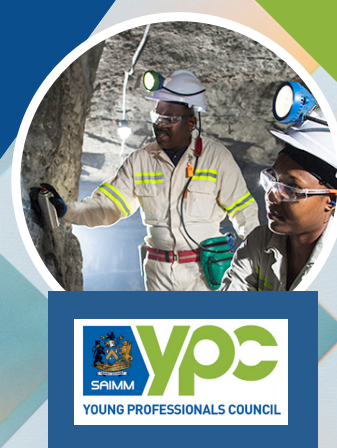




ADAPTING THE AFRICAN MINING INDUSTRY TO CHANGING GLOBAL TRENDS TO ENSURE LONG TERM SUSTAINABILITY



21ST ANNUAL STUDENT COLLOQUIUM

21 OCTOBER 2025
MINTEK, RANDBURG, JOHANNESBURG

Final Programme

Tuesday 21 October 2025

Plenary session sponsored by Fraser Alexander



07:30-08:30 **Registrations and Early Morning Refreshments**
08:30-08:35 **Safety Briefing**
Venue Official
08:35-08:40 **Welcome and Opening Address**
A. Moganedi, *Student Colloquium Chairperson and SAIMM YPC Council, South Africa*
08:40-08:55 **SAIMM Presidential Address**
G.R. Lane, *SAIMM President, South Africa*

08:55-09:25 **Keynote Presentation:** Sir Ian Chauke, General Manager | BMF Executive Member | Founder of Legacy Talk | Chief Ideas Officer | ESG Strategist | Speaker
09:25-09:40 **Sponsor Presentation by**
S. Tshabalala, *Fraser Alexander, South Africa*
09:40-10:10 **Mid-Morning Refreshments**

Parallel Sessions

Mining – Venue: Atrium

Session Chairs: T. Maphosa, M. Mashile

10:00-10:20 **The economic impact of powder factor variation on drill and blasting operations at beifang mining services**
J. Haingura, *University of Namibia, Namibia*
10:20-10:40 **Evaluating the external dilution factor for ore-mining: Mavachab Gold Mine Namibia**
A. Van Zyl, *Namibia University of Science and Technology, Namibia*
10:40-11:00 **An operations planning and underground management system in underground gold mines**
R.M. Mazanhi, *University of Zimbabwe, Zimbabwe*
11:00-11:20 **A predictive approach towards rock fall mitigation in underground mines**
B.B.T. Sande, *Zimbabwe School of Mines, Zimbabwe*
(Online Presentation)
11:20-11:40 **The development of a predictive maintenance system for jackhammer to optimize maintenance costs**
S. Matakina, *Zimbabwe School of Mines, Zimbabwe*
(Online Presentation)
11:40-12:00 **An automated fault detection system on the compressed air networks**
L.T. Vakisai, *Zimbabwe School of Mines, Zimbabwe*
(Online Presentation)
12:00-13:00 **Lunch**
13:00-13:20 **Optimizing the cost-effectiveness of the reclamation process for underground mining equipment through a priority-based decision matrix**
N.M. Kadi, *University of Pretoria, South Africa*
13:20-13:40 **Improving tramming operations at Level 102 and 105 at Kusasalethu Gold Mine**
D. Mahlakwana, *University of Pretoria, South Africa*
13:40-14:00 **Performance evaluation of the through-the-rock locator system in underground mines**
N.E. Mathebula, *University of Pretoria, South Africa*
14:00-14:20 **Evaluating the dewatering strategies implemented at Mogalakwena Open Pit Mine**
A. Holiwe, *The University of the Witwatersrand, South Africa*
14:20-14:40 **Investigation of underground support efficiency at Khutala Colliery**
W. Malaudzi, *The University of the Witwatersrand, South Africa*
14:40-15:00 **Optimisation of prestrip rates with a focus on loads per hour at navigation pit, Khwezela Colliery**
N. Ntsabatshe, *The University of the Witwatersrand, South Africa*
Continuation of Metallurgy Presentations
(Delegates to join the metallurgy session)
15:20-15:40 **Afternoon Refreshments and Adjudication Process**
15:40-16:00 **Awards Ceremony and Close of Colloquium**

Metallurgy – Venue: Auditorium

Session Chairs: M.L. Mathopo, N. Mabena

10:00-10:20 **Effect of heat treatment conditions on the microstructure of Ti-11Nb for biomedical application**
O. Marumo, *Vaal University of Technology, South Africa*
10:20-10:40 **Building a furnace from the ground up: A practical Metallurgical Engineering initiative**
F. Mampuru, *Vaal University of Technology, South Africa*
10:40-11:00 **Design and fabrication of an In-House foundry laboratory sand mixer**
R. Ramadwa, *Vaal University of Technology, South Africa*
11:00-11:20 **Modeling the rheological behaviour of aqueous zinc oxide and dolomite suspensions under colloid science and engineering control**
K.L. Jazlyn Rieth, *Namibia University of Science and Technology, Namibia*
11:20-11:40 **Magnesium-calcium separation from dolomite in chloride medium**
E.S. Mweuta, *Namibia University of Science and Technology, Namibia*
11:40-12:00 **Eco-friendly production of carburised iron ore pellets**
E. Kemp, *University of Pretoria, South Africa*
12:00-13:00 **Lunch**
13:00-13:20 **Producing carbon neutral reductants from charcoal fines**
K. Geerkens, *University of Pretoria, South Africa*
13:20-13:40 **Determination of the driving forces for optimal sintering of magnesia-chromite bricks**
M. Hoosen, *University of Pretoria, South Africa*
13:40-14:00 **Wear behaviour of CrCoNi and VCoNi medium entropy alloys**
S. Masangu, *University of the Witwatersrand, South Africa*
14:00-14:20 **Indentation size effect of 316L stainless steel**
P. Sekgata, *University of the Witwatersrand, South Africa*
14:20-14:40 **Study of ore particle size and binder type in sintered pellets of chromite ore**
T. Makeke, *University of the Witwatersrand, South Africa*
14:40-15:00 **Comparative analysis of convex and concave cone designs in hydrocyclones: impact on separation efficiency and performance prediction**
A. Minnaar, *North-West University, South Africa*
15:00-15:20 **Optimizing the throughput in a wet drum magnetic separator using flow pattern analysis**
C van Niekerk, *North-West University, South Africa*
15:20-15:40 **Afternoon Refreshments and Adjudication Process**
15:40-16:00 **Awards Ceremony and Close of Colloquium**