Sunday March 19th

16.30-18.00 Registration and wine reception, with hot and cold canapés (accompanying guests welcome)

Monday March 20th

07.30 Registration desk opens. Light breakfast of filled croissants, tea, coffee and fruit juice

08.50 Opening Remarks
B.A. Wills (MEI, UK)

09.00 Technical Session 1
Chairmen: G. Yorath (University of Cape Town, South Africa) and E.-P. Heikkinen (University of Oulu, Finland)

09.00 Keynote Lecture: Process mineralogy: an essential booster of the circular economy
E. Pirard (University of Liege, Belgium)

09.40 The business value of best practice process mineralogy
N.O. Lotter (Flowsheets Metallurgical Consulting Inc., Canada), W. Baum (Ore & Plant Mineralogy LLC, USA), S. Reeves (Starkey & Associates Inc., Canada), C. Arrue (Rio Tinto Ltd, Chile) and D.J. Bradshaw (University of Cape Town, South Africa)

10.00 Process mineralogy: the key to unlocking the provision of minerals and metals to a sustainable world
M. Becker, J.L. Broadhurst and D. Bradshaw (University of Cape Town, South Africa)

10.20 Coffee, poster and exhibition viewing

11.20 Sampling – a key tool in modern process mineralogy
N.O. Lotter (Flowsheets Metallurgical Consulting Inc., Canada and C.L. Evans (University of Queensland, Australia)

11.40 Evaluation of sampling systems in iron ore concentrating and pelletizing processes - quantification of total sampling error (TSE) vs. apparent process variation
K. Engström and K.H. Esbensen (LKAB, Sweden)

12.00 On-line monitoring of spodumene flotation with novel time-resolved Raman Spectroscopy
P. Tanskanen (University of Oulu, Finland), P. Lamberg, O. Sirén (Keliber Ltd, Finland), J. Takalo and L. Kurki (Timegate Instruments Ltd., Finland)

12.20 Microanalytical techniques for characterising critical metal deportment in mine materials
N. Fox, A. Parbhakar-Fox (University of Tasmania, Australia) and A. Somers (Sci Aps Inc., USA)

12.40 Lunch

14.00 Technical Session 2
Chairmen: D. Chetty (Mintek, South Africa) and J.D. Miller (University of Utah, USA)

14.00 Advancements in automated mineralogy incorporating Micro-XRF technology
A. Menzies, M. Barazza (Universidad Católica del Norte, Chile), S. Scheller, R. Tagle (Bruker Nano GmbH, Germany), G. Gloy (Bruker Pty Ltd, Australia)
14.20 Micro-XRF: a new automated mineralogical analysis paradigm  
I. Tonžetić (Sci-Ba Laboratories, South Africa)

14.40 New tools for process monitoring – PLSR on XRD data  
U. König (PANalytical B.V., The Netherlands)

15.00 Applications of advanced analytical and mass spectrometry techniques to the characterisation of micaceous lithium bearing ores  
M.G. Aylmore, K. Merigot, Z. Quadir, W. Rickard, D. Saxey, D. Fougerouse, S. Reddy, N. Evans, B. McDonald, B.I.A. McInnes (Curtin University, Australia), E. Catovic and P. Spitalny (Lithium Australia, Australia)

15.20 Environmental impact of mine exploitation: An early predictive methodology based on ore mineralogy and contaminant speciation  
A. Chopard, M. Benzaazoua, H. Bouzahzah (UQAT, Canada), B. Plante and P. Marion (Université de Lorraine, France)

15.40 Improved mine-waste characterisation through blended testwork  
A. Parbhakar-Fox, N. Fox (University of Tasmania, Australia), R. Hill, T. Ferguson and B. Maynard (Grange Resources, Australia)

16.00 Happy Hour, Vineyard Gardens  
Accompanying guests welcome

Tuesday March 21st

08.20 Registration desk opens. Light breakfast of filled croissants, tea, coffee and fruit juice

09.00 Technical Session 3  
Chairmen: M. Aylmore (Curtin University, Australia) and K. Tungpalan (University of the Philippines, Philippines)

09.00 Keynote Lecture: Reflections on the benefits and tasks ahead for geometallurgy – from metallurgist to junior miner at Pasinex Resources  
S. Williams (Pasinex Resources Ltd, Canada)

09.40 Mineralogical domains by XRD multivariate statistical analysis and SEM image analysis of the nickel sulfide deposit, Fazenda Sta. Rita, Brazil  
R. Contessotto, J.L. Antoniassi and H. Kahn (University of Sao Paulo, Brazil)

10.00 Process mineralogical preliminary approach for geometallurgical concept implementation in a Norwegian industrial mineral case-study  
C.A. Mena Silva and K. Aasly (Norwegian University of Science and Technology, Norway)

10.20 Coffee

11.00 Automated mineralogy applied to exotic Cu deposits in northern Chile  
A. Menzies, M. Barazza (Universidad Católica del Norte, Chile), S. Scheller, R. Tagle (Bruker Nano GmbH, Germany) and G. Gloy (Bruker Pty Ltd, Australia)

11.20 Importance of mineralogy in copper selective flotation at Chelopech concentrator  
D. Naumov, H. Bouzahzah, S. Gaydardzhiev (University of Liege, Belgium) and L. Stamenov (Dundee Precious Metals, Bulgaria)

11.40 Influence of mineralogy on spiral performance of tungsten ore  
Y. Ghorbani, P. Hegarty, R. Fitzpatrick, G. Rollinson (Camborne School of Mines, UK) and P. Hingston (Wolf Minerals Ltd, UK)

12.00 Mineral characterization as a tool in the implementation of geometallurgy into industrial mineral mining  
A.M. Lang, K. Aasly and S.L. Ellefmo (Norwegian University of Science and Technology, Norway)

12.20 Valuation of uncertainty in geometallurgical process optimisation  
K.G. van den Boogaart and R.T. Delgado (Helmholtz Institute Freiberg for Resource Technology, Germany)

12.40 Lunch

14.00 Technical Session 4  
Chairman: H.J. Glass (Camborne School of Mines, UK)

14.00 Modelling of combined processing parameters for tailing material based on Mineral Liberation Analysis (MLA) data  
P. Büttner, I. Osbahr, R. Zimmermann, G. Unger, L. Satge, J. Gutzmer (Helmholtz Institute Freiberg for Resource Technology, Germany) and T. Leißner (TU Bergakademie Freiberg, Germany)
14.20 Applied mineralogy at Kansanshi mine - proof of the concept of on-site routine process mineralogy for continuous improvement of plant operations
M. Kalichini, E.M. Paul, A. Prinsloo (First Quantum Minerals, Zambia) and W.R. Goodall (MinAssist Pty Ltd, Australia)

14.40 High speed automated mineralogy
M. Hiscock (Oxford Instruments NanoAnalysis, UK)

15.00 Towards the development of an integrated modelling framework using mineralogy
S. Ntlhabane, M. Becker, E. Charikinya, R. Schouwstra and D. Bradshaw (University of Cape Town, South Africa)

15.20 Optimising automated mineralogy for operational mine site applications
J. Strongman (iMin Solutions Ltd, UK), C. Brough, J. Fletcher, R. Garside (Petrolab Ltd, UK), A. Prinsloo (FQML Kansanshi Mining plc, Zambia) and B. Tordoff (Zeiss Natural Resources Lab, UK)

15.40 Coffee

17.30 Coaches leave for conference dinner at Lagoon Beach Hotel

Wednesday March 22nd

08.00 Registration desk opens. Light breakfast of filled croissants, tea, coffee and fruit juice

09.00 Technical Session 5
Chairmen: H. Kahn (University of Sao Paulo, Brazil) and K. Aasly (Norwegian University of Science and Technology, Norway)

09.00 Keynote Lecture: X-Ray Tomography for mineral processing technology–particle characterization from mine to mill
J.D. Miller (University of Utah, USA)

09.40 X-ray Computed Tomography: challenges in iron ore analysis for process mineralogy
L. Bam, J.A. Miller (Stellenbosch University, South Africa), I. Basson (Tect Geological Consulting, South Africa) and M. Becker (University of Cape Town, South Africa)

10.00 2D-3D liberation comparisons in HCT testwork for the Hannukainen IOCG deposit, Finland
C. Brough, J. Strongman, J. Fletcher (Petrolab Ltd, UK), S. Graham (Zeiss Natural Resources Lab, UK), A. Barnes (Geochemic Ltd, UK), R. Bowell, R. Warrender (SRK Consulting, UK) and L. Ward (University of Leicester, UK)

10.20 Coffee

11.00 The role of vein-type mineralisation in mineral liberation
K. Tungpalan (University of the Philippines, Philippines), E. Wightman and E. Manlapig (JKMRC, Australia)

11.20 Automated classification of drill cores textures for geometallurgy
P.-H. Koch, C. Lund, V. Lishchuk, P. Lamberg and J. Rosenkranz (Luleå University of Technology, Sweden)

11.40 An overview of the modelling liberation of scheelite and the determination of the parameters function equation

12.00 Mineralogical study to determine agglomeration free heat treatment conditions for spodumene concentrate
O. Peltosaari, S. Strand, P. Tanskanen, E.-P. Heikkinen (University of Oulu, Finland), O. Sirén and P. Lamberg (Keliber Ltd, Finland)

12.20 The effect of phyllosilicates in the processing of Great Dyke PGE ores
T. Dzingai, M. Becker, B. McFadzean (University of Cape Town, South Africa) and M. Tadie (University of Stellenbosch, South Africa)

12.40 Lunch

14.00 Technical Session 6
Chairman: M. Becker (University of Cape Town, South Africa)

14.00 Grade and product quality control by micro-CT scanning of the Namakwa Sands Ti-Zr placer deposit West Coast, South Africa: an orientation study
A. Rozendaal, S.G. Le Roux, A. du Plessis (University of Stellenbosch, South Africa) and C. Philander (Tronox Namakwa Sands, South Africa)

14.20 Calculating the deportment of a fine-grained and compositionally complex Sn skarn with a modified approach for automated mineralogy
M. Kern, R. Möckel, J. Krause, J. Teichmann and J. Gutzmer (Helmholtz Institute Freiberg for Resource Technology, Germany)
Mineralogical and geochemical study of REE from a carbonatite deposit
M. Edahbi, B. Plante, M. Benzaazoua (UQAT, Canada) and M. Pelletier (Ressources Géoméga, Canada)

Mineralogical studies in developing a novel approach for the extraction of rare earth elements from ferruginised rare earth element ores
D. Chetty, W. Clark, K. Bisaka and I. Thobadi (Mintek, South Africa)

Conference summary
M. Becker (University of Cape Town, South Africa)

Invitation to Process Mineralogy ‘18
A.J. Wills (MEI, UK)

Farewell reception, Vineyard Gardens
Accompanying guests welcome

Posters

Characterisation of rare earth elements in ion adsorption clays
C. Burcher-Jones, R. Ram, J. Petersen and M. Becker (University of Cape Town, South Africa)

Optical and electrical properties of alexandrite (BeAl₂O₄:Cr³⁺) mineral
N.M. Trindade (São Paulo Federal Institute, University of São Paulo, Brazil), A.R. Blak, E.M. Yoshimura (University of São Paulo, Brazil), L.V.A. Scalvi and R.M.F. Scalvi (São Paulo State University, Brazil)

Developing a particle-based process model for a dry magnetic separator
E. Charikinya, J. Robertson, A. Platts, M. Becker, D. Bradshaw (University of Cape Town, South Africa) and P. Lamberg (Luleå Technical University, Sweden)

An approach to mineral processing by liberation modelling of tantalum ore

Mineralogy and texture of the Storforshei iron formation, and their effect on mineral liberation and particle size distribution of the ground product
M.K. Tøgersen, R.A. Kleiv and K. Aasly (Norwegian University of Science and Technology, Norway)

Industrial gamma-activation assay system for gold ore analysis
A.D. Sokolov, V.V. Gostilo, V.L. Titov (Baltic Scientific Instruments, Latvia) and Y.N. Burmistenko (Applied Physics Instruments, Finland)

Prediction of contaminant leaching from a REE silicated deposit
M. Edahbi, B. Plante, M. Benzaazoua (UQAT, Canada) and S. Doire (Matamec Explorations Inc., Canada)

Mineralogical control on the leaching properties of cobalt oxides from DR Congo
L. Santoro, E. Pirard (Université de Liège, Belgium), S.T. Yav and A. Kanik (University of Lubumbashi, DR Congo)

Application of micro-CT scanning in the recovery of endo-skarn associated scheelite from the Riviera Deposit, South Africa
A. Rozendaal, S.G. Le Roux and A. du Plessis (University of Stellenbosch, South Africa)

Characterisation of a low-grade nickel-bearing ore separated in the Falcon Concentrator
C.K. Thubakglale, N.E. Jeli, P. Mendonidis (Vaal University of Technology, South Africa) and R.K.K. Mbaya (Tshwane University of Technology, South Africa)

Distribution of REE minerals in fluorite flotation at the Vergenoeg Mine, South Africa
F.E. Minz, M. Kern, S. Birtel, J. Krause (Helmholtz Institute Freiberg for Resource Technology, Germany) T.W. Höfig and J. Gutzmer (Technical University Bergakademie Freiberg, Germany)

Mineralogical distribution of base metal sulfides in processing products generated from black shale-hosted Kupferschiefer-type ore
A. Kamradt, S. Walther (Martin Luther University, Germany), J. Schaefer (UVR-FIA GmbH, Germany), S. Hedrich and A. Schippers (Federal Institute for Geosciences and Natural Resources, Germany)