

Abstracts received – Digitalization in Mining Conference 2018

The 4th industrial revolution of underground geological mapping

M. Mpanza, *University of Johannesburg*

Advanced analytics and simulation modelling-Using algorithms and artificial intelligence to process data

A. Kazerouni, *Rhodes University*

Rethinking minerals processing with digital

M. Trimech, *Metso FZE*

Interactive visualization of pyrometallurgy phase diagrams

M.W. Erwee and Q.G. Reynolds, *Mintek*

The socio-economic effects of mechanizing and/or modernizing hard rock mines in South Africa

H.S. Gumede, *Ocean Business Process Re-engineering*

Analytics in mining safety through digitization

M. Brodner, *Simplus Innovation*

Python-based machine learning tools for metallurgical data clustering

Q.G. Reynolds, M.W. Erwee, and P. Moodley, *Mintek*

Using Emerging 3D Technology to make mines safer

G. Ockhuizen, *GadgetBoy 3D Solutions*

Digital sensors, smart software and big data driving the future of environmental risk and safety in mining

H. Pienaar, *Adroit*

Intelligent Mining™: Leveraging eco-systems, edge analytics and 4th industrial technologies to deliver real value

E. Croeser, J.A. du Plessis, and R. Jacobs, *IoT.next*

IoT disrupting fleet management systems thinking

L. Möller and H. Becker, *Krypton Mining*

On the slope of enlightenment – Virtual reality success stories in mining

E.A. van Wyk¹ and M.W. Prinsloo², ¹*Tshwane University of Technology* and ²*STS3D*

Real time digital logbooks and business intelligence for mines

C. Viljoen, *MMM Technologies*

Digital operation management system: the first step towards digital transformation

K. van Nes, *Hatch Digital*

The role of web-based applications in mine water management

X. Adams, *SRK*

Digital twins – tools for realtime control and optimization and prescriptive maintenance

K. Brooks, R. Dreyer, F. Pieterse, and M. Westcott, *BuESp, 4 Sight Holdings*

An integrated approach to operating and improving metallurgical processes

J.H. Zietsman, *Ex-mente*

From core logging to washability using artificial intelligence

M.I. Dorland and H.C. Dorland, *Virtual Geomet (Pty) Ltd*

Digital explosives management

V. Dhokie, *Kiyo Solutions*

Lifting the lid on underground mining operations

A. Gardiner, *Minetec Pty Ltd*

Aligning corporate strategy with mine digitization

K. Ampofo, *University of Queensland*

Emerging technological trends and importance of open innovation in disrupting Mining Industry

G. Mishra, *Transrupt*

Value driven digital transformation in mining

G. Huckle, *Partners in Performance*

Towards Digital Transformation in Mining

P. Putter, *MineRP*

South African Mining Industrialization: Vision 2050 What are the prerequisites of the Fourth Industrial Revolution?

M. Smeiman, *Msanda*

The real value of predictive maintenance

K. Naidu, *Sandvik*

Remote vs Virtual monitoring for underground mine ventilation

M.P. Matlhwana, *University of the Witwatersrand*

How a value maximisation approach combined with advance analytics and digital in the plant can make South African mining cost competitive again

G. Nel and A. Rajagopaul, *McKinsey & Company*

Cost effective digital implementation at South African Mines: Our experiences

E.K. Leeka, T.C. van Schalkwyk, and M. Magro, *Anglo American*

Development of a digitalization platform to combine process insights with actionable outcomes

R.P. Brown, A.L. Haasbroek, and S.J. Streicher, *Stone Three Mining*

New drilling technology for providing real-time rock--recognition and its potential for optimizing mining and metallurgical processes

P. Piper, E. Rankhododo, K. Bro, and P. Martensson, *Groundwork Consulting Rockma*

Practically road mapping the technology and digital transformation in mining

C. Holtzhausen and T. Moodley, *Operational Performance and Business Improvement Hatch Digital*

Digitalization – What Next? – The stakeholder view

C. Holtzhausen and T. Moodley, *Operational Performance and Business Improvement Hatch Digital*

Using Internet-of-Things and Industry 4.0 concepts to improve end to end mineral processing in Mining

A. Haasbroek, R. Brown, J. Roux, and A. Loubser, *StoneThree, MineRP*

An integrated capacity utilization through appropriate combination of constraints analysis, Integrated Planning Process (IPP) and Management Practices

G. Hlatshwayo, *Proudfoot*

The Digital Mining Value Chain: Mine Planning to Logistics Execution Reality or just another Super Hero story?

M. Smeiman, Msanda, and J. Roux, *MineRP*

Industry X.0 - The digital reinvention of industry

W.V. Tucker, *Accenture*

Tools for use in a digitalized mine

R.E. Tessendorf, T.P. Phahlane, and W.A.S. Fourie, *Komatsu Mining Corp. Group*

Dark data? The use of sensor data in process monitoring and control

M. Bauer, *University of Witwatersrand*

Advanced Process Control in coal beneficiation

V. Classen, *Exxaro*

Kumba's technology journey to modernization of operations

B. Ntsoelengoe, *Anglo American*

A mine twin was born - Augmented reality

F.J. Grobler and B.H. Forbes, *Graphic engineering solutions and services Pty Ltd*

Digital Revolution and IoT – but has the Mining Industry already been doing Industrial IoT

C. van Wyk, *OSISoft*

Does the Mining Industry have an appreciation for the business risks associated with Cyber Security?

C. Viljoen and G. Lane, *Vuuma*

Defined Digital Strategies or a 'sweet shop' of digital solutions.

I.G. Lane and H. Sinko, *Vuuma*