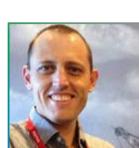


# **Introducing Phillip Mulder New Coaltech Board** Chairperson





Mine Closure.

Phillip Mulder, Seriti's Chief Technical Officer, and new Coaltech Board Chairperson, brings a wealth of operations and technical environment knowledge and experience to the Board.

Mulder describes himself as a confident, independent self-starter and motivated individual with a purpose. "My purpose is to influence the lives of others by living by example."

His operational experience has developed his ability to motivate people and he believes his commitment facilitates the synergy of individuals to form an efffective team.

His technical abilities extend to strategic leadership skills and a determination to implement world class business planning technologies and processes. Mulder's operational experience in coal mining is extensive and ranges from underground

and surface mining, project management, mine design and scheduling, resource to reserve declarations, technical auditing and financial valuation, mining method trade-offs, mine planning systems and technology. He has a degree in Mining Engineering from the University of Pretoria, Masters in Business

In his current position at Seriti he is responsible for Group Safety, medium to long term strategic life of mine planning, Resource Geology, Engineering and Asset Management, Metallurgy and

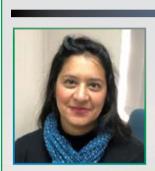
Administration from the University of Stellenbosch and a Mine Managers Certificate of

Mulder says he is excited about his role in Coaltech, "Filling the shoes of the outgoing Coaltech chairperson, David Power, is a big challenge, but I look forward to continuing his work of growing the organisation further while future-proofing it."

# Who's new



### Naadira Haniff -**New Director Representative Thungela**



Naadira is the Mining Technical Support Manager at Thungela Resources, working on technical assessments, estimation & resource planning and development. She has over 20 years' experience in the mining industry. Previously she was Project Lead Geologist at BHP Billiton, Resource Geologist at Anglo Coal Gas Projects and prior to that she did resource and exploration work in coal. Naadira has also held positions of exploration and production geologist in the gold mining industry.

### Kelley Reynolds-Clausen -**New Environment Steer Com Chairperson**



Kelley is a senior consultant at Eskom Research, Testing and Demonstration, managing ash and FGD gypsum research projects. She started working for Eskom in 1993 as a microbiologist and progressed to water and waste research and consulting for the organisation. Her interests include ash utilisation and beneficiation, waste management and industrial microbiology. She is a registered scientist with SACNASP, the Vice President of the South African Coal Ash Association and Vice Chair for the Coaltech Environmental Steering Committee. She holds a PhD in Microbiology from Stellenbosch University.



# The year that was 2023





As we approach the end of 2023, I am pleased to reflect on the progress we have made with our research programme. This year we have seen significant advances in safety, coal processing, and environmental protection. Some examples include the work done on life sustainability in underground refuge bays, the development of a guideline

for mine closure relinquishment criteria, and unlocking obstacles to the commercialisation of eutectic freeze crystallisation. (Visit the Coaltech website for further details.) In the coming months a number of projects will also be finalised. I would like to thank all the researchers, engineers, mine personnel, and other professionals who made this research and development possible. Your dedication and hard work is making a real difference in the lives of coal miners and their communities. I also want to thank Eskom and the coal mining industry for their support of R&D. The industry's investment in R&D is essential to ensure that coal mining remains a safe, productive, and an environmentally responsible industry.

# **Congratulations**

## Deanship - Facility Natural & Agriculature science at the **University of the Free State**



The University of the Free State (UFS) has appointed Prof Paul Oberholster as Dean: Faculty of Natural and Agricultural Sciences as of 1 January 2024. In 2019, Prof Oberholster joined the UFS as Director of the Centre for Environmental Management. He also also received the National Science and Technology Foundation (NSTF) Award in the category Water Research Commission, with a focus on natural-based passive phyco-remediation and phytoremediation treatment technology. In 2022, he was elected as a member of the Academy of Science of South Africa (ASSAf) in recognition of his academic achievements in South Africa, and in 2023 he was appointed as the Managing Director of the Ecological Engineering Institute of Africa (EEIA).

# Passing of Johan de Korte - A friend & colleague

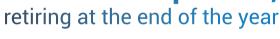


It is with great sadness that we inform you of the passing of Johan de Korte, on the Thursday, 26 October 2023.

Johan was a valuable contributor to the Coal Industry and will be sorely missed.

Our thoughts & prayers go out to his wife & family.

# **Farewell Ritva Muhlbauer Environment Steer Com** Chairperson,







### FINAL RESEARCH PROTECTS **FOR THE LAST QUARTER OF 2023**



# **Environment**

# Agreed relinquishment criteria for mine closure in

**South Africa Guideline** By Jones & Wagener (Pty) Ltd

Few mines in South Africa have obtained closure certificates. A key finding from this project is that there is a lack of specific guidance in the vast closure related legislative landscape. The aim of this project is to provide the guidance on the best mechanism for reaching agreed relinquishment criteria for mine closure in South Africa. Per definition, "Relinquishment (transition of ownership and responsibility for the land to a third party) is often discussed in the context of post-

closure land use' <u>Learn more here</u>

# Fabricated soils from South African coal waste

By Juarez Amaral Filho; Mariette Smart; Jessica Weiler; Thanos Kotsiopoulos; Susan Harrison - Centre for Bioprocess Engineering Research, CeBER, Department of Chemical Engineering. University of Cape Town

Coal processing in South Africa results in coal discard dumps and fine

coal waste storage facilities. This study builds on earlier work that, following further recovery of coal, the bulk ash-rich fine coal waste can be re-purposed into a fabricated soil that supports the growth of grasses typically used in mine rehabilitation. The study further explores the type of fine coal waste used and the soil design and their effect of soil properties as well as the value of re-instating a soil microbiome through inoculation of the fabricated soils on manufacture.

**Learn more here** 



# **Processing**

#### Hydrothermal treatment of coal discards and sewage sludge for production of advanced materials

Prepared by Gentil Mwengula Kahilu - School of Chemical and Metallurgical Engineering, Faculty of Engineering and the Built Environment, University of the Witwatersrand, Johannesburg, South Africa Supervisor: Prof Jean Mulopo, Co-Supervisor: Prof Samson Bada

The disposal of coal discards (CD) and sewage sludge (SS) is a substantial problem to waste management in coal beneficiation and wastewater treatment plants (WWT). This work investigates essential aspects for contributing to the reduction of environmental effects, with a particular emphasis on the hydrothermal carbonization (HTC) technology for the synergetic treatment of CD and SS to produce value-added carbonaceous materials (CM).

#### The alternative uses of coal in the production of advanced materials and lightweight products for the sustainability of the South African coal industry Report Chair: Samson BADA, Clean Coal Technology Group, University

of the Witwatersrand Report Chapter Leads: Samson BADA, Jibril Abdulsalam, and

Orevaoghene Eterigho-Ikelegbe, - University of the Witwatersrand With the aim to lead the country into a new carbon-based economy

this report looks to reinvent applications for coal utilisation beyond combustion and energy generation. This also has a role in sustaining the circular economy concept envisioned by this country. Several new carbon-based industries using coal fines, discards or waste as carbon ore for advanced and lightweight materials are examined. In this context, the report is a thorough review of emerging technologies to use discarded products highlighting coal fines or coal slurries as feedstock for high-quality and valuable products.

Learn more here

# Mining

# Assessing the life-sustainability of underground

Refuge Bays in South African collieries By Inus Labuschagne and Tjaart Cronje

Following a request by the South African Colliery Managers Association (SACMA), Coaltech has investigated and assessed Refuge Bay designs, construction, and equipment by referencing legal and other requirements as well as international practices in the use of Refuge Bays as places of safety for life-sustainability during emergencies. This report summarises the current situation in some of the South African collieries as well as highlighting various leading practices identified. This assessment identified some areas of improvement for Refuge Bay designs, construction, and maintenance of facilities for life-sustaining conditions within Refuge Bays of the South African coal mining industry.

**Learn more here** 







to exhibit their products or services.

**Learn more here** 

### Coaltech is seeking a new CEO. Colatech has a opening for the positions of Chief Executive

**CEO Job Vacancy** 

Officer. The candidate should have at least twenty (20) years' experience in the mining industry, with a minimum of two years in mining related research or project management. For More information, please download the attached Job Spec. Applications should be emailed to cbergman@coaltech. co.za and include an updated CV, with your address, contact numbers and ID, before 31 December 2023. **CEO Position Spec** 



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