COSMO – Stochastic Mine Planning Laboratory
Mining Engineering

TECHNICAL DAY PROGRAM

Friday, June 23, 2023

9:15 – 9:30	***Roussos Dimitrakopoulos - Welcome and Update on New Developments***
9:30 – 10:00	Integrating Progressive Reclamation and Waste Management into the Simultaneous Stochastic Optimization Framework with Contextual Bandits *Zachary Levinson*
10:00 – 10:30	Optimizing Multi-Element Cut-Off Grades for a Strategic Production Plan Under Supply Uncertainty *Jake Cutler*
10:30 – 11:00	Simultaneous Stochastic Optimization of Short-Term Planning of Mining Complexes under Supply and Processing Uncertainty *João Pedro de Carvalho*
11:00 – 11:15	***Break***
11:15 – 11:45	Diverse Candidate Generation for a Sustainability-Aware Stochastic Optimization of Mining Complexes *Yassine Yaakoubi*
11:45 – 12:15	On the Commercial Software KPI-COSMO Stochastic Mining Optimizer for the Optimization of Mining Complexes: Present Release, Applications and Next Developments *Giovanni dos Santos and Benny Cohen*
12:15 – 13:15	***Lunch***
13:15 – 13:45	Introduction to Data-driven Contextual Stochastic Optimization *Erick Delage, HEC Montreal*
13:45 – 14:15	Joint Stochastic Optimization of Stope Layout, Production Scheduling, and Access Network, with Dilution Management *Cristina Penadillo Palomino*
14:15 – 14:45	Impacts of High-Order Geostatistical Simulations on the Integrated Long-term Underground Mine Production Scheduling *Laura Andrade*
14:45 – 15:00	***Break***
15:00 – 15:30	High-Order Stochastic Simulation via Semidefinite Programming (SDP): Algorithm, Implementation, and Case Study *Lingqing Yao*
15:30 – 16:00	Simultaneous Stochastic Optimization of Mining Complexes with Recovery and Market Uncertainty: Application at an Open Pit Copper Mining Complex *Will Yi Jiang*
16:00 – 16:30	Updating Geological and Geometallurgical Orebody Models with Incoming Production Data Using Actor-Critic Reinforcement Learning *Liam Findlay*
16:30	***Closing Remarks:*** *Research in the Year Ahead*