Control Certificate.

For the upcoming year, we have planned the following events in the table below:

Date	Meeting/Exam	Venue
30-31 July 2024	2 nd Branch Meeting and Technical Visit	Mogalakwena
16 May 2024	SCO Practical Exam	Glencore
27 September 2024	Golf Day/Family Day	Highland Gate
October 2024	SCO Practical Exam	Dwarsrivier Mine

Welcome SANIRE President



Kevin Le Bron

Council Members



Jannie Maritz



Sifiso Mashile



Glorius Nkosi

Sponsors and Guests



Dave Roberts, Gift Thantsha, and Jannie Maritz



Kevin Le Bron and Sponsors



Gaynor Le Bron and Thandile Dlokweni



Katinka Cartes, Craig Smith, Rodney Podmore, and Johann Esterhuyse

TREASURER'S BLOG

Dear SANIRE Members

SANIRE remains in a strong financial position, with assets exceeding one million rand. The organization's investment (savings) account has continued to grow over the years, driven by accrued interest.

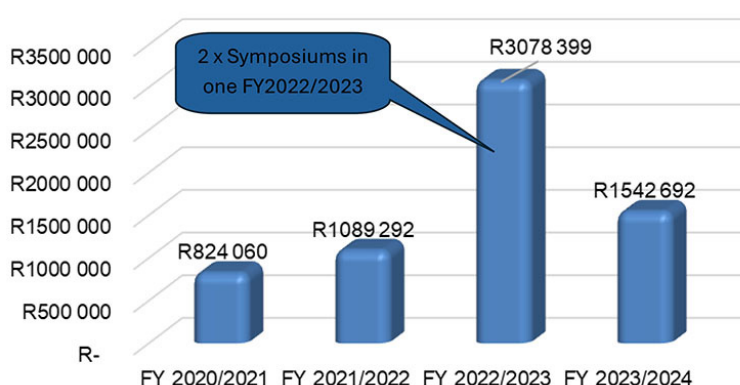
Income Analysis

For the financial year 2023/2024, SANIRE experienced a 50% decrease in overall income compared to the previous financial year (2022/2023). This significant drop can be attributed to the unique situation in FY2022/2023 where two symposiums were held within a single financial year, resulting in unusually high-income margins.

Summary of SANIRE's financial standing

		Closing Balance	Actual	Closing Balance	Comments
		FY2022/2023	FY 2023/2024	FY 2023/2024	
Assets	Inventory	R108 230	-R10 600	R97 630	Sold Rock Engineering books
	Accounts receivable	R527 919	R358 213	R886 132	Largely from Membership fees (including historical)
	Current bank account	R336 965	-R34 342	R302 623	Transactional account
	Savings bank account	R912 968	R8 778	R921 745	Investment Account
Equity liabilities	Accounts payable-suppliers	R123 347	R85 491	R208 838	

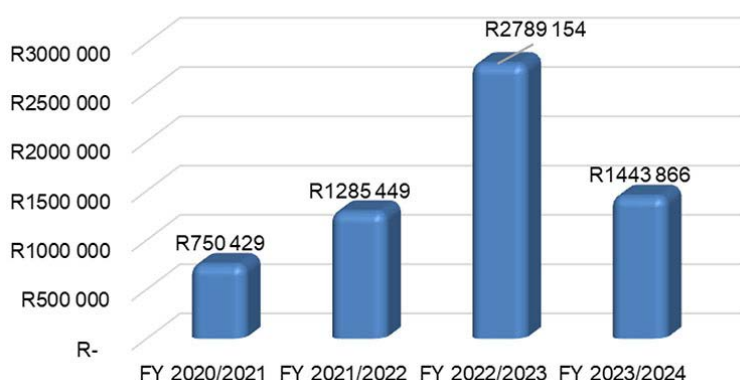
Main Branch Actual Income



Expenditure Overview

In line with the reduction in income, SANIRE's overall expenditure also decreased by 49% in FY2023/2024 compared to FY2022/2023.

Main Branch Actual Expenses



Branch Financial Performance

All SANIRE branches remained financially active, each closing with a positive bank balance. However, the Eastern Bushveld, Western Bushveld, and Freeval branches reported financial losses for the year:

Summary of SANIRE's financial standing

	Opening	Income	Expenditure	Shortfall/Surplus	Closing Balance
Eastern Bushveld Branch	R47 254	R220 000	R259 475	(R 39 475)	R7 779
Coal Fields	R2 896	R19 300	R11 150	R8 150	R11 046
Gauteng Branch	R10 837	R25 500	R20 457	R5 043	R15 880
Western Bushveld Branch	R79 135	R59 000	R68 056	(R9 056)	R70 079
Freeval Branch	R49 846	R24 500	R27 085	(R2 585)	R47 261
Northern Cape	R11 500	R94 157	R41 540	R52 617	R64 117
Totals		R442 457	R427 763	R14 694	R216 162

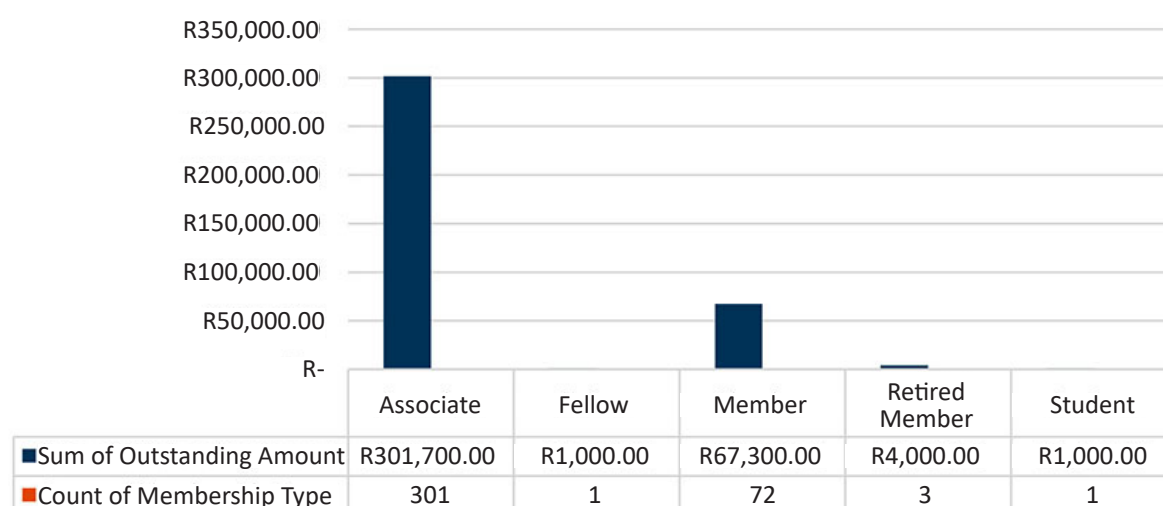
Membership Fees Recovery

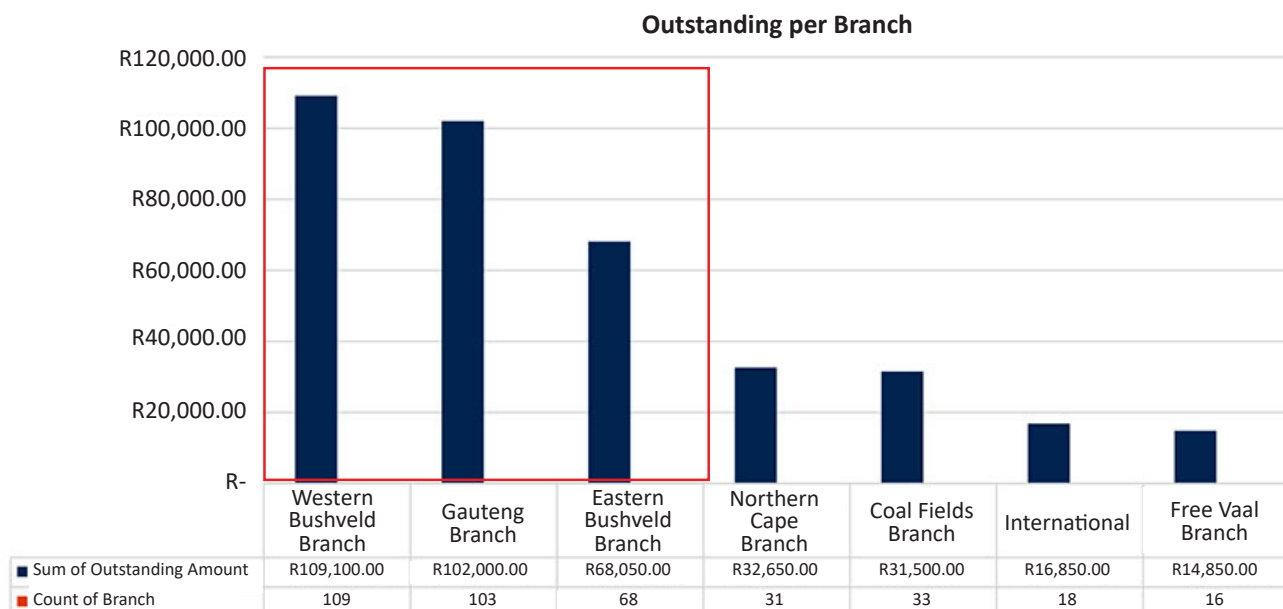
The recovery of membership fees was notably low at 48%, largely impacted by the Western Bushveld branch, which had 109 members with outstanding fees. The Gauteng branch followed closely with 103 members, and the Eastern Bushveld came in third with 68 members with unpaid fees.

As of 1 July 2024

Amount Invoiced	R731 000.00
Revenue received	R356 000.00
Amount Outstanding	R375 000.00
Members Invoiced	731
Members Paid	353
Members Outstanding	378
Members Paid	353

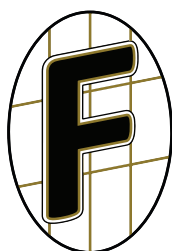
Outstanding per Member Grade





Conclusion

SANIRE remains financially sound despite a decrease in income and expenditures in the FY2023/2024. Efforts to improve membership fee recovery and to address the financial losses at certain branches will be a key focus moving forward. The continued growth of the savings account provides a stable foundation for future financial health.



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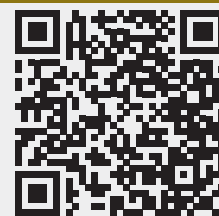
GDT100



FAB602



FAB500



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WE WILL BE AT ELECTRA MINING 2-6 SEPT 2024 - HALL 5, STAND B17

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SANIRE Banquet Highlights

The bi-annual SANIRE Presidential banquet was held at Emperors Palace in Kempton Park on the 28th of September 2024. The event turned out to be a glitzy affair which lived up to good networking, fine dining and laughter as patrons swapped their Manolo Blahniks for their waltzing shoes and merrily danced the night away.

The highlight of the event was the awards ceremony which saw Rock Engineering personnel, young and old being recognised for their contribution and the excellent work that they had done towards the advancement of the science. Amongst others, the event saw Prof. Francois Malan being honoured with the prestigious Napier award to celebrate the Rock Engineering giant and titan that he has always been and continues to be. The award categories and winners were as follows:

- ➔ **Honorary Member Lifetime Achievement Award**
Prof. Raymond Durrheim
- ➔ **Napier Award**
Prof. Francois Malan
- ➔ **Salamon Award**
Prof. John Napier and Prof. Francois Malan
- ➔ **Ortlepp Award**
Divine Ile
- ➔ **Dick Stacey Award**
Christiaan van Rooyen
- ➔ **Rock Engineering Practitioner Award**
Jean-Pierre Gouvea and Jean-Claude van Zyl
- ➔ **RockStar Award**
Lebogang Baloyi
- ➔ **Lelanie Prinsloo Technological Innovation Award**
Quinton Enslin
- ➔ **Sponsorship Award**
REUTECH and HMA





SANIRE Award Winners





EDUCATION BLOG

SANIRE FOGAP Skills Initiative

Dear SANIRE Members

To curb fall-of-ground (FoG) fatalities, the FoG action plan is supported with a momentous skills development project that SANIRE and the Minerals Council are implementing to empower its members and practitioners within the Rock Engineering fraternity.



SANIRE FOGAP Skills Initiative

To curb fall-of-ground (FoG) fatalities, the FoG action plan is supported with a momentous skills development project that SANIRE and the Minerals Council are implementing to empower its members and practitioners within the Rock Engineering fraternity.

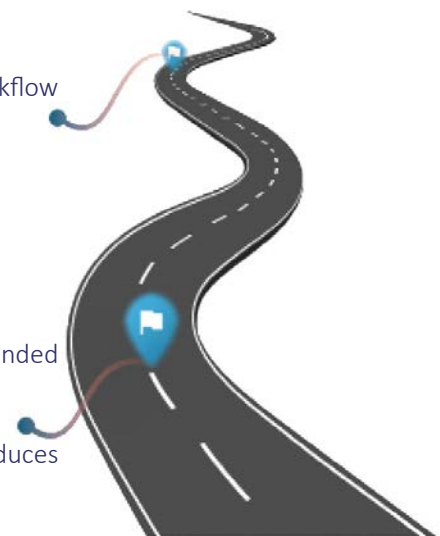
Objective



- Improve access to relevant knowledge and learning experiences for industry practitioners
- Improve the quality and level of engagement of learning experiences so that practitioners turn enthusiastic about learning
- Produce competent Rock Engineering practitioners that can add additional value to all stakeholders in the mining industry
- Incorporation of training material to further professionals (production, suppliers etc.) in the industry.

Our Progress and Journey Ahead...

- Clear Vision and Strategy
 - Project plan development to achieve stated objectives
- Enabled world-class Education Technology
 - Covers all elements of content, assessment and accredited workflow capabilities
- Phase 1.0 training content developed
 - Revision and re-work of Rock Engineering Technical Papers
 - Developed and deployed on Learning Platform
- Launch of Learning Platform to SANIRE Members
 - Launch and access to paid-up members imminent
- Enhanced Learning Experiences
 - Development of advanced digital learning content, including extended reality
- Enhanced Assessments
 - Transition to digital assessments that increases scalability and reduces turn-around times
- Broadening of Scope
 - Increase training coverage of various industry disciplines



SANIRE BRANCH Contributions

FreeVaal Branch

Greetings from the FreeVaal Branch

Amazing presentations were delivered by:

1. Justin Taylor, Carbon Tech (TSL)
2. Johan (JJ) van der Merwe, Harmony (Project)
3. Warren Thöhl, Leica-Hexagon (Reality capture solutions)

They demonstrated not only their products, technical expertise but also the profound impact they are making in the industry. They highlighted the significant strides taken to overcome obstacles in the field of mining, all whilst emphasizing their commitment to saving lives.

Khumbu'lekhaya!

The raffle prizes had us in stitches with two “non-consumers” winning the extraordinary prizes of 18-year Johnny Walker and 15-year-old KVV gift packs. Lots of jealous members going home that day.

With the year speeding past, there are still a couple of events to look forward to, including:

1. Presidential Banquet, 28 September 2024
2. Strata Control Practical scheduled for a to-be-confirmed date in October 2024.
3. The year end planned somewhere in November 2024

Let me leave you with this note:

“Do the best you can until you know better. Then when you know better, do better.” – Maya Angelou

Warm Spring Wishes to all

Mitch Wiggins

SANIRE Free Vaal Chairperson



SANIRE BRANCH Contributions

Coalfields Branch

Greetings from the Coalfields Branch

With Spring upon us, it will be a delight to elect candidates for the Coalfields Branch Committee on the 20th of September 2024. We trust that we will hand-over the baton to individuals who will advance the functioning of the committee and effect the necessary progressive change. The current committee has had the privilege of organizing and hosting several technical visits and workshops for the branch.

Technical Visits

Two technical visits were undertaken in the last 6 months. The first visit was held at Optron in March where the following rock engineering solutions were presented:

- a real-time monitoring roof bolt strain gauge,
- a digital compass which records and stores data,
- a 3D Laser scanner for highwall and/or underground environments. This scanner can indicate discontinuities and some of their characteristics within the rock mass.

This visit was followed by an underground visit to a high extraction mining method using short walling at Exxaro Matla Colliery which had to be run in two sessions due to a high level of interest, attendance tallied up to 30 people.

And lastly, a visit to the Rock Mechanics Laboratory in Melville in May where a number of rock strength tests were conducted (i.e. UCS, UTS, Brazilian strength test) for the aspiring Rock Engineers to understand the principles of rock strength testing from sample preparation to acquiring the resultant strength test data.

All these visits were well attended mostly by Strata Control Officers (SCOs) who are currently writing Rock Engineering (RE) Examinations towards their Rock Mechanics Certificates. It was truly inspiring to witness such commitment and participation of the SCOs, which indicates the bright future of Rock Engineering in the Coalfields Branch.

Branch Meeting

A successful branch meeting took place on the 26th of April 2024 with an attendance of approximately forty (40) people constituting of Rock Engineering personnel as well as Suppliers. At the meeting, there were three (3) Rock Engineering technical presentations and two (2) Suppliers presenting on new support consumables developments.

However, the greater percentage of attendance was by suppliers when compared to Rock Engineering Practitioners. This meeting was hosted in Secunda at the Sasol Mining Recreational Club. The second meeting was hosted at Secunda Lake Umuzi where the Department of Mineral Resources and Energy (DMRE) presented a revised/ newly proposed Chapter 2, which is to be included to the MHSA Act 29 of 1996.



SANIRE BRANCH Contributions

Eastern Bushveld Branch

Greetings from the Eastern Bushveld Branch

The SANIRE Eastern Bushveld Branch's annual golf day at Highland Gate on September 27, 2024, became a standout event not only for its competitive golf format but also for its thoughtful inclusivity. The four-ball competition gave participants the chance to enjoy the challenging course set amidst Highland Gate's stunning scenery.

Meanwhile, the rock engineering women enjoyed a day of relaxation, indulging in spa treatments from Vygenhoek Spa therapists. This blend of competition and wellness added a unique touch to the event, ensuring that both golfers and non-golfers had a memorable experience. The combination of competitive sport and the luxurious spa treatments created a balanced atmosphere of excitement and relaxation, making it a highlight for the SANIRE community and its members.

A heartfelt thank you goes to Kevin and Gaynor Le Bron for their presence and support at the SANIRE Eastern Bushveld Branch's annual golf day. Their participation contributed to the day's success, adding to the sense of community and camaraderie that made the event so special.

A special thanks goes to Dirk Swart for his incredible effort in organizing the day. His dedication and meticulous planning were instrumental in the event's success. Dirk's commitment, alongside the invaluable support from sponsors, made this a truly memorable occasion for everyone involved. Without the generosity and dedication of these suppliers, the event wouldn't have been as impactful or enjoyable for the participants. Their involvement was key to the smooth execution of the day's activities, ensuring everyone had an exceptional experience both on and off the course.

Easavani Wessels

SANIRE Eastern Bushveld Chairperson



Key block theory for the miner: a novel simplified method for determining block removability

by C van Rooyen

(Supervisor Prof TR Stacey)

University of the Witwatersrand, Johannesburg, South Africa

Gravity driven rock falls cause the most injuries and deaths in the South African underground mines as compared to other agencies. The rocks are primarily defined by the intersection of discontinuities such as joints. Key block theory describes a methodology to determine whether such a rock can move into an excavated space. The complex calculations and multiple iterations required to execute key block analysis, however, restricts its routine use. Although there are several methods that address some of the shortcomings of key block theory, none address the complexity of its underlying calculations. The main drive of this research project was to find a method to judge rock block removability that is simple enough to encourage the routine application of key block theory in daily mining. The novel gravitational removability theorem satisfied the need for simplicity. A comparison between the gravitational removability method and the edge vector method on a large set of synthetic blocks yielded a fair correlation in terms of removability, but less so in terms of non-removability. The definition and application of a set of calibrating geometric conditions in conjunction with the gravitational removability method resulted in a perfect accounting of all the synthetic blocks. The gravitational removability method proved effective in identifying rotational removability as well. The gravitational removability theorem, equations to calculate the gravitational removability number and a set of geometric conditions that allows the judgement of removability of a block with no, or minimal calculation are presented.



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Full Page (A4)	297 h	210 w	R8000.00
Half Page Horizontal	148 h	210 w	R2800.00
Third Page Horizontal	99 h	210 w	R2400.00
Square	60 h	60 w	R1000.00

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ROCKtalk

THE NEXT ROCKStar

Full Names: Davis Chiloane

Company: Vedanta Zinc International

Designation: Acting Rock Engineer/Strata Control Officer

Date of Birth: 15 November 1988

Educational Qualification: Chamber of Mines Certificate in Rock Mechanics, Blasting Certificate

First Job: Learner Official at Sibanye Gold



1. **What would you consider as your biggest career *faux pas* to date and what lesson/s have you learned from it?**

My biggest *faux pas* would be burning any bridges with former employers or colleagues as there's always potential for referrals, networking and it in general helps maintain a good reputation in the industry.

2. **What motivates you to get out of bed in the morning?**

Making my son proud and leaving a legacy for my family.

3. **What is your favourite quote (why)?**

"There is nothing noble in being superior to your fellow man; true nobility is being superior to your former self". This quote by Ernest Hemingway reminds me to stay humble and that I am my biggest competitor.

4. **What is your personal song (why)?**

Crazy by Gnarls Barkley, it resonates with me deeply.

5. **What is your favourite movie?**

Men of Honour. I strive to be the character that is played by Cuba Jnr he displays tremendous resilience in spite of the difficult circumstances he is faced with.

6. **If the story of your life were to become a biopic, what would the title be?**

"Straight out of Hammanskraal"

7. **If the story of your life were to become a biopic, which famous actor or actress would play you?**

John David Washington

8. **What is the best vacation you've been to or plan on going to?**

I plan on going to Bali, It's a popular holiday destination I would like to visit. The famed island of the Gods. I think as a rock engineer I would also enjoy visiting its volcanic hillsides.

9. **Do you have a favourite newspaper, blog?**

The Daily Maverick has a good take on current events.

10. **How do you unwind?**

I like to go out and have a cold beer with friends.

11. **What is your greatest fear?**

My greatest fear would be to leave this earth not having created generational wealth for my son. The state of affairs in this country is quite concerning for the upcoming generation.

12. **What is your hidden talent?**

I can cook a few good meals, and I am an excellent pool player. (Champion among my friends lol)

13. **What is the one thing that very few people know about you?**

I like to dance. (break dancer of note).

14. **If you could interview one person (dead or alive) who would that be (why)?**

Marcus Garvey, he was a great political activist.

15. **If you could only drink one beer/cocktail for the rest of your life, what would it be?**
Heineken. (The full stop is for emphasis).
16. **If you were an animal what would you be (why)?**
The Lion, it's the king of the jungle.
17. **If you were on death row, what would your last meal be?**
Cow heels and any pasta dish.
18. **What do you want to be remembered for?**
Someone who was loyal, honest, loved his family and could always be counted on by his friends.
19. **If you were stuck on an island what three things would you bring?**
Machete, beer and matches
20. **If you were a rockstar, what would your stage name be?**
I think Davis is already a rockstar name.
21. **Growing up, what was your dream career?**
Fireman
22. **Why did you choose Rock Engineering as a career?**
Despite the obvious financial benefits, it was to become a rockstar, no it's a dynamic field and all its facets are equally interesting. The dynamic nature of the field keeps one on their toes.
23. **What are 3 words to describe Rock Engineering?**
Dynamic, fun, rigorous
24. **What do you find the most challenging in Rock Engineering?**
Having to make precise decisions because any small mistake can be catastrophic. The analysis and having to apply engineering judgement to scenarios that have no reference points.
25. **What do you like most about Rock Engineering?**
I am able to travel to different places and I'm exposed to different cultures because of my work but above this it's the fact that it plays a crucial role in helping to exploit the mineral wealth that is contained in our country's belly.
26. **What are some areas that you believe will become of increasing importance in the near future of the rock engineering discipline?**
Rock Engineering discipline is one of the key contributors to the welfare of mining. South Africa's mining industry is dwindling due to a variety of factors. Growth of the rock engineering field as a science will allow us to exploit deeper reserves and improve, optimise yields in current operations without having to rely heavily on green field projects.
27. **What is your view on the continued loss of critical Rock Engineering skill in South Africa?**
It is a significant obstacle and challenge and with increasing industry needs of this skill it is imperative that programmes are put in place by the big role players to retain the skill.
28. **What solutions would you propose to abate this looming problem?**
Educational institutions, government and the private sector need to work together to market this skill to draw more people to it and reduce the skills loss.
29. **Who is your role model/mentor? What is the best advice you have ever been given?**
Industry mentors: Trevor Rangasamy, Jerry Wienand. Best advice is simply to finish what you started.
30. **What advice would you give to someone who wants to choose Rock Engineering as a career?**
This is a rewarding career but requires one to have a full understanding of all aspects involved in being a rock engineering practitioner. Hard-work does pay off in this field.



SANIRE

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