Preliminary 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 Adress** 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. Gerryts, *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. Roux[1] and M. Smeiman[2], [1]*Executive, MineRP Holdings* and [2]*President, Max Smeiman and Associates, South Africa*
11:00–11:20	**Towards digital transformation in mining** P. Putte, *MineRP, South Africa*r
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. Viljoen and G. Lane, *Collaborations, South Africa*
12:00–12:10	**Sponsor Presentation:** *Kiyo Solutions*

Poster Demonstrations Session

12:10–12:15	**Digital explosives management** V. Dhookie, *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. Olivier[1], P.W. Smit[1], and V. Classen[2], [1]*GE Digital Mine,* [2]*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	
08:35–08:55	**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*
08:55–09:15	**An integrated capacity utilization through appropriate combination of constraints analysis, integrated planning process (IPP), and management practice** G. Hlatshwayo, *Proudfoot, South Africa*
09:15–09:35	**Advanced analytics and simulation modelling - using algorithms and artificial intelligence to process data** A. Kazerouni, *Rhodes University, South Africa*
09:35–09:55	**The real value of predictive maintenance** N. McCoy, *Sandvik, South Africa*
09:55–10:15	**Mid-Morning Refreshment**
10:15–10:35	**Rethinking minerals processing with digital techniques** J. Puroranta, *Metso Minerals, Finland*
10:35–10:55	**Lifting the lid on underground mining: High-precision tracking in underground mining** G. Wilmot, *Minetec, Australia*
10:55–11:15	**Tools for use in a digitalized mine** R.E. Tessendorf[1], T.P. Phahlane[1], C. Walters-Gerout[1], and W.A.S. Fourie[2], [1]*Komatsu Mining Corporation, South Africa,* [2]*Komatsu Mining Corporation, USA*
11:15–12:05	**Workshop on `Digitalisation'– What Next? – The stakeholder view**

Poster Demonstrations Session

12:05–12:10	**Decision Analytics in mining safety through digitization** M Brodner, *Simplus Innovation, South Africa*
12:10–12:15	**Intelligent Mining™: Leveraging ecosystems, edge analytics, and 4th Industrial technologies to deliver real value** E. Croeser[1], J-A. du Plessis[2], and R. Jacobs[2], [1]*IoT.nxt* and [2]*Deloitte Consulting, South Africa*
12:15–12:20	**Real-time digital logbooks and business intelligence for mines** C. Viljoen, *MMM Technologies, South Africa*
12:20–12:25	**From core logging to washability using artificial intelligence** M.I. Dorland and H.C. Dorland, *Virtual Geomet (Pty) Ltd, South Africa*
12:30–13:10	**Lunch**

Session 4: Technology

13:10–13:30	**Rock recognition technology and its potential for optimizing mining and metallurgical processes** P.S. Piper[1], N.E. Rankhododo[1], K. Bro[2], and P. Martensson[2], [1]*Groundwork Consulting, South Africa* and [2]*Rockma Systems, Sweden*
13:30–13:50	**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*
13:50–14:10	**Using the Internet of Things and Industry 4.0 concepts to improve end-to-end mineral processing in mining** A.L. Haasbroek[1], J. Roux[2], R.P. Brown[1], and A. Loubser[2], [1]*Stone Three Mining Solutions,* [2]*MineRP, South Africa*

Poster Demonstrations Session

14:10–14:15	**Digitalization technologies mine of tomorrow** TBC, *Anglo American Platinum Limited, South Africa*
14:15–14:20	**Surface and underground IT infrastructure challenges** TBC, *Anglo American Platinum Limited, South Africa*
14:20–14:40	**Afternoon Refreshment**
14:40–15:00	**The digital revolution and IoT – but has the mining industry already been doing industrial IoT** C. van Wyk, *OSISoft, South Africa*
15:00–15:20	**A mine twin was born - augmented reality** F.J. Grobler and B.H. *Forbes, Graphic Engineering Solutions & Services Pty Ltd, South Africa*
15:20-15:40	**Kumba's technology Journey to modernization of operations** B. Ntsoelengoe, *South Africa*
15:40–15:50	**Conference Closure – Conference chair**