





Program

Day 1 - Wednesday 4 November 2015		
7.00 am - 5.30 pm	Registration Open	
	SESSION 1: Official Conference Opening and Keynote Presentations I Session Chairs: Associate Professor Serkan Saydam MAusIMM and Rudrajit Mitra MAusIMM, UNSW Australia Room: Theatre	
8.00 am - 8.05 am	Welcome from the Conference Chair: <i>Serkan Saydam MAusIMM, Third International Future Mining Conference Chair</i>	
8.05 am - 8.10 am	AusIMM Welcome: <i>Miriam Way MAusIMM, Deputy Chief Executive and Director, Member Services, AusIMM</i>	
8.10 am - 8.15 am	UNSW Australia Welcome: <i>Professor Mark Hoffman FTSE FIEAust, Dean, UNSW Engineering</i>	
8.15 am - 8.20 am	Official Conference Opening: <i>Professor Ian Jacobs, President and Vice-Chancellor, UNSW Australia</i>	
8.20 am - 9.00 am	Keynote Presentation I: The Gold Industry of the Future – How Mines will Have to Adapt to Meet Future Challenges — <i>Nick Holland, Chief Executive Officer, Gold Fields</i>	
9.00 am - 9.25 am	The Longwall Mine of the Future — <i>Dieter Haage, Head of Mining Excellence, Underground, Coal, Anglo American</i>	
9.25 am - 9.30 am	Women In Mining Network (WIMnet) Presentation: <i>Donna Frater MAusIMM, WIMnet Committee Member</i>	
9.30 am - 9.50 am	Morning Tea Break and Exhibition	
	SESSION 2A: Innovations and Opportunities from Other Disciplines I Session Chairs: Dieter Haage, AngloAmerican Room: Theatre  Sponsored by AngloAmerican	SESSION 2B: Needs and Issues I Session Chair: Helmut Mischo, Freiberg University Room: Meeting Room 6B
9.50 am - 10.15 am	Monitoring Design and Data Management for a Multiwell CO ₂ Storage / Enhanced Coalbed Methane Test in a Stacked Coal Reservoir, Buchanan County, Virginia, USA — <i>E S Gilliland, N S Ripepi, S J Schafrik, C Schlosser, J Amante, A K Louk, E Diminick, S Keim, C Keles and M Karmis</i>	Mining—Community Conflicts – Can the Future Mining Sector Transform Social Responsibility? — <i>J Fraser and M Scoble</i>
10.15 am - 10.40 am	Virtual Reality Scientific Visualisation – A Solution for Big Data Analysis of the Block Cave Mining System — <i>J Tibbett, F Suorineni, B Hebblewhite and A Colebourn</i>	Fundamentally Transforming the Economic and Sustainability Signature of Mining Assets — <i>M Jones</i>
10.40 am - 11.05 am	Effective Immersive Visualisation Systems for Mining Applications and Beyond — <i>T Bednarz, E Widzyk-Capehart, O Daud and N Cutmore</i>	An Assessment of the Potential for Transformational Market Growth Amongst the Critical Metals — <i>J P Sykes, J P Wright, A Trench and P Miller</i>
11.05 am - 11.30 am	Integrating Measurement, Systems and Leadership to Build Safe, Productive Cultures — <i>M I Roberts</i>	How to Get a Social Licence to Mine — <i>L Abrahamsson, J Lööv, M Nygren and E Segerstedt</i>
11.30 am - 11.55 am	Update on the Current State-of-the-art with DynaCut and Hard Rock Continuous Mining Systems — <i>B Neilson, presented by J Savage</i>	Work Organisation for Attractive Mining – Lean Mining and the Working Environment — <i>J Lööv and J Johansson</i>

11.55 am - 12.45 pm Lunch Break and Exhibition

	SESSION 3A: Innovations and Opportunities from Other Disciplines II Session Chair: Peter Johnson, Maptek Room: Theatre 	SESSION 3B: Needs and Issues II Session Chair: Paul Hagan, UNSW Australia Room: Meeting Room 6B
12.45 pm - 1.10 pm	Status Quo and Future Evaluations of Global Rare Earth Mining (with Respect to Special Rare Earth Element-industry Criteria) — <i>G Barakos, H Mischo and J Gutzmer</i>	Future Climate – Is Heat Stress a Real Risk for the Future and How Can We Better Manage it? — <i>C Killip</i>
1.10 pm - 1.35 pm	Light Airborne Platforms for Monitoring Mines and Minerals — <i>L Ameglio, F Durulle, G Jacobs and C Cavern</i>	The Use of High-intensity Monitoring Data to Better Characterise Geotechnical Properties of a Non-homogeneous Rock Mass — <i>P Corbett and P Sheffield</i>
1.35 pm - 2.00 pm	Unmanned Aerial Vehicles for Mine Environment Monitoring — <i>B P Banerjee, S Raval and P J Cullen</i>	Potential and Applications of Underground <i>In Situ</i> Bioleaching — <i>R Schlueter and H Mischo</i>
2.00 pm - 2.25 pm	Unmanned Aerial Robots for Remotely Operated and Autonomous Surveying in Inaccessible Underground Mine Voids — <i>C Sennersten, CA Lindley, A Davie, R Lyu, A Grace, B Evans, D Pentecost, T Taylor, L De Macedo Camargo, J Craig, G N Salomao, A Hellicar, D Biggins, G Timms, M Coombe, MS Sharif, G Smith and A Rahman</i>	Making Hard Rock <i>In Situ</i> Recovery a Reality — <i>L L Kuhar, P Breuer, D J Robinson and A McFarlane</i>
2.25 pm - 2.50 pm	Synergistic Collaboration of Humans and Automated Systems – Innovative Steps Towards Fully Autonomous and Continuous Mining Systems — <i>J Ruiz-del-Solar, E Widzyk-Capehart, P Vallejos and R Asenjo</i>	Resource Efficient Mining Processes of Tomorrow — <i>K Duffy, W Valery, A Jankovic and P Holtham</i>

2.50 pm - 3.10 pm Afternoon Tea and Exhibition

	SESSION 4: Novel Mining Systems and Technologies Session Chairs: Elton Peebles MAusIMM, Rio Tinto Room: Theatre 	Sponsored by
3.10 pm - 3.50 pm	Keynote Presentation II: The Future of Copper Mining – A Rio Tinto perspective — <i>Craig Stegman MAusIMM, Chief Growth and Innovation Officer, Copper & Coal, Rio Tinto</i>	
3.50 pm - 4.15 pm	Copper Price Uncertainties – Chaos Theory to Manage Risks in Mining Projects — <i>C Tapia Cortez, S Saydam, J Coulton and C Sammut</i>	
4.15 pm - 4.40 pm	Selection and Planning of Fully Mobile In-pit Crusher and Conveyor Systems for Deep Open Pit Metalliferous Applications — <i>M Dean, P Knights, M S Kizil and M Nehring</i>	
4.40 pm - 5.05 pm	What the Internet of Things Means to Mining — <i>D Kent and D Eisner</i>	
5.05 pm - 5.30 pm	Pairing Magnetic and E-field through-the-Earth Communication Systems Based on Mine Site Conditions — <i>E C Jong, S J Schatrik, E S Gilliland, C W Weiss and J Waynert</i>	
6.45 pm for 7.00 pm departure	Conference Dinner Cruise MV Epicure I, departing from Casino Wharf, Pyrmont	

Day 2 - Thursday 5 November 2015	
7.30 am - 3.55 pm	Registration Open
	SESSION 5: Opening and Keynote Session II Session Chair: Associate Professor Serkan Saydam MAusIMM, UNSW Australia Room: Theatre
8.45 am - 9.00 am	Welcome and Introduction: <i>Andrew Dempster, Director, Australian Centre for Space Engineering Research and Serkan Saydam MAusIMM, Third International Future Mining Conference Chair</i>
9.00 am - 9.10 am	Ministerial Address
9.10 am - 9.50 am	Keynote Presentation III: Space Exploration and Mining – A Potential Common Journey — <i>René Fradet, Deputy Director, Engineering and Science Directorate, NASA Jet Propulsion Laboratory</i>
9.50 am - 10.15 am	Swamp Works – A New Approach to Develop Space Mining and Resource Extraction Technologies at NASA's Kennedy Space Center: Prospecting, Excavation, Load, Haul and Dump for <i>In Situ</i> Resource Utilisation — <i>R P Mueller, L Sibille, K Leucht, J D Smith, I I Townsend, A J Nick, J M Schuler and J J Fox</i>
10.15 am - 10.40 am	Morning Tea Break and Exhibition
	SESSION 6: Off-Earth Mining (Asteroid Mining, Mining on Mars/Moon) Session Chair: Professor Andrew Dempster, Australian Centre for Space Engineering Research Room: Theatre
10.40 am - 11.05 am	An Integrated Economics Model for <i>In Situ</i> Resource Utilisation in Support of a Mars Colony — <i>S Saydam, R Shishko, C Tapia Cortez, T de Roche, R Fradet, J Coulton and A G Dempster</i>
11.05 am - 11.30 am	A Multilayer 3D Index Tool for Recursive Block Models Supporting Terrestrial and Extraterrestrial Mine Planning — <i>C A Lindley, C Sennersten, A Davie, O Goldstein, R Lyu, A Grace, B Evans, D Pentecost, T Thomas, L De Macedo Camargo, J Craig, G N Saloma, A Helligar, D Biggins, G Timms, M Coombe, M S Shariq, G Smith and A Rahman</i>
11.30 am - 11.55 am	Trajectory Design and Economic Analysis of Asteroid Mining Missions to Asteroid 2014 EK24 — <i>S Dorrington, N Kinkaid and J Olsen</i>
11.55 am - 12.20 pm	Resource Recovery in Space — <i>S Ata, G Bournival and M Manfield</i>
12.20 pm - 1.10 pm	Lunch Break and Exhibition
	SESSION 7: Innovations and Opportunities from Other Disciplines III Session Chair: Phillip Durham MAusIMM, Howden Room: Theatre
	Sponsored by  Howden
1.10 pm - 1.50 pm	Keynote Presentation IV: Moving Ahead by Leaps and Shuffles — <i>James D Humphrey, Senior Market Professional Global Mining Division, Caterpillar</i>
1.50 pm - 2.15 pm	Real-time Mining – Moving Towards Continuous Process Management in Mineral Resource Extraction — <i>J Benndorf, M W N Buxton, K Nienhaus, L Rattmann, A Korre, A Soares, A deJong, N Jeannee, P Graham, D Buttgerit, S Gehlen, F Eijtelkamp, H Mischo, M Sandtke and T Wilsnack</i>
2.15 pm - 2.40 pm	Mining-RoX – Mobile Robots in Underground Mining — <i>S Grehl, M Donner, M Ferber, A Dietze, H Mischo and B Jung</i>
2.40 pm - 3.05 pm	Culter Mining – Crossover Technology from Civil Engineering to Mining — <i>S K Schwank</i>
3.05 pm - 3.30 pm	Exploration and Mining Unified through Seismic Imaging — <i>G Turner, M Urosevic, D Pridmore and J Dwyer</i>
3.30 pm - 3.35 pm	AusIMM Chartered Professional Program Presentation: <i>Angus M Robinson FAusIMM(CP), AusIMM Chartered Professional Board</i>
3.35 pm - 3.55 pm	Afternoon Tea and Exhibition
	SESSION 8: Novel Mining Systems and Technologies Session Chair: Rudrajit Mitra MAusIMM, UNSW Australia Room: Theatre
3.55 pm - 4.20 pm	Comparative Life Cycle Impacts of Deep Ocean Minerals and Land-based Counterparts — <i>B C McLellan</i>
4.20 pm - 4.45 pm	The Solwara 1 Deepwater Mining Project — <i>R Berndt</i>
4.45 pm - 5.10 pm	Processing of Subsea Massive Sulfide Ores by Flotation – Similarity and Features with Terrestrial Ores — <i>L O Filippova and IV Filippov</i>
5.10 pm - 5.15 pm	Conference Close: <i>Rudrajit Mitra MAusIMM, Third International Future Mining Conference Co-Chair</i>