

Final Programme—New technology and innovation in the Minerals Industry Colloquium

Thursday: 9 June 2016

07:00–08:00 **Registration and early morning refreshments**

08:00–08:05 **Safety Briefing**

08:05–08:10 **Welcome:** A.S. Macfarlane, *Conference Chair*

08:10–08:20 **Opening Address:** R.T. Jones, *President SAIMM*

SESSION 1A: STRATEGIES AND COMPETENCIES, D. Vogt

08:20–08:50 **Keynote Address:**
E. Ritchken, *Mining Phakisa Secretariat*

08:50–09:10 **Predictive asset optimization in the cognitive era**
G. Ralph, *IBM South Africa*

09:10–09:30 **Mechanization – what does it mean for the future miner?**
F. Fourie and P. Valicek, *Anglo American Platinum*

09:30–09:50 **Lifting the lid on underground mining operations**
A. Gardiner, *Minetec*

09:50–10:10 **DEMO SESSION: From data to the appropriate action**
G. Lane, D. Kok, K. Daya, R. Smith, and K. Ismail, *NXGN*

10:10–10:30 **Mid morning refreshments**

10:30–11:00 **Keynote Address: Innovation state of play in mining?**
A. Lane, *Deloitte*

11:00–11:20 **The role of technology in strategy and competitiveness**
G. Malherbe, *VCI Ltd*

11:20–11:40 **Modern mines : a collection of gadgets for a new mining system?**
A.S. Macfarlane, *Tomahee*

11:40–12:00 **Riding the perfect storm facing the mining sector**
N. Singh, *CSIR*

12:00–12:20 **Moving to next generation mining systems : A Chamber perspective**
A.S. Macfarlane, *Tomahee*

12:20–12:40 **Then, what next? Becoming excellent**
T.S. Hattingh, *University of the Witwatersrand*

12:40–13:10 **Lunch**

SESSION 2A: SAFETY, HEALTH AND PEOPLE, N. Singh

13:10–13:40 **Keynote Address: Innovation: State of Play – Engaging the industry to understand social, technological and strategic innovation in mining**
G. Stanway, *Partner VCI*

13:40–14:00 **Robotic miners required: apply within**
D. Naude, *DeBeers*

14:00–14:20 **Innovation in managing water usage in the stope environment**
S. Rupprecht, *University of Johannesburg*

14:20–14:40 **A mobile safety inspection platform for underground mining**
N. Govender, P. Bosscha, and H. Swart, *CSIR*

14:40–15:00 **Adopting manufacturing philosophies to improve operational stability**
F. Walraven, *3DS*

15:00–15:10 **Sponsorship Presentation - Cidra**

15:10–15:20 **Comfort break**

SESSION 3A: NEW MINING TECHNOLOGIES, F. Fourie

15:20–15:50 **Keynote Address**
R. Howes

15:50–16:10 **DEMO SESSION: Planning in the agile enterprise**
M. Woodhall, *MineRP*

16:10–16:30 **Unlocking value by reorganizing the operational value chain through modernization**
A.G. Fenn, *Sibanye Gold*

16:30–16:50 **Controlled foam injection: a new and innovative non-explosive rockbreaking technology to replace drilling and blasting in mining**
R. Pickering and C. Young, *Rod Pickering & Associates and CFI Technologies*

16:50–17:10 **Adapting oil and gas drilling techniques for the mining industry with dewatering well placement technology**
A. Rowland*, M. Bester†, M. Boland‡, C. Cintolesi#, and J. Dowling*,
*Schlumberger Water Services, †Kumba Iron Ore, ‡Schlumberger Water Services (UK), #Anglo American (Chile), *Schlumberger Water Services (USA)

17:10–17:30 **Fuel cellocomotive results in a production section**
P. Valicek, F. Fourie, and G. Lugg, *Anglo American*

17:30–17:35 **Day 1 Conference Close:** A.S. Macfarlane

17:35–19:30 **Networking Cocktail Function**

SESSION 1B METALLURGY, C. Bergman

08:50–09:10 **Upgrading ores at the ACACIA Bulyanhulu and Buzwagi mine sites using ore sorting technologies—case study**
N. Schoeman* and F. Shayo†, **Technical Advisor (Independent and †Buzwagi*

09:10–09:30 **New approaches to old problems can dramatically improve the viability of operations**
D.J. Robinson, R. Rajasingam, J. Wu, and P.D. Fawell, *CSIRO Mineral Resources, Australia*

09:30–09:50 **Virtual prototyping of the Minfurn carbon regeneration furnace**
Q.G. Reynolds, *Mintek*

09:50–10:10 **DEMO SESSION: From data to the appropriate action (Plenary 1)**
G. Lane, D. Kok, K. Daya, R. Smith, and K. Ismail, *NXGN*

10:10–10:30 **Mid afternoon refreshments**

10:30–11:00 **Keynote Address: Innovation state of play in mining? (Plenary 1)**
A. Lane, *Deloitte*

11:00–11:20 **auxi Lending a helping hand to improve metallurgical processes**
J.H. Zietsman and C. Kok, *Ex Mente (Pty) Ltd and University of Pretoria*

11:20–11:40 **Preliminary assessment of the comminution circuit of the Kambove, Democratic Republic of Congo**
F.K. Mulenga* and A.M.M. Mwashibi†, **University of South Africa and †Générale des Carrières et des Mines (Gécamines)*

11:40–12:00 **An innovative development in coarse particle flotation and the impact on flowsheet design in base and precious metal plants**
C. Naude, *Solo Resources*

12:00–12:20 **Design and structure optimization of a reconfigurable vibrating screen for the mining and mineral processing industries**
B. Ramatsetse*, R. Boitumelo*, O. Makinde*, K. Mpofu*, H. Campbell*, and †C. Engelbrecht, **Tshwane University of Technology and †Vipro Vibrating Products Pty Ltd*

12:40–13:10 **Lunch**

13:10–13:40 **Keynote Address: Innovation: State of Play—engaging the industry to understand social, technological and strategic innovation in mining (Plenary 2A)**
G. Stanway, P. Mahoney, and C. Griebel, *Partner VCI*

SESSION 2B RESILIENCE, E. Preis

13:40–14:00 **Keynote Address: Important considerations in building a resilient mining industry in Africa (Plenary 2A)**
L.R. Smart, *University of Pretoria*

14:00–14:20 **Instigation of a revitalized and sustainable socio-economic model for South Africa's mining communities**
H.D. Darwish* and E.P. Preis†, **North-West University and †University of Pretoria*

14:20–14:40 **Resilience development in the new generation of production mining employees**
A. Bukanga and P. Knottenbelt, and L. van Heusden, *University of Johannesburg and Norkem Park Primary School*

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Friday: 10 June 2016

07:00–08:00 **Registration and early morning refreshments**

08:00–08:05 **Emergency procedures**

08:05–08:10 **Welcome**

A.S. Macfarlane, *Conference Chairman*

SESSION 4: MINING, G. Lane

08:10–08:40 **Keynote: Innovation in narrow tabular hard rock mining – successes and challenges**

G.L. Smith, *Anglo Platinum*

08:40–09:00 **Coal recovery optimization in opencast pillar mining at Wolvekrans colliery, BMK pit**

L.P. Ngwenyama, W.W. de Graaf and E. Preis, *University of Pretoria*

09:00–09:20 **Applications and requirements for Underground Remote Piloted Aerial system**

J. Green, A. Marnewick, and J.H.C. Pretorius, *University of Johannesburg*

09:20–09:40 **Innovative approach for monitoring and inspection of deep mineshafts**

N. Benecke and M. Weber, *DMT GmbH & Co. KG*

09:40–09:50 **Sponsorship Presentation - Geobrugg**

09:50–10:10 **DEMO SESSION: IOT.Nxt,**

N. Steyn and J. Malherbe, *Axizworkgroup*

10:10–10:30 **Mid morning refreshments**

SESSION 5: MANAGEMENT INFORMATION SYSTEMS, G. Malherbe

10:30–11:00 **Keynote Address:**

P. Turner, *Sibanye Gold*

11:00–11:20 **Management operating performance system the future to mechanization**

S. Strydom, F. Fourie, P. Valicek, G. Krafft, and J. Sevenoaks, *Anglo Platinum*

11:20–11:40 **Visual information management, integrated across the mining value chain**

M. Woodhall and E. Strydom, *MineRP*

11:40–11:50 **Sponsorship Presentation - New Concept Mining**

11:50–12:40 **Lunch**

SESSION 6: DATA MANAGEMENT, L. Simpson

12:40–13:00 **How much is a rockpass scan worth?**

H. Grobler and J. Green, *University of Johannesburg*

13:00–13:20 **The digital mine — mining in the clouds**

L. Möller, *Hatch*

13:20–13:40 **Geotechnical logging using DMT's ultra-slim borehole scanner**

T. Gorka*, S. Peters*, and S. Naicker†, **DMT GmbH and Co.Kg* and †*DMT-Kai Batla Pty Ltd*

13:40–13:50 **Sponsorship Presentation - Minetec**

13:50–14:10 **DEMO SESSION: A complete solution for all your mining and processing requirements**

D. Denton, *Resolve Immix*

14:10–14:30 **Mid afternoon refreshments**

SESSION 7: SPECIFIC TECHNOLOGIES, M. Woodhall

14:30–14:40 **Sponsorship Presentation - AARD Mining Equipment**

14:40–15:00 **Future trends in shaft development**

D. Roos, *Herrenknecht AG*

15:00–15:20 **Mechanized installation of flexible high-tensile strength chain-link mesh for increased productivity and safety during tunnel rock reinforcement**

B. Schoevarts*, F. Germán†, and L. Roberto‡, **Geobrugg Southern Africa (Pty) Ltd*, †*Geobrugg Andina, SA (Chile)*, and ‡*Geobrugg AG (Switzerland)*

15:20–15:40 **A need for a material change in the South African mining industry**

S.M. Rupprecht, *University of Johannesburg*

15:40–16:00 **Conference Close**

A.S. Macfarlane