

**MINERAL PROCESSING 2008  
PROVISIONAL PROGRAMME**

**THURSDAY 7 AUGUST**

**PLENARY PRESENTATION 1**

<b>08:30 - 09:15</b>	<b>PL01</b>	Why be sustainable if the world is about to end?	<i>Chris Moran: SMI, University of Queensland, Australia</i>
<b>SESSION 1A GENERAL</b>			
<b>09:20</b>	<b>OR01</b>	The role of Process Mineralogy in Mineral Processing - with a focus on Flotation	<i>D Bradshaw: University of Cape Town</i>
<b>09:40</b>	<b>OR02</b>	New methods for measuring and modelling froths	<i>JJ Cilliers, K Waters, G Morris: Imperial College, London, UK</i>
<b>10:00</b>	<b>OR03</b>	Energy in mining	<i>M Powell: JKMRC, University of Queensland, Australia</i>
<b>10:20</b>	<b>TEA</b>		
<b>SESSION 2A GEOLOGY &amp; MINERALOGY</b>			
<b>10:50</b>	<b>OR04</b>	A summary of hydrogeological and chemical work conducted at the Navachab Gold Mine, central Namibia in the period 200 - 2005	<i>NM Steven: Rockwater Consulting, Namibia; FP Badenhorst: AngloGold Ashanti Namibia Pty Ltd</i>
<b>11:10</b>	<b>OR05</b>	An integrated approach to mineral sulphide tailings management and AMD mitigation	<i>A Hesketh, JL Broadhurst, STL Harrison : University of Cape Town</i>
<b>11:30</b>	<b>OR06</b>	Geometallurgical characterisation of the Merensky Reef at Northam Platinum Mine: comparison of normal, pothole and transitional reef types	<i>M Becker et al : University of Cape Town</i>
<b>11:50</b>	<b>OR07</b>	A Radiogenic and stable isotope study at the Mufulira Copper Mine, Zambia	<i>NM Steven et al: Rockwater Consulting, Namibia</i>
<b>SESSION 2B BIOPROCESSING</b>			
<b>10:50</b>	<b>OR08</b>	Microorganism strain management for use in the removal of cobalt and copper from hydrometallurgical process solutions	<i>ND Dlamini, A. F. Mulaba – Bafubiandi: University of Johannesburg</i>
<b>11:10</b>	<b>OR09</b>	Operating considerations for lactate-fed sulphidogenic reactors for use in treatment of acid mine drainage	<i>O Oyekola, STL Harrison, R van Hille : University of Cape Town</i>
<b>11:30</b>	<b>OR10</b>	Visualisation of microbial attachment to sulphide minerals in a bioleach environment: the novel biofilm reactor	<i>C-J Africa, STL Harrison, R van Hille: University of Cape Town</i>
<b>11:50</b>	<b>OR11</b>	Kinetics of dissolution of Galena from a Sulphide concentrates by a chloride process	<i>T Mukongo et al: Columbus Stainless</i>

SHORT PRESENTATIONS				SHORT PRESENTATIONS			
12:10	SP01	Measuring velocity profiles in diaphragm valves	<i>V Fester, M Chhiba: Cape Peninsula University of</i>	12:10	SP08	Identification of process fault conditions with random forest model	<i>C Aldrich, JJ Burchell, L Auret: University of Stellenbosch</i>
12:17	SP02	Kinetic aspects of multi-component systems operated under eutectic freeze crystallisation conditions	<i>DG Randall, AE Lewis, J Nathoo : University of Cape Town</i>	12:17	SP09	An application of eco-efficiency to process design in minerals processing: a case study approach	<i>M Guma, H von Blottnitz, J Broadhurst : University of Cape Town</i>
12:24	SP03	The estimation of the continuous selection error using variography based on different sampling strategies for the critical-to-metal accounting elements at a high carbon ferrochromium smelter	<i>E Thyse: University of Stellenbosch; JJ Eksteen: Lonmin Plc</i>	12:24	SP10	Online tracking of operational fault conditions in hydrocyclones by use of machine vision	<i>C Aldrich, A Louw, MJ Leeuwner: University of Stellenbosch</i>
12:31	SP04	Precipitation of selenium from acidic copper sulphate solution using sodium sulphite	<i>M Mangere, J. Nathoo, A. E. Lewis: University of Cape Town</i>	12:31	SP11	Dry beneficiation of coal using an air-fluidised bed of magnetite	<i>S Kretzschmar, J Pocock, BK Loveday: University of KwaZulu-Natal</i>
12:38	SP05	Applicability of using EFC to treat Hydrometallurgical Brines	<i>L Zibi, AE Lewis, J Nathoo : University of Cape Town</i>	12:38	SP12	<i>Escherichia coli</i> and <i>Pseudomonas</i> strains absorbing nickel from low sulphur Ni bearing solutions	<i>E Fosso-Kankeu, AF Mulaba-Bafubiandi, B Mamba: University of Johannesburg</i>
12:45	SP06	Water Minimisation at Skorpioon Zinc – A Systemic Approach to Process Optimisation	<i>H Bhika, AE Lewis, J Nathoo: University of Cape Town</i>	12:45	SP13	Computational fluid dynamic modelling of two phase flow in a hydrocyclone	<i>MJ Leeuwner: University of Stellenbosch</i>
12:52	SP07	Removal of aluminum silicate scaling species from a gas liquor stream using alumina	<i>N Mbedzi, J Nathoo, AE Lewis: University of Cape Town</i>	12:52	SP14	Optimization of conventional flotation performance using response surface methodology	<i>M Kor, SZ Shafaei, F Sereshki: Shahrood University of Technology, Iran</i>
13:00	LUNCH			13:00	LUNCH		
<b>SESSION 3A COMMINUTION</b>				<b>SESSION 3B PYROMETALLURGY &amp; METAL ACCOUNTING</b>			
14:00	OR12	Investigating the effect of recycling load on the performance of HPGR circuit	<i>H Benzar, N Aydogan: Hacettepe University, Turkey</i>	14:00	OR17	Control of electrode immersion in the Lonmin no. 1 circular smelting furnace through furnace feed manipulation	<i>G Georgalli: University of Stellenbosch; JJ Eksteen: Lonmin Plc</i>
14:20	OR13	Effect of HPGR on energy consumption, mineral liberation and particle size distribution of platinum ores	<i>N Solomon, M Becker, J Petersen, A Mainza : University of Cape Town</i>	14:20	OR18	Sorption studies of South African coals	<i>R Cox, JH Knoetze : University of Stellenbosch; JJ Eksteen: Lonmin Plc</i>
14:40	OR14	Studies on mill pulp lifter chamber, grate discharge and their effects on discharge flowrate and flow-back	<i>P Condoni, A Mainza: University of Cape Town; M Powell : JKMR, Australia</i>	14:40	OR19	CFD modelling of molten matte and slag flows in a circular 3-phase smelting furnace	<i>JJ Bezuidenhout, SM Bradshaw: University of Stellenbosch; JJ Eksteen: Lonmin Plc</i>
15:00	OR15	Study of the efficiency of mineral department in the three-product cyclone	<i>A Mainza: University of Cape Town; M Powell: JKMR, Australia</i>	15:00	OR20	Development and initial application of a combined volume of fluid and discrete phase modelling approach to gas stirred ladles	<i>S Cloete, SM Bradshaw: University of Stellenbosch; JJ Eksteen: Lonmin plc</i>
15:20	OR16	Investigation of liner wear effect on semiautogenous mill operational parameters	<i>M Karamoozian, Z Shafaei, R Kakaie: University of Technology - Shahrood-Tehran, Iran</i>	15:20	OR21	Development of a heuristic methodology for designing measurement networks for metallurgical accounting	<i>P Bepswa, DA Deglon : University of Cape Town</i>
<b>SHORT PRESENTATIONS</b>							
15:40	SP15	Development of an oxidation index to predict floatability in a sulphide ore	<i>O Bıcak, Z Ekmekci: Hacettepe University, Turkey</i>				
15:47	SP16	Multi component breakage modelling of a ball milling circuit during the blended cement production	<i>Hakan Dündar, Hakan Benzer: Hacettepe University, Turkey</i>				
15:54	SP17	Developing a fundamental understanding of the Kieserite crystallization process.	<i>P Govan, AE Lewis, J Nathoo : University of Cape Town</i>				
16:01	SP18	Phosphate crystallization from dewatering liquors	<i>R Ramaru, J. Nathoo, AE Lewis: University of Cape Town</i>				
16:08	SP19	Investigating the effect of slag chemistry on chrome department between the slag and the matte phase	<i>RC du Preez, G Georgalli: University of Stellenbosch; JJ Eksteen: Lonmin Plc</i>				
16:15-17:15	<b>FORMAL POSTER SESSION</b>						

FRIDAY 8 AUGUST 2008

PLENARY PRESENTATION 2

08:30 - 09:15	PL02	The mineral processing industry and future interaction with academia	FW Petersen: University of Cape Town				
<b>SESSION 4A PHYSICAL SEPARATION</b>				<b>SESSION 4B BIOPROCESSING</b>			
09:20	OR22	Optimising the settling behaviour of slimes	J Morkel: University of Pretoria	09:20	OR26	Investigating heap bioleaching - the effect of a variance in feed iron concentration on bioleaching performance and the microbial population.	S Harrison, AW van Zyl, N Spurr, R van Hille : University of Cape Town
09:40	OR23	Modelling of the High Efficiency Air Classifiers	Okay Altun, Hakan Benzer: Hacettepe University, Turkey	09:40	OR27	Soil washing and bioremediation of contaminated slime dam material	L Lorenzen, T Shumba: University of Stellenbosch
10:00	OR24	Predicting vibrating screen performance using a scale model	M Hilden, EV Manlapig: JKMR, Australia; J-P Franzidis: University of Cape Town	10:00	OR28	The effect of CO2 availability on the microbial growth and ferrous iron oxidation kinetics	L Naik, J Petersen, STL Harrison: University of Cape Town
10:20	OR25	Froth flotation in e-waste processing	IO Oguninji, MKG Vermaak: University of Pretoria	10:20	OR29	Biooxidation kinetics of <i>Leptospirillum ferriphilum</i> under heap bioleach conditions	T Ojumu, STL Harrison, P Petersen, GS Hansford: University of Cape Town
10:40	TEA			10:40	TEA		
<b>SESSION 5A HYDROMETALLURGY</b>				<b>SESSION 5B PROCESS CONTROL</b>			
11:10	OR30	Effect of seed concentration on the oxidation and precipitation of iron	M Hove, RP van Hille, AE Lewis: University of Cape Town	11:10	OR35	Identification of the dynamic state behaviour of a semi-autogenous mill	C Aldrich, JJ Burchell, JW de V Groenewald: University of Stellenbosch
11:30	OR31	Effect of surface properties on solid-liquid separation characteristics of metal sulphides	T Mokone, AE Lewis, R van Hille : University of Cape Town	11:30	OR36	RNMPCC vs PID control of a RoM milling circuit	LC Coetzee: Mintek; IK Craig: Imperial College, UK; EC Kerrigan: University of Pretoria
11:50	OR32	Copper recovery in a bench-scale carrier facilitated tubular supported liquid membrane system	S Makaka, M Aziz, A Nesbitt: Cape Peninsula University of Technology	11:50	OR37	Monitoring of the steady state operation of a concentrator circuit by use of ensemble methods	C Aldrich, L Auret: University of Stellenbosch
12:10	OR33	Removal of metal pollutants from aqueous solutions: natural clinoptilolite put to the test	DW Nyembe, AF Mulaba-Bafubandi, BB Mamba: University of Johannesburg	12:10	OR38	Recirculating load stabilisation and optimisation at Newcrest Cadia Valley Operations using Mintek Floatstar	D Philippotts: Mintek
12:30	OR34	Treatment of reverse osmosis retentate using eutectic freeze crystallisation	T Reddy, AE Lewis, J Nathoo: University of Cape Town	12:30	OR39	Online monitoring of coal feeds on conveyor belts by use of support vector machines	C Aldrich, GT Jemwa, JD Thomas: University of Stellenbosch
12:50	LUNCH			12:50	LUNCH		
<b>SESSION 6A FLOTATION</b>							
13:50	OR40	Improving the froth flotation recoveries of copper and cobalt bearing minerals from a mixed copper-cobalt oxidized ore using a novel dilution technique	DT Bell: University of Johannesburg				
14:10	OR41	Continuous online xanthate monitoring by means of spectrophotometry	B Lalla, F van Zyl: Mintek				
14:30	OR42	Assessment of froth stability down a flotation bank	S Morar: University of Cape Town				
14:50	OR43	Development and modelling of a two-stage semi-batch flotation apparatus	NV Ramlall, BK Loveday, J Pocock: University of KwaZulu-Natal				
15:10	OR44	The effect of regrind on mineralogy and floatability of an ore	E Mavunga, MC Harris: University of Cape Town				
15:30	CLOSING with Refreshments						

## POSTERS

- PP01** Automated analysis of laboratory sedimentation tests by use of machine vision *C Aldrich, GT Jemwa, A Samuels: University of Stellenbosch*
- PP02** Kinetics of microbial ferrous-iron oxidation by *Leptospirillum ferriphilum*: effect of ferric-iron on biomass growth *T Ojumu et al: University of Cape Town*
- PP03** Investigating the effect of the specific gravity differences on the dry classification performance *H Benzer, O Altun, H Orkun Öksüz, E Uzun: Hacettepe University., Turkey*