APCOM 2015 Program

May 23th-27th 2015 at Westmark Hotel and Convention Center

Fairbanks AK

Date/Time		Presenter/s
May 23rd 2015	Free Day for the Delegates, No Official Program	
May 24th / 6:00-8:00 PM	APCOM Reception	
Monday-May 25th 2015		
8:00 AM-12:30 PM	**Morning Session (Keynote Session)**	
	Welcome Address	Dr. Sukumar Bandopadhyay Mayor Luke Hopkins (Fairbanks North Star Borough) J.Steven Gardner (2015 SME President)
	The Story of APCOM after 50 years: Some things change, some things remain the same	Dr. Raja V. Ramani
	A New Paradigm for Smart(er) Mining Complexes and Mineral Value Chains: A technological perspective on risk management and sustainability	Dr. Roussos Dimitrakopoulos
	The Sasquatch of Geostatistics: Myths that are much talked about, but rarely seen	Dr. Clayton V. Destsch
9:55 AM-10:10 AM	**Coffee-Break**	
	Reliability in Mining: The Past, the Present and the Future	Dr. Uday Kumar
	3-D modeling of minerals: A case study from Sweden	Dr. Pär Weihed
F-2015-162	Hybrid Robotics in Mining	Dr. George Danko
	Mine Automation	Dr Arman Melkumyan
12:30 PM-2:00 PM	**Lunch-Break**	
2:00 PM-3:40 PM	**Geostatistics I**	

F-2015-047	Sensitivity of indirect recoverable mineral resource modelling to the distribution of Selective Mining Units within panels for mining projects	Winfred Assibey-Bonsu and Charles Muller
F-2015-183	Comparison of Fort Knox Gold Deposit Resources from Pre-feasibility (1991) to Production (1999-2015).	Harry M. Parker and Eric Hill
F-2015-086	Using large support data to improve grade prediction in underground mining	Marcel Antonio Arcari Bassani, Péricles Lopes Machado, João Felipe Coimbra Leite Costa and Ricardo Hundelshaussen Rubio
F-2015-061	Determination of the Risk Index Reference values Applied to Brazilian Phosphate Mines	F. G. Fernandes, C. M. Pinheiro and E. M. Apparicio
F-2015-152	Comparison between disjunctive kriging and multi-Gaussian kriging to estimate the recoverable reserve for a beach sand deposit in India	Mainak Thakur, Biswajit Samanta and Debashish Chakravarty
3:50 PM-5:30 PM	**Production Scheduling I**	
F-2015-009	A surface constrained stochastic mine production scheduling method and its application at a copper deposit	Alexandre Marinho and Roussos Dimitrakopoulos
F-2015-017	The impacts of slope angle approximations on open pit mining production scheduling	Filipe S. Beretta and Alexandre Marinho
F-2015-102	A Fast Optimum Pit Limit Analysis Method Based On Revised Maximum Flow Algorithm	Chotipong Somrit and Kadri Dagdelen
F-2015-074	Using the Bienstock-Zuckerberg Algorithm to Solve Underground Production Scheduling Models	Andrea Brickey, Barry King and Orlando Rivera
3:40 PM-3:50 PM	**Coffee-Break**	
3:50 PM-5:30 PM	**Project Evaluation**	
F-2015-021	Asset Performance – Getting the most from your assets	Joseph Plant
F-2015-057	An agent-based approach to evaluating the effect of dynamic age challenge on community acceptance of mining project	Mark K. Boateng and Kwame Awuah-Offei
F-2015-105	The Systematic Mining Project Evaluation Criteria (SYSPEC) for Investment Decisions	Hyung Min Park and Michael G. Nelson
F-2015-046	Restructuring of a Greek Toll Road Concession Project	Gabriel Böde Jiménez; Dimitrios Gatsonis and Klaus Böde
3:50 PM-5:30 PM	**Mine Planning I**	

F-2015-016	Traditional versus stochastic mine planning under material type and grade uncertainties	Alexandre Marinho and Luis Martinez Tipe
F-2015-066	A Comprehensive Approach to Strategic Open Pit Mine Planning with Stockpile Consideration	Mohammad Tabesh, Hooman Askari-Nasab and Rodrigo Peroni
F-2015-079	Using simulation to assess the trade-off between value and reliability in open pit planning	Maximiliano Alarcón, Xavier Emery and Nelson Morales
F-2015-099	Optimal Economic Envelope of Joint Open-Pit and Underground Mines	Cecilia Julio, Jorge Amaya, Amina Lamghari and Nelson Morales
F-2015-101	Comparing new and traditional methodologies for production scheduling in open pit mining	Marcos Goycoolea, Daniel Espinoza, Eduardo Moreno and Orlando Rivera
6:00 PM-7:00 PM	**APCOM International Council Meeting**	
Tuesday-May 26th 2015		
8:00 AM-10:00 AM	**Mine Exploration**	
F-2015-023	Automated lithological recognition using DTW signal processing of natural gamma logs	Katherine Silversides, Arman Melkumyan and Derek Wyman
F-2015-028	Core Partial Recovery and Its Effect on Sample Grades	Vivian Tavares Kayser and João Felipe Costa
F-2015-070	Geological domain classification using multiple chemical elements and spatial information	M. Balamurali and A. Melkumyan
F-2015-081	Plotting Multi-Element Geochemical Data in Three Dimensions to Aid in Predicting Ore Recovery and Mineral Exploration Targeting	Maureen N. Moore-Roth and Cesar Carrasco
F-2015-115	Achievements from application of the Hylogger 3 to the mining industry in chile	Victor Montenegro, Nicolas Urrutia, Leandro Voisin and Angus McFarlane
F-2015-116	Application of the Hylogger 3 to the characterization of mineral and metallurgical residues	Leandro Voisin , Javier Merrill, Victor Montenegro and Angus McFarlane
8:00 AM-10:00 AM	**Mineral Processing**	
F-2015-042	Strategic planning of metallurgical extraction using Variable Neighbourhood Descent and the Network Simplex Method	Alessandro Navarra
F-2015-120	A Discrete Element Model for Vibrating Air-Table Separators	Nikhil Gupta, Gerald Luttrell and Tathagata Ghosh
F-2015-134	Advances in Modeling of Air-based density separators	Tathagata Ghosh
F-2015-135	Project Life Cycle Process Modelling and Simulation Using the	David Wiseman, Robert Bratton and Gerald Luttrell

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	Limn® Toolset	
F-2015-166	A CFD Model Development for the Flotation Rate Constant	M. Karimi, G. Akdogan and S. M. Bradshaw
F-2015-178	Modeling and optimization of spiral concentrator for separation of iron values from sub grade iron ore	G. V. Rao, R. Markandeya and S. K. Sharma
8:00 AM-10:00 AM	**Mine Ventilation**	
F-2015-002	Ventilation System Design for the Sanford Underground Research Facility	Tyler R. Artz, Purushotham Tukkaraja and Bryce Pietzyk
F-2015-032	Investigation of the parameters of the air flow in the longwall area for validation of the VentZroby simulation software	W. Dziurzynski, T. Palka and St. Wasilewski
F-2015-075	Application of Genetic Algorithm for Solving Multiple Fan Ventilation Network	Mahesh Shriwas and Felipe Calizaya
F-2015-078	Sensitivity Study on Ventilation Parameter Changes in a Mine Ventilation System	Gary Li and Steve Hardcastle
F-2015-148	Optimization of Mine Ventilation Networks Using the Weighted Augmented Lagrange Method	W. Nyaaba, S. Frimpong and K. A. El-Nagdy
F-2015-060	Monitoring systems for coal mines utilizing booster fans	V. Gangrade, F. Calizaya, and M.G. Nelson,
10:00 AM-10:30 AM	Coffee-Break	
10:30 AM-12:30 PM	**Mine Discrete-System Simulation**	
F-2015-013	Optimization of open pit haulage cycle using a KPI controlling alert system and a discrete-event operations simulator	Pedro Pablo Vasquez Coronado and Victor Octavio Tenorio
F-2015-024	Using Discrete Simulation and Animation to Identify the Optimal Sizes and Locations of Mine Refuge Chambers	Ebrahim Tarshizi, Charles Kocsis and Danny Taylor
F-2015-043	Discrete event simulation to quantify upgrades of Peirce-Smith converting aisles	Alessandro Navarra and Frank Mucciardi
F-2015-104	Optimizing design parameters for ground articulating pipeline system using discrete event simulation	Sisi Que, Kwame Awuah-Offei and Samiel Frimpong
F-2015-108	Simulation and Optimization in Open Pit Mining	Shiv Prakash Upadhyay, Hooman Askari-Nasab, Mohammad Tabesh and Mohammad Mahidi Badiozamani
F-2015-137	Investigation into mine equipment subsystems availability and reliability data modelling using discrete event simulation	E. Gbadam, K Awuah-Offei and S. Frimpong

10:30 AM-12:30 PM	Geotech-Rock Mechanics	
F-2015-003	Development of Drones to Collect Geotechnical Data in Large Underground Mines	Srikant Annavarapu and P. Ganesh Kumar
F-2015-053	Rock mechanics of tabular deposits - a computational challenge	William G. Pariseau and Michael K. McCarter
F-2015-113	Application of 3D geotechnical block models in design of open pit mines – A Case study at Mont-Wright Open Pit Mine	Hesameddin Eivazy, Kamran Esmaieli, Raynald Jean and Francisco Albor
F-2015-168	Technological and Geomechanical Modelling for Mining Safety Improvement	Anatoly A. Kozyrev, Sergey V. Lukichev, Oleg V. Nagovitsyn and Inna E. Semenova
F-2015-181	Evaluation of Various Mining Methods to Design an Underground Coal Mine Using FLAC 2D	Taraprasad Bhowmick, Tushar Gupta, Gang Chen, Sukumar Bandopadhyay and Tathagata Ghosh
10:30 AM-12:30 PM	Geostatistics II	
F-2015-091	Grade Modelling with Local Anisotropy Angles: A Practical Point of View	David F. Machuca-Mory, Harri Rees and Oy Leuangthong
F-2015-150	Local truncated pluri-Gaussian mask optimization for categorical variable modeling with locally varying proportions	Samaneh Sadeghi and Jeff B. Boisvert
F-2015-153	Dealing with periodicity within the Kriging Framework	Leon Tolmay
F-2015-122	Incorporating distributed Dijkstra's algorithm into variogram calculation with locally varying anisotropy	Oscar Peredo, Felipe Navarro, Mauricio Garrido and Julián M. Ortiz
F-2015-080	Expected uncertainty as a function of the variogram, data spacing and other factors	Felipe A. C. Pinto and Clayton V. Deutsch
12:30 PM-2:00 PM	Lunch-Break	
2:00 PM-3:40 PM	Mine Planning II	
F-2015-173	Geometallurgical models for the quantification of uncertainty in mining project value chains	Stephen Coward and Peter Dowd
F-2015-136	Application of the metaheuristic approaches in open pit mine planning	Javad Sattarvan, Omid Gilani, Masoud Soleymani Shishvan and Asif Khan
F-2015-034	A Dynamic-ore-price-based Method for Optimizing a Mineral Supply Chain with Uncertainty	Jian Zhang and Roussos Dimitrakopoulos
F-2015-033	Management Support System for a fleet of vehicles in an Open Pit Mine	Esteban Chumpitaz Saravia, Magno Huamaní Condori and Miguel Ángel Pacoticona Ccoa
F-2015-007	Resource Model Uncertainty Analysis and Stope Optimizer (MSO) Evaluation for an Underground Metal Mine Project	Arja Jewbali, Honglinang Wang and Christopher Johnson

2:00 PM-3:40 PM	**CFD Application in Mine Ventilation**	
F-2015-006	Preliminary Analysis of Surface Mine Inversion Dispersion Techniques through Numerical Simulations	Patrick Ealy, Purushotham Tukkaraja
F-2015-045	Gob Ventilation Modeling on HPC platforms using GPGPU/CPU Combinations	R. C. Gilmore, J. F. Brune, J. A. Marts, Saqib A. Saki, G. E. Bogin Jr. and J. W. Grubb
F-2015-159	CFD analysis of airflow distribution in high mining areas of room-and-pillar coal mining	Y. P. Chugh, Ahmad Zharif Md Azmi, Harrold Gurley, Vijaya Kumar Kollipara and Joseph Hirschi
F-2015-160	Validation of Empirical Models for Shock loss due to Regular Obstructions in Mine Airways using CFD	Srivatsan J. S. and B. S. Sastry
2:00 PM-3:40 PM	**Computer Modeling in Unconventional Resource Development**	
F-2015-049	Production Performance Prediction and Field Development Design Tool for Coalbed Methane Reservoirs: A Neuro-simulation Approach	Vaibhav Rajput, E.D.K. Basel and Turgay Ertekin
F-2015-073	Modeling of Asphaltene Component Segregation and Tar Mat Formation	Venu Nagineni, Sukit Leekumjorn and Christian Agger
F-2015-107	Computer in Pore-Network Modeling and Prediction of Flow and Transport Properties in Porous Media	Fidelis O. Wopara, Sunny E. Iyuke and Abhijit Dandekar
F-2015-133	Accelerating Autonomous Flow Control Technology Adoption by Albertan SAGD Operators via a Simulator-Validation Process	Sudiptya Banerjee
3:40 PM-3:50 PM	Coffee-Break	
3:50 PM-5:30 PM	**Mine Operations**	
F-2015-012	Application of the Theory of Constraints to the Pillar Development Cycle of an Underground Coal Mine	Ernest Baafi, Dalin Cai and Ian Porter
F-2015-019	Optimization of Dragline Digging Sequences Using a Genetic Algorithm	Xin Liang, Peter Knights and Andrew Jessett
F-2015-050	Challenges of multi-mine simultaneous optimisation for a large iron ore mining operation	Johann Menezes and Farshad Rashidi Nejad
F-2015-077	Investigation of Electric Rope Shovel Reliability, Availability and Maintainability in Surface Mining Operation	Mohammad Babaei Khorzoughi and Robert A. Hall
3:50 PM-5:30 PM	**Mine Design Simulation**	
F-2015-098	A novel approach to data mining and simulation of haul processes	Andrés Latorre, José Miguel Castro and Carlo

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	on mining operations	Calderón
F-2015-092	Linear programming approximations for modeling instant-mixing stockpiles	Eduardo Moreno, Daniel Espinoza, Felipe Ferreira, Marcos Goycoolea, Alexandra Newman and Mojtaba Rezakhah
F-2015-100	An ant colony optimization-based approach for long distance ore pipeline routing	Daniel Baeza, Christian F. Ihle, and Julián M. Ortiz
F-2015-044	Optimization of Time Duration to Install Face Equipment at Longwall Face in Indian Coal Mines	G. C. Roy and Netai Chandra Dey
3:50 PM-5:30 PM	**Decision Making**	
F-2015-095	Decision support system for mining methods selection using Bayesian belief networks	Todor P. Petrov and Jhon Silva-Castro
F-2015-037	Optimization based on Critical Path Methods in VULCAN Gantt Scheduler	Daniel Arancibia C., Marcelo Arancibia A. and Ignacio García A.
F-2015-063	Evidential reasoning: Potential usage for decision making under uncertainty in mining engineering	Vahagn Khechadoorian, Morteza Osanloo and Seyyed Pedram Mirmoini
F-2015-026	Resumption of Deep Open-Pit Mining as a Future Challenge	Delaram Pahlevani and Morteza Osanloo
7:00 PM-10:00 PM	**APCOM Dinner & Awards**	
Wednesday-May 27th 2015		
10:30 AM-12:30 PM	**Miscellaneous**	
F-2015-031	Virtual Reality Ladder Climbing for Mine Safety Training	Chengyuan Lai and Ryan P. McMahan
F-2015-055	Development of a Generic Mine Visualization Tool Using Unity	Timothy J. Orr, Brendan D. Macdonald, Stephen R. Iverson and William R. Hammond
F-2015-126	Particle tracking simulation for tracer dispersion in porous media: a five-spot laboratory model	Arif Widiatmojo, Kyuro Sasaki, Amin Yousefi-Sahzabi and Yuichi Sugai
F-2015-132	The Effect of the Simulation Environment on Cognitive Workload Metrics	Jennica L. Bellanca, Brianna Eiter, Timothy J. Orr and Brendan Macdonald
F-2015-163	Design principles for a mining interface	Heather Dougherty, Kramer Luxbacher, Nino Ripepi, Michael Karmis and Zacharias Agioutantis
F-2015-029	A conceptual approach to design a magnetically-propelled integrated underground hoisting system	Taraprasad Bhowmick and Pratik Dutta
8:00 AM-10:00 AM	**Drilling and Blasting**	

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F-2015-182	Application of Computers in Surface Mine Rock Blasting - Current & Future Perspectives	Dr. Piyush Rai
F-2015-064	Blast Fragmentation Size Analysis Using Normalized Graph Cut based Image Segmentation Technique	Pankaj Rathi, Ashok Kumar Patel and Snehamoy Chatterjee
F-2015-088	Assessment processes of construction and drilling & blasting integration through a technology platform	Mauricio Vargas, Nolberto Contador, Edgardo Hernández, Ricardo Torres and Andrés Latorre
F-2015-068	Modeling Blasting Costs Based on Regulated Structure's Location and Environmental Constraints	Mohammadhossein Sadeghiamirshahidi, Stan Vitton and Thomas Oommen
F-2015-165	The use of specific energy in rotary drilling: the effect of operational parameters	Rajib Ghosh, Håkan Schunnesson and Uday Kumar
F-2015-167	Discrete element simulation of rock cutting	G. van Wyk, D.N.J. Els, G. Akdogan, S.M. Bradshaw
10:00 AM-10:30 AM	**Coffee-Break**	
10:30 AM-12:30 PM	**Underground Mining**	
F-2015-036	Online work capacity monitoring and work-rest scheduling for different job nature of underground miners	Netai Chandra Dey and A. Somesh Vikrant
F-2015-155	Towards Extracting Absolute Roughness from Underground Mine Drift Profile Data	Curtis Watson and Joshua Marshall
F-2015-158	Underground Mine Design under Stochastic Scenarios	Paulo Roberto Guimarães Mello, Rodrigo de Lemos Peroni, João Felipe Costa and Rodney Wolff
F-2015-169	Process Optimization in Mining: Preconditions, step-by-step implementation and benefits	Christoph Mueller
F-2015-001	Baseline Analysis of Predicted Tracking System Performance	Steven Schafrik, Michael Karmis and David Snyder
F-2015-067	FEATureFACE – An Innovative Collision Avoidance System for the Underground Mining Industry	Kai Neumann, Jan Berg, Britta Eichentopf, Philipp Mehnert and Karl Nienhaus
10:30 AM-12:30 PM	**Off-shore Placer resource estimation**	
F-2015-090	Support Vector Machines: An Emerging Technique for Ore Grade Estimation	Snehamoy Chatterjee, Sridhar Dutta, Sukumar Bandopadhyay and Biswajit Samanta
F-2015-014	Resource estimation of an off-shore platinum deposit using sequential Gaussian simulation	Victor Octavio Tenorio and Sukumar Bandopadhyay
F-2015-157	Improved ore grade estimation using clustering and support vector	Sridhar Dutta, Sukumar Bandopadhyay and

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	machines	Debasmita Misra
F-2015-176	Development of a Methodology combining Clustering and Conditional Simulation for the Definition of Underwater Sampling Models	Victor Octavio Tenorio, Sukumar Bandopadhyay, Debasmita Misra, Sathy Naidu and John Kelley
F-2015-177	Support Vector Machines Applied for Resource Estimation of Underwater Glacier-type Platinum Deposits	Victor Octavio Tenorio, Sukumar Bandopadhyay, Debasmita Misra, Sathy Naidu and John Kelley
12:30 PM-2:00 PM	**Lunch-Break**	
2:00 PM-3:40 PM	**Geostatistics III**	
F-2015-179	Assessment of thickness uncertainty using geostatistical simulation in the Rondon do Pará Bauxite Deposit, Brazil	Saulo B. de Oliveira, Jeff B. Boisvert and Clayton V. Deutsch
F-2015-121	How precise and accurate is the space of uncertainty derived from simulations?	Rafael M. Caixeta, João F. C. L. Costa, Péricles L. Machado, Diniz T. Ribeiro, Dione H. Dias & Rafaeli O. Pires
F-2015-124	Application of Geostatistical Simulation for Mineral Resource Estimation by Modelling of Drillhole Data - Case Study on an Iron Ore Mine	Abu Bakarr Jalloh and Kyuro Sasaki
F-2015-146	A spatial uncertainty index of subsurface models for drill hole planning	Marie-Gabrielle Vallet, Denis Marcotte and François Guibault
F-2015-030	Geostatistical prediction of fugitive dust dispersion in open pit haul roads	Taraprasad Bhowmick and Sukumar Bandopadhyay
2:00 PM-3:40 PM	**Mine Planning III**	
F-2015-018	Low quality secondary data in short term mining planning: use or discard them?	Cristina da Paixão Araújo, Marcel Arcari Bassani and João Felipe Coimbra Leite Costa
F-2015-035	Optimizing a mining complex under supply uncertainty: Integrating components from deposits to transportation systems	Luis Montiel Petro and Roussos Dimitrakopoulos
F-2015-041	Stochastic Optimization of an Open Pit Mining Complexes with Capital Expenditures: Application at a Copper Mining Complex	Ryan Goodfellow and Roussos Dimitrakopoulos
F-2015-174	Calculating Correlation and Causality of the Impact of Social Media Interaction on the Social Risk of Mineral Development	Sean Dessureault and W. Pratt Rogers
3:40 PM-3:50 PM	Coffee-Break	
3:50 PM-5:30 PM	**Production Scheduling II**	

F-2015-082	A Comparison of Conventional and Direct Block Scheduling Methods for Open Pit Mine Production Scheduling	Nelson Morales, Enrique Jélvez, Pierre Nancel-Penard, Alexandre Marinho and Octávio Guimarães
F-2015-171	Strategic mine planning and Production Scheduling Optimization at Newmont's Twin Creeks Operation	Kazuhiro Kawahata, P. Schumacher, M. Fein and Kurt Criss
F-2015-175	Mining options optimization: concurrent open pit and underground mining production scheduling	Eugene Ben-Awuah, Otto Richter and Tarrant Elkington
F-2015-083	Multi-criteria optimization for scheduling of a bench and fill mine	Nelson Morales, Alejandra Gómez and Javier Vallejos
APCOM Conclude		