

Dubrovnik International ESEE Mining school

DIM ESEE-2: Implementing innovations

Innovation in extraction

18th – 20th October 2023

Dubrovnik, Croatia //
hybrid mode with online participation



Challenges for raw materials professionals in the ESEE region (Eastern and Southeastern Europe)

Lack of lifelong learning courses and other forms of informal education for raw materials professionals in the ESEE region

Higher education system with outdated curriculum offering too much theory and insufficient focus on innovative and advanced tools and methodologies

Expensive lifelong learning courses in Western Europe, often not affordable for ESEE raw materials professionals

DIM ESEE-2 innovative workshops FROM professionals TO professionals

- ☐ Unique lifelong learning course for professionals working in fields: Geology, Geological engineering, Geophysics, Mining engineering, Applied Earth Sciences, Mineral processing etc.
- ☐ 3 days of acquiring knowledge and practical work + networking with other raw materials professionals from ESEE region
- ☐ Best value for money

SAVE THE DATES!

Innovation workshops at the Inter University Center, Dubrovnik

- Innovation in extraction (18th – 20th October 2023) – hybrid mode!
- Innovation in ore processing (23rd – 25th October 2024)

2023 workshop: Innovation in extraction

The workshop will address several innovative extraction methods and review some of the latest future-oriented technologies. The latest achievements in the field of blasting will be presented, such as the use of computer modelling, the characterization of the rock mass for the purpose of optimal fragmentation during blasting, and methods of reducing the unwanted effects of blasting. Innovations related to hard rock mechanical cutting and digitization in the field of exploitation will be presented using examples from practice and results achieved as part of currently ongoing EU research projects.

TOPIC 1

Wednesday, 18th October 2023

Blasting Extraction Methods

TOPIC 2

Thursday, 19th October 2023

Mechanical Extraction Methods

TOPIC 3

Friday, 20th October 2023

**Innovative & Sustainable
Extraction Practices**

DAY 1: 18th October 2023

TOPIC 1 Blasting Extraction Methods

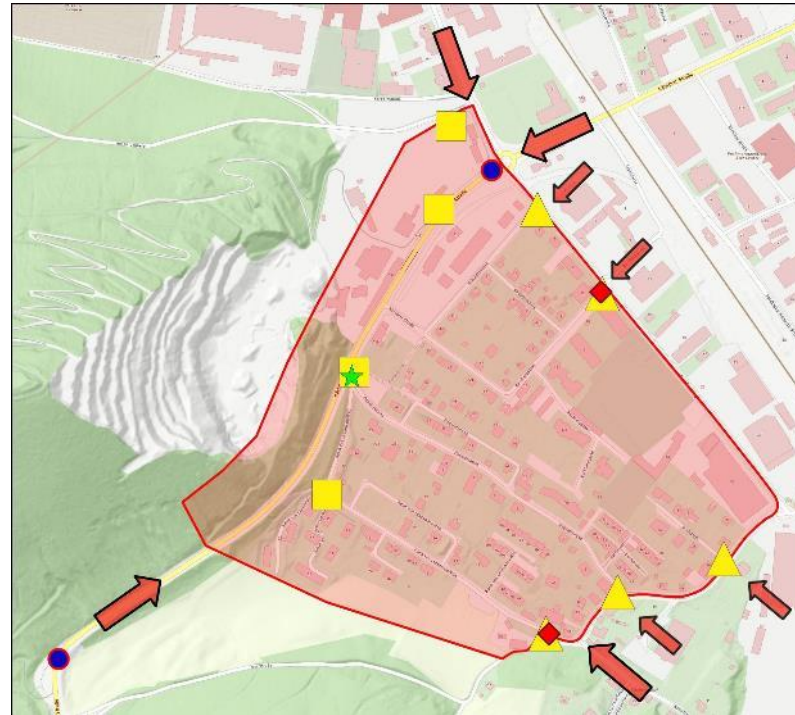
- Advanced technologies in blast modelling using electronic detonators
- Case study: Improving mill throughput by blast optimization using advanced technologies
- Safety Concept for production blasting in populated areas (Leitendorf best-practise case)
- How Low Can You Go? - Extra-Low-Profile Equipment for underground mineral extraction (DOK-ING)

Images

- electronic detonators



- Safety Concept for production blasting in populated areas



- Extra-Low-Profile Equipment for underground mineral extraction



DAY 2: 19th October 2023

TOPIC 2 Mechanical Extraction Methods

- Latest developments in hard rock cutting
- The EPIROC Mobile Miner
- Cutting for hard rock development, the MX650 experience from Sandvik

Images

- The EPIROC Mobile Miner



- Cutting for hard rock development, the MX650 experience from Sandvik



DAY 3: 20th October 2023

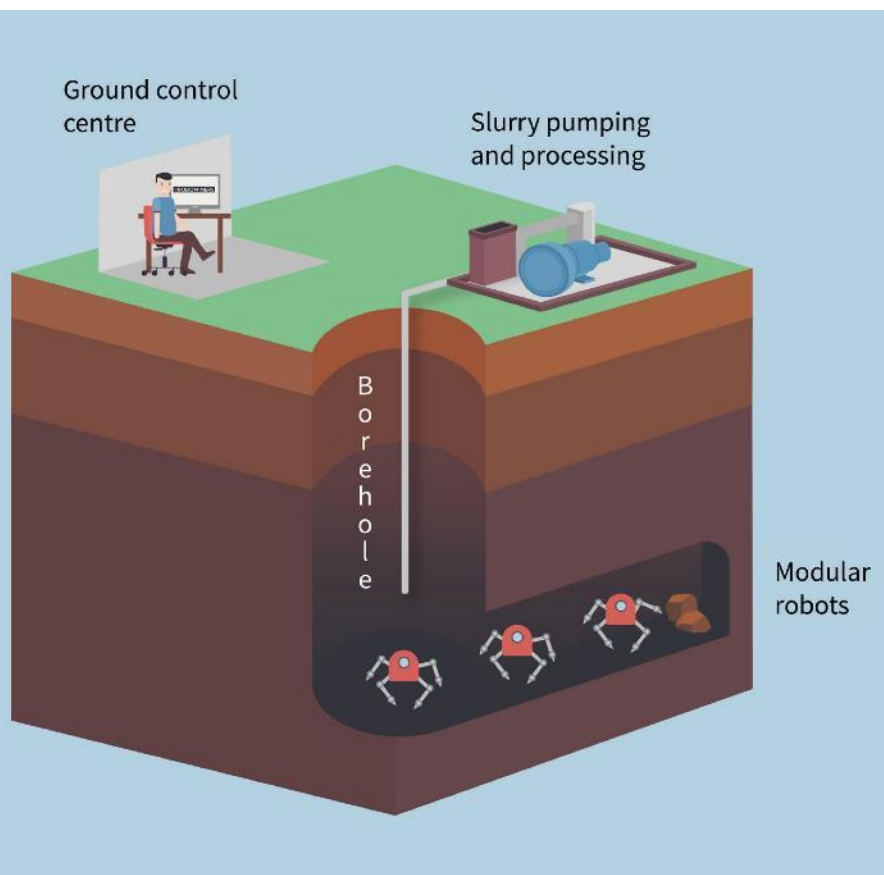
TOPIC 3

Innovative & Sustainable Extraction Practices

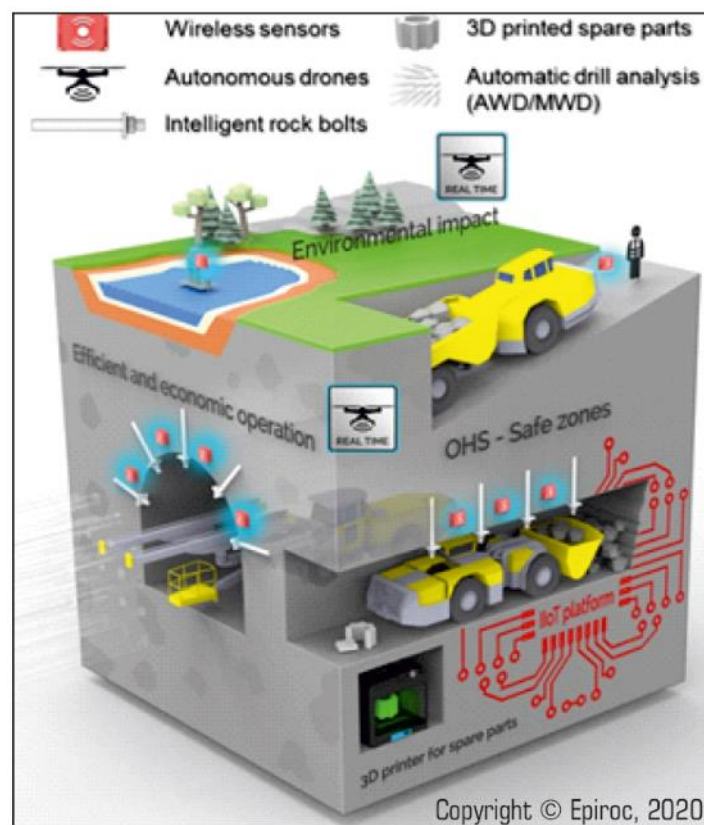
- Resilient Bio-inspired Modular Robotic Miners for mining in inaccessible areas - the Robominer project
- The Digitalized Mining Process - IlluMINEation project
- Earth Observation Data for Extraction Planning
- Future smart mining with micro-organisms

Images

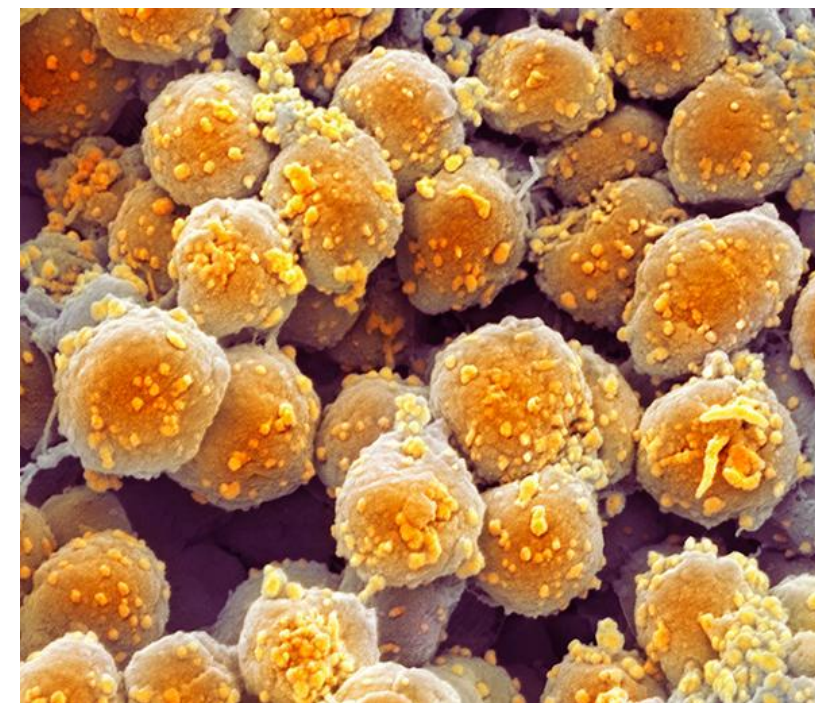
- Robominer



- IlluMINEation



- Future smart mining with micro-organisms



Upon completion of the training programme, participants will:

- Understand the principles of blasting design for safety
- Be able to select the most suitable detonator types to achieve optimum blasting results in relation to the overall excavation and mineral processing process
- Understand the principles of mechanical excavation in underground hard rock mining
- Be able to identify opportunities, strengths and weaknesses of hard rock cutting
- Be able to understand the benefits of Earth Observation data for Extraction Planning
- Be able to identify the opportunities, strengths and threats of a fully digitalized mining process

PLEASE NOTE: FOLLOWING THE GUIDELINES OF EIT RAWMATERIALS PROGRAMME, ALL PARTICIPANTS WILL HAVE TO UNDERGO A SHORT COMPETENCY ASSESSMENT PROCESS AFTER THE COURSE. PARTICIPANTS WHO SUCCESSFULLY PASS THE ASSESSMENT WILL RECEIVE THE CERTIFICATE ON COURSE COMPLETION.

REGISTRATION

Participation fee covering accommodation, meals and all workshop activities:

500 euros + VAT 25%

Online participation fee:

100 euros + VAT

(mandatory payment by 3rd October for all participants)

Applications are encouraged particularly from RIS countries: Armenia, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Georgia, Greece, Hungary, Italy, Kosovo, Latvia, Lithuania, Malta, Moldova, Montenegro, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Turkey, Ukraine.

Apply here: <https://dim-esee.eu/registration-and-fees/>

The workshop will be held at the IUC Dubrovnik and via online platform in parallel.

2022 edition: Innovation in process-oriented orebody characterization

- 38 participants in total (22 on-site and 16 online)
- PhD candidates and postdoctoral researchers employed at universities or in industry, engineers from various companies, representing 21 different institutions from 18 different countries





Contact
Us

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