

Final Programme – Digitalization in Mining Conference 2018

Wednesday 6 June 2018

- 06:30–07:30 **Registration & early morning refreshments**
 07:30–07:35 **Safety Briefing and Emergency Proceeding**
 07:35–07:45 **Welcome Address**
 A.S. Macfarlane, *Conference Chair*
 07:45–08:00 **Opening Address**
 S. Ndlovu, *SAIMM President*

Session 1: Strategy

- 08:00–08:30 **Keynote Address**
 B. Gerrits, *Department of Science and Technology, South Africa*
 08:30–08:50 **Digital transformation in the South African minerals industry - challenge and opportunity**
 E. Brümmer and G.L. Smith, *Anglo American Platinum Limited, South Africa*
 08:50–09:10 **Industry x.0 - the digital reinvention of industry**
 W.V. Tucker, *Accenture, South Africa*
 09:10–09:30 **Value-driven digital transformation in mining**
 G. Huckle, *Partners in Performance, South Africa*
 09:30–09:50 **The socio-economic effects of mechanizing and/or modernizing hard rock mines in South Africa**
 H.S. Gumede, *Oceana Business Re-Engineering, South Africa*
 09:50–10:00 **Sponsor Presentation: SEDNA**
 10:00–10:20 **Mid - Morning Tea**
 10:20–10:40 **South African mining industrialization beyond 2050. Will a new Mining Charter ignite global trade or lead to local industrial complacency and eventual ruin?**
 M. Smeiman, *Max Smeiman and Associates, South Africa*
 10:40–11:00 **The digital mining value chain: mine planning to logistics execution. Reality or just another superhero story?**
 J. Roux¹ and M. Smeiman², ¹*Executive, MineRP Holdings and* ²*President, Max Smeiman and Associates, South Africa*
 11:00–11:20 **Towards digital transformation in mining**
 P. Putter, *MineRP, South Africa*
 11:20–11:40 **Defined digital strategies, or a 'sweet shop' of digital solutions**
 G. Lane and H. Sinko, *Vuuma Collaborations, South Africa*
 11:40–12:00 **Does the mining industry have an appreciation for the business risks associated with Cyber Security?**
 C. Retief and G. Lane, *MWR Infosecurity and Vuuma Collaborations, South Africa*
 12:00–12:10 **Sponsor Presentation: Kiyo Solutions**

Poster Demonstrations Session

- 12:10–12:15 **Digital explosives management**
 V. Dhooke, *Kiyo Solutions, South Africa*
 12:15–12:20 **Python-based machine learning tools for metallurgical data clustering**
 Q.G. Reynolds, M.W. Erwee, and P. Moodley, *Mintek, South Africa*
 12:20–12:25 **Digital sensors, smart software and Big Data: driving the future of environmental risk and safety in mining**
 H. Pienaar, *Adroit, South Africa*
 12:30–13:10 **Lunch**

Session 2: Data

- 13:10–13:30 **Emerging technological trends and importance of open innovation in changing the mining industry**
 G. Mishra, *Founder Mining Innovation Portal, South Africa*
 13:30–13:50 **Big, dark data – How to get value out of your industrial process data**
 M. Bauer, *University of Pretoria, South Africa*
 13:50–14:10 **Advanced process control in coal beneficiation**
 M.C. Olivier¹, P.W. Smit¹, and V. Classen², ¹*GE Digital Mine, Exxaro Resources, South Africa*
 14:10–14:30 **Mid - Afternoon Tea**
 14:30–14:50 **Interactive visualization of pyrometallurgical phase diagrams**
 M.W. Erwee and Q.G. Reynolds, *Mintek, South Africa*
 14:50–15:50 **Panel Discussion**
 15:50–16:00 **Day one closure – Conference chair**
 16:00–18:00 **Networking Cocktail**

Thursday 7 June 2018

- 07:00–08:00 **Registration & early morning refreshments**
 08:00–08:05 **Safety Briefing and Emergency Proceeding**
 08:05–08:15 **Welcome Address**
 A.S. Macfarlane, *Conference Chair*

Session 3: Decision

- 08:15–08:35 **Keynote Address**
 A. Lane, *Deloitte, South Africa*
 08:35–09:15 **Combining profit maximization with advanced analytics and digital capabilities to make mineral processing plants cost-competitive**
 G. Nel and A. Rajagopaul, *McKinsey & Company, South Africa*
 09:15–09:35 **An integrated capacity utilization through appropriate combination of constraints analysis, integrated planning process (IPP), and management practice**
 G. Hlatshwayo, *Proudfoot, South Africa*
 09:35–09:55 **Advanced analytics and simulation modelling - using algorithms and artificial intelligence to process data**
 A. Kazerouni, *Rhodes University, South Africa*
 09:55–10:15 **The real value of predictive maintenance**
 N. McCoy, *Sandvik, South Africa*
 10:15–10:25 **Sponsor Presentation: MineRP Holdings**
 10:25–10:45 **Mid-Morning Refreshment**
 10:45–11:05 **Rethinking minerals processing with digital techniques**
 J. Puroranta, *Metso Minerals, Finland*
 11:05–11:25 **Lifting the lid on underground mining: High-precision tracking in underground mining**
 G. Wilmot, *Minetec, Australia*
 11:205–11:45 **Tools for use in a digitalized mine**
 R.E. Tessendorf¹, T.P. Phahlane¹, C. Walters-Gerout¹, and W.A.S. Fourie², ¹*Komatsu Mining Corporation, South Africa*, ²*Komatsu Mining Corporation, USA*
 11:45–12:05 **Rock recognition technology and its potential for optimizing mining and metallurgical processes**
 P.S. Piper¹, N.E. Rankhododo¹, K. Bro², and P. Martensson², ¹*Groundwork Consulting, South Africa* and ²*Rockma Systems, Sweden*
 12:05–12:25 **Development of a digitalization platform to combine process insights with actionable outcomes**
 B.S. Lindner, R.P. Brown, A.L. Haasbroek, and S.J. Streicher, *Stone Three Mining, South Africa*

Poster Demonstrations Session

- 12:25–12:30 **Decision analytics in mining safety through digitization**
 M. Brodner, *Simplus Innovation, South Africa*
 12:30–12:35 **Intelligent Mining™: Leveraging ecosystems, edge analytics, and 4th Industrial technologies to deliver real value**
 E. Croeser¹, J.-A. du Plessis², and R. Jacobs², ¹*IoT.nxt and* ²*Deloitte Consulting, South Africa*
 12:35–12:40 **From core logging to washability using artificial intelligence**
 M.I. Dorland and H.C. Dorland, *Virtual Geomet (Pty) Ltd, South Africa*
 12:40–13:20 **Lunch**

Session 4: Technology

- 13:20–14:00 **Workshop on 'Digitalization' – What Next? – The stakeholder view**
 C. Holtzhausen and T. Moodley, *Hatch, South Africa*
 14:00–14:20 **Using the Internet of Things and Industry 4.0 concepts to improve end-to-end mineral processing in mining**
 A.L. Haasbroek¹, J. Roux², R.P. Brown¹, and A. Loubser², ¹*Stone Three Mining Solutions, South Africa*

Poster Demonstrations Session

- 14:20–14:25 **Digitalization technologies mine of tomorrow**
 TBC, *Anglo American, PLC South Africa*
 14:25–14:30 **Mine of Tomorrow – Digital Enablement**
 H. van Rooyen, N. Roberts, and F. de Bruyn, *Anglo American, PLC South Africa*
 14:30–14:50 **Afternoon Refreshment**
 14:50–15:10 **The digital revolution and IoT – but has the mining industry already been doing industrial IoT**
 C. van Wyk, *OSISoft, South Africa*
 15:10–15:30 **A mine twin was born - augmented reality**
 F.J. Grobler and B.H. Forbes, *Graphic Engineering Solutions & Services Pty Ltd, South Africa*
 15:30–15:50 **Kumba's technology Journey to modernization of operations**
 B. Ntsoelengoe, *South Africa*
 15:50–16:00 **Conference Closure – Conference chair**