



ALMA MATER STUDIORUM
UNIVERSITA DI BOLOGNA
DEPARTMENT OF CIVIL, CHEMICAL,
ENVIRONMENTAL AND MATERIALS ENGINEERING



First International EnviroMining Virtual Conference 2025

**Jointly organized by
University of Bologna & University of Petroșani**

CONFERENCE PROGRAMME

20 – 21 Febuary 2025

GENERAL PROGRAMME

Eastern European Time

20 February 2025

- 11:00 – 11.15 Welcome and Opening Ceremony
Professor Sorin-Mihai RADU, Rector of the University of Petrosani
Professor Ezio Mesini, Dean of the Georesources Research Group, University of Bologna
- 11:15 – 11:35 Keynote Speaker – Dr. Mohamed ELKARMOTY
- Faculty of Engineering – Cairo University
- 11:35 – 11:45 Q & A
- 11:45 – 13:30 Session 1
- 13:30 – 14:30 Break
- 14:30 – 16:30 Session 2
- 16:30 – 17:00 Networking

21 February 2022

- 11:00 – 11.20 Keynote Speaker – Dr. Angus MAXWELL,
Maxwell GeoSystems Ltd. - London, Hong Kong,
Singapore, Torino (EU), Colorado, Sydney and
Kochi (India)
- 11:20 – 11:30 Q & A
- 11:30 – 13:15 Session 1
- 13:15 – 14:15 Break
- 14:15 – 16:15 Session 2
- 16:15 – 16:45 Networking

SESSION 1
THURSDAY 20.02.2025
11:45 – 13:30

Algorithms, Environmental, Mining & Modelling		
Chairpersons: Dorel GUSAT, Camelia MADEAR		
1.	K. Marvie REED, Stefano BONDUÀ, A REVIEW OF THE STATE-OF-THE-ART OPTIMIZATION ALGORITHMS FOR DIMENSIONAL STONE CUTTING	11:45 12:00
2.	Alparslan TURANBOY, Erkan ÜLKER, Görkem Rıdvan ARIK, İbrahim UYSAL, A NEW APPROACH for ESTIMATING DISCONTINUITY NETWORK in ROCK MASS	12:00 12:15
3.	Evangelos MACHAIRAS, Emmanouil A. VAROUCHAKIS, APPLICATION OF VIRTUAL REALITY TOOLS IN CRITICAL RAW MATERIALS EXPLOITATION	12:15 12:30
4.	Margarita ANTONIOU, Drago TORKAR, Zoran LEVNAJIC, Vida VUKASINOVIC, DIFFERENTIAL EVOLUTION FOR MAXIMUM CUBOID EXTRACTION IN SUSTAINABLE STONE CUTTING: APPLICATION TO A GRANITE ROCK EXAMPLE	12:30 12:45
5.	Natalia-Silvia ASIMOPOLOS, Laurentiu ASIMOPOLOS, Adrian-Aristide ASIMOPOLOS, METHODS OF EVALUATING THE DEPTH AND DIMENSIONALITY OF GEOLOGICAL STRUCTURES BASED ON GEOPHYSICAL PARAMETERS MEASURED AT THE LAND SURFACE	12:45 13:00
6.	André Monteiro KLEN, Stefano BONDUÀ, Sara KASMAEYAZDI, Danielle APARECIDA de MENEZES, FFKM: A SOFTWARE FOR AUTOMATIC DISCONTINUITY SET IDENTIFICATION AND STEREOGRAPHIC PROJECTION ANALYSIS	13:00 13:15
7.	Gelu MADEAR, Camelia MADEAR, COMBINED METHODS FOR DIMENSION STONE DEPOSITS' JOINTS AND FRACTURES DETECTION, DIGITALISATION AND VISUALISATION	13:15 13:30
Break		13:30 14:30

SESSION 2
THURSDAY 20.02.2025
14:30 – 17:00

Algorithms, Environmental, Mining & Modelling		
Chairperson: Sara KASMAEEYAZDI		
1.	Andreea Gabriela ŞFABU, Izabela-Maria APOSTU, Maria LAZAR, Florin FAUR, USE OF AI IN THE DESIGN OF MINING SITES RECLAMATION. A CASE STUDY FOR JIU VALLEY, ROMANIA	14:30 14:45
2.	Sertaç DÜNDAR, Niyazi BİLİM, Dhikra GHILIFOUI DERESAL, Bilgehan KEKEÇ, THE MOST COMMONLY USED TBM TYPES AND THEIR SUITABILITY FOR HARD AND SOFT GROUNDS	14:45 15:00
3.	Daniel OPPONG, Asare ASANTE-ANNOR, Emmanuel Daanoba SUNKARI, ASSESSMENT OF SURFACE WATER AND GROUNDWATER QUALITY IMPACTS AT IDUAPRIEM MINE, TARKWA, SOUTHWESTERN GHANA: APPROACHES FOR DECOMMISSIONING OF A TAILINGS STORAGE FACILITY	15:00 15:15
4.	Emmanuel Daanoba SUNKARI, Issah DAUDA, Shadrach FOSU, Abayneh Ataro AMBUSHE, HYDROGEOCHEMICAL AND ANTHROPOGENIC CONTROLS ON GROUNDWATER QUALITY IN THE TALENSI DISTRICT, NORTHERN GHANA: IMPLICATIONS FOR ARSENIC CONTAMINATION	15:15 15:30
5.	Xiaoning LIU, Sara KASMAEEYAZDI, Francesco TINTI, Gongwen WANG, 3D GEOLOGICAL MODELING AND GRADE ESTIMATION FOR A GOLD DEPOSIT IN SHANDONG PROVINCE, CHINA	15:30 15:45
6.	Qiaoyu GAO, Peng YAN , Stefano BONDUÀ, STUDY ON THE INFLUENCE OF IN-SITU STRESS LEVELS ON THE DAMAGE CHARACTERISTICS OF SURROUNDING ROCK DURING DRILL-AND-BLAST EXPANSION OF TBM PILOT TUNNELS	15:45 16:00
7.	Camelia MADEAR, Gelu MADEAR, Stefano BONDUÀ, MINIMISATION OF WASTE, WATER AND ENERGY CONSUMPTION AT EXTRACTION OF DIMENSION STONE TO SUPPORT ECO-LABEL CERTIFICATION	16:00 16:15
8.	Guido ALFARO DEGAN, Andrea ANTONUCCI, Gianluca COLTRINARI, Sara INNOCENZI, Dario LIPPIELLO, COMPARING WHOLE-BODY VIBRATION EXPOSURE BETWEEN TWO EXCAVATORS IN AN ITALIAN QUARRY: A CASE STUDY	16:15 16:30
Networking		16:30 17:00

SESSION 1
FRIDAY 21.02.2025
11:30 – 13:15

Algorithms, Environmental, Mining & Modelling		
Chairpersons: Stefano BONDU, Camelia MADEAR		
1.	Dorel GUSAT, Ioan BUD, Dinu DARABA, ENVIRONMENTAL SPECIFIC NEEDS OF A GRAVEL PIT – CASE STUDY SOMES RIVER	11:30 11:45
2.	Camelia MADEAR, Gelu MADEAR, Sorin Mihai RADU, Simion BRUMA, ASSESSING VEGETATION AND SOIL CONDITIONS IN THE RUSCHITA MARBLE QUARRY USING DRONE-BASED MULTISPECTRAL REMOTE SENSING	11:45 12:00
3.	Susana Apostu, Alexandra Soica, ENERGY RESPONSIBILITY: INTEGRATING GREEN SOURCES TO REDUCE THE ECOLOGICAL IMPACT IN THE JIU VALLEY. CASE STUDY	12:00 12:15
4.	K. Marvie REED, Stefano BONDU, PRODUCTION OPTIMISATION AND ENVIRONMENTAL PROTECTION IN ORNAMENTAL STONE QUARRIES USING GROUND PENETRATING RADAR TECHNIQUES	12:15 12:30
5.	Alexandra SOICA, Susana APOSTU, Razvan Bogdan ITU, THE USE OF NATIVE VEGETATION IN THE REHABILITATION OF MINING SITES IN THE JIU VALLEY: APPROACHES AND STRATEGIES FOR EFFECTIVE REESTABLISHMENT	12:30 12:45
6.	Cheng FAN, STUDY ON DAILY-SCALE EMISSION CHARACTERISTICS OF SPONTANEOUS COMBUSTION GASES IN SHALLOW SOIL OF COAL FIRE AREAS	12:45 13:00
7.	Roseline Joseph, ENVIRONMENTAL ISSUES IN MINING: A COMPREHENSIVE REVIEW OF CHALLENGES AND STRATEGIES FOR MITIGATION AND REHABILITATION	13:00 13:15
Break		13:15 14:15

SESSION 2
FRIDAY 21.02.2025
14:15 – 16:45

Algorithms, Environmental, Mining & Modelling		
Chairperson: Gelu MADEAR		
1.	Erkan ÜLKER, Alparslan TURANBOY, Görkem Rıdvan ARIK, İbrahim UYSAL, GENERATION and VISUALIZATION of DFN (DISCRETE FRACTURE NETWORK) FROM ROCK MASS DISCONTINUITY SETS	14:15 14:30
2.	Menna ALI, Mohamed ISMAEL, K Marvie REED, Stefano BONDUÀ, Mohamed ELKARMOTY, OVERVIEW ON THE MINING ENVIRONMENTAL IMPACT OF ELECTRIC VEHICLES BATTERIES PRODUCTION	14:30 14:45
3.	Gizem BOLUK, Yasin Ramazan EKER, Şerife Yurdağül KUMCU, Yusuf UZUN, STRENGTH OF SILLE STONE AGAINST ACID RAIN	14:45 15:00
4.	Jinxi LIANG, Sara KASMAEYAZDI, Xiaoning LIU, Francesco TINTI, 3D MODELING OF WATER INRUSH IN COAL MINES: UNDERSTANDING THE CAUSES TO ENHANCE SAFETY IN MINING OPERATIONS	15:00 15:15
5.	Tarek SEDKI, Abdel-Mageed MOHAMED, HARNESSING THE POWER OF ARTISANAL AND SMALL-SCALE GOLD MINING FOR EGYPT'S ECONOMIC GROWTH.	15:15 15:30
6.	Sertaç DÜNDAR, Niyazi BİLİM, THE HISTORICAL DEVELOPMENT OF MECHANIZED EXCAVATION AND THE FORECASTING ON FUTURE STATE OF MECHANIZED EXCAVATION	15:30 15:45
7.	Erkan ÜLKER, Alparslan TURANBOY, İbrahim UYSAL, Görkem Rıdvan ARIK, DEVELOPMENT OF A WEB-BASED 3D VISUALIZATION TOOL THAT CAN BE USED IN GEOSCIENCE STUDIES	15:45 16:00
8.	Ioan BUD, Dorel GUSAT, Dinu DARABA, REHABILITATION PLAN METHOD FOR AN ANDEZITE OPEN PIT	16:00 16:15
Networking		16:15 16:45