

Society of Mining Professors 6th Regional Conference 2018 Preliminary Programme

Day 1: Sunday, 11 March 2018

Welcome Reception

17h00–19h00 **Cocktail/Registration**

Day 2: Monday, 12 March 2018

Official Opening

Session Chair: R. Mitra

07:00–08:00 **Conference Registration and Tea/Coffee**

08:00–08:10 **Welcome from Chair and OHS Briefing**

08:10–08:15 **Welcome from Vice Chancellor**
University of the Witwatersrand

08:15–08:20 **Welcome from Dean**
FEBE, University of the Witwatersrand

08:20–08:35 **General overview of SOMP**
B. Hebblewhite, *Secretary General, SOMP*

08:35–08:50 **Welcome Address**
S. Ndolu, *SAIMM President*

08:50–09:20 **Keynote Address 1**
L. Kgatle, *SASOL*

Session 1: Research & Development

Session Chair:

09:20–09:40 **Development of wear- and corrosion-resistant coatings for pump sleeves in a copper mine**
S.I. Hango^{*†‡§}, J.W. van der Merwe^{*†§}, L.H. Chown^{*†§}, F.P.L. Kavishe^{†‡§}, and L.A. Cornish^{*†§}, **University of the Witwatersrand, South Africa, †DST-NRF Centre of Excellence in Strong Materials, hosted by the University of the Witwatersrand, ‡University of Namibia, Namibia, and §African Materials Science and Engineering Network (A Carnegie-IAS RISE Network)*

09:40–10:00 **Geological mapping and modelling in the University of the Witwatersrand mine tunnel, South Africa**
C. Birch, *University of the Witwatersrand*

10:00–10:30 **Coffee and Tea Break**

10:30–10:50 **An evaluation of the economic viability of mining Bench 7B at Grootegeluk Colliery**
S. Mhlongo^{*} and C.K. Chabedi[†], **The University of the Witwatersrand and †Exxaro, South Africa*

10:50–11:10 **Integrated phytomining and ethanol production in the Zambian Copperbelt to minimize mine decontamination costs and environmental and social impacts: a review**
T. Sinkala, *University of Zambia, Zambia*

11:10–11:30 **Prediction of the spontaneous combustion liability of coal and coal-shale using statistical analysis**
M. Onifade and B. Genc, *University of the Witwatersrand, South Africa*

11:30–11:50 **The costs of sampling errors and bias to the mining industry**
R.C.A. Minnitt, *University of the Witwatersrand, South Africa*

11:50–12:10 **Effect of recycled bauxite grog addition on andalusite-containing refractory castables for tundish applications**
S.L. Msibi^{*†} and E. Matinde[†], **Scaw Metals Group, South Africa, †University of the Witwatersrand, South Africa*

12:10–12:30 **An evaluation index system for 'green' surface coal mining based on fuzzy theory**
Q. Cai, W. Zhou, X. Lu, F. Liu, and L. Li, *China University of Mining and Technology, China*

12:30–13:20 **Lunch**

Poster Presentations

13:20–13:25 **PESTLE and SWOT analysis of the potential for mining Zambia's low-grade copper ore deposits: the case of Kakosa South deposit**
S. Kangwa and V. Mutambo, *University of Zambia, Zambia*

13:25–13:30 **Use of the attainable region approach for the determination of the run-of-mine size distribution for optimal downstream processing**
F.K. Mulenga^{*} and A.M.M. Mwashiti[†], **University of South Africa, South Africa, †Kambove Concentrator, Democratic Republic of Congo*

13:30–13:35 **Coal as a strategic resource in South Africa**
P. Dikgwatlhe, *University of South Africa*

13:35–13:40 **Factors influencing operational effectiveness in the Zambian copper mining industry**
M.K. Banda^{*}, C. Sichinsambwe[†], and J.M. Tembo[‡], **School of Information and Communication Technology, †School of Business, and ‡The Copperbelt University, Kitwe, Zambia*

Session 2: Sustainable Development

Session Chair:

13:40–14:10 **Keynote Address 2:**
D. Naidoo, *Vedanta*

14:10–14:30 **Mining and metallurgical wastes: a review of recycling and re-use practices**
E. Matinde, G.S. Simate, and S. Ndlovu, *University of Witwatersrand, South Africa*

14:30–14:50 **Limits to artisanal and small-scale mining: evidence from the first kimberlite mines**
W.P. Nel, *University of South Africa, South Africa*

14:50–15:10 **Post-mining excellence: strategy and transfer**
J. Kretschmann, *TH Georg Agricola University, Germany*

15:10–15:30 **Afternoon Tea**

15:30–15:50 **Appropriate technologies for titanium extraction and processing for sustainable development of titanium-zirconium placers in red sand floor area of Binh Thuan, Vietnam**

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- N. Nguyen* and G. Nguyen[†]
 *Hanoi University of Mining and Geology and
[†]National Institute of Mining-Metallurgy
 Science and Technology, Hanoi, Vietnam
- 15:50–16:10 **The role of mining heritage in society engagement**
 D.J. Carvajal, *University of Huelva, Spain*
- 16:10–16:30 **Wrap up Discussion and Closure**
- 17:30 **Bus leaves for dinner venue**
- 18:30–21:00 **Conference Dinner**

Day 3: Tuesday, 13 March 2018

- 07:00–07:55 **Conference Registration and Tea/Coffee**
- 07:55–08:00 **Welcome and Safety Briefing**

Session 3: Innovation in Teaching & Learning

Session Chair:

- 08:00–08:30 **Keynote Address: The importance of teaching mineral reporting and valuation codes in mine planning and valuation discourses within a mining engineering curriculum**
 C. Musingwini, *University of the Witwatersrand, South Africa*
- 08:30–09:15 **Panel Discussion: Mining Education of the Future**
- 09:15–09:35 **Mine Design course at the University of the Witwatersrand**
 B. Genc and R. Mitra, *University of Witwatersrand, South Africa*
- 09:35–09:55 **A review of work-integrated learning in south african mining engineering universities**
 L.A. Maseko, *University of South Africa, South Africa*
- 09:55–10:15 **Enhancing sustainability of minerals engineering programmes through the development of a Minerals Resource Centre**
 H. Musiyarira, T. Hollenberg, and P. Shava, *Namibia University of Science Technology, Namibia*
- 10:15–10:45 **Coffee and Tea Break**

Session 4: Research & Development

Session Chair:

- 10:45–11:05 **Underground mine transportation and the mine of the future**
 S. Rupprecht, *University of Johannesburg, South Africa*
- 11:05–11:25 **A net smelter return model for a polymetallic deposit**
 P. Shava* and C. Musingwini[†], **Namibia University of Science and Technology, Namibia* and [†]*University of Witwatersrand, South Africa*
- 11:25–11:45 **Using mine planning case studies for empirical estimation of the maximum number of criteria and alternatives for multi-criteria decision-making**
 M.J. Mahase, C. Musingwini, and A.S. Nhleko, *University of the Witwatersrand,*

South Africa

- 11:45–12:05 **Digital transformation in mining**
 M. Woodhall and E. Strydom, *MineRP, South Africa*
- 12:05–12:25 **Optimizing the extractive capacity of the mining loading, and haulage fleet at Nchanga Open Pit mine, Zambia**
 G. Dembetembe* and V. Mutambo[†], **University of Zimbabwe, Zimbabwe*, [†]*University of Zambia, Zambia*
- 12:25–13:30 **Lunch**

Poster Presentations

- 13:30–13:35 **The influence of work pressure on worker attitudes towards health and safety in a platinum mining stope**
 P. Nelwamondo, M. Mpanza, and S. Rupprecht, *University of Johannesburg, South Africa*
- 13:35–13:40 **A safety and accident communication system for underground mines**
 B. Besa, S. Mulenga, and C. Mazimba, *University of Zambia, Zambia*
- 13:40–13:45 **Comparison of cut-off grade models in mine planning for improved value creation based on npv**
 J. Githiria, C. Musingwini, *University of the Witwatersrand, South Africa*
- 13:45–13:50 **Selection of Zambia's optimal copper mining excess profit tax**
 W. Banda, *University of Zambia, Zambia*
- 13:50–14:00 **Tax relief for mining companies: the cart before the horse**
 K. Thambi, *University of Witwatersrand, South Africa*

Session 5: Mining Schools/Programs

Session Chair:

- 14:00–14:15 **Presentation 1 (MEESA) - Prof Ronny Weber Youngman**
- 14:15–14:30 **Presentation 2 (Namibia) - Dr Harmony Musiyarira**
- 14:30–15:00 **Afternoon Tea**
- 15:00–15:15 **Presentation 3 (Zambia) - Dr Bunda Besa**
- 15:15–15:30 **Presentation 4 (Botswana) - Dr Raymond Suglo**
- 15:30–15:45 **Presentation 5 (MEA) - Prof Bruce Hebblewhite**
- 15:45–16:00 **Q & A Session**
- 16:00–16:10 **Wrap up session**
- 16:10–16:20 **Vote of Thanks**