



TECHNISCHE UNIVERSITÄT
BERGAKADEMIE FREIBERG

Die Ressourcenuniversität. Seit 1765.



The 4th International Summer School

From Dredging to Deep-Sea Mining

2 – 6 July 2018



Organizing Committee

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Contents

Welcome	4
About Summer School	5
How to participate	7
Program	8
Map of Freiberg	9

Welcome

Being a University of Resources and the oldest existing mining science university in the world, TU Bergakademie Freiberg focuses comprehensively on securing the supply of natural resources along the entire value-added chain. Today we prepare to meet challenges in mining industry which might be ‘on the table’ in the nearest future. Geological uncertainty, high and growing costs for exploration, exhausting easy-to-access mineral deposits, worsening economic feasibility of mine development, the need for critical raw materials – all this compels to pay our attention to the mineral wealth of the seas and oceans, reserves of which are becoming increasingly important.

This year for the fourth time in TU Bergakademie Freiberg we are offering the Summer School “From Dredging to Deep-Sea Mining”, which is aimed at improving the knowledge of students and young researchers from different countries in new promising field of human activity – deep-sea mining. It will enable young generation of miners to become acquainted with advanced technologies for exploration, mining and processing of seabed minerals, as well as with environmental, economical, legislative and political aspects of deep-sea mining. The Summer School will be realized within the context of seminars and practical trainings. Visits to German mining companies are planned as well.

As a result we expect the fostering of students’ knowledge and development of their interest on the considered issues, the strengthening of international relations between participants involved, analysis of the state of the mining industry and ways of its further development on a global scale. We hope this Summer School become a new good tradition, which will enable to make a positive contribution to the benefit of the society.



Prof. Dr. Carsten Drebenstedt

Chair of Surface Mining,
Coordinator of the Summer School

About the Summer School

Aims

The Summer School “From Dredging to Deep Sea Mining” is an initiative aimed at the development and promotion of both theory- and practice-based studies. By bringing together the leading scholars in the field, the School aims to become a centre for the elaboration and dissemination of knowledge in deep-sea mining, covering



such aspects as methods and technologies for mining and processing of underwater minerals, marine exploration, and environmental, economical, legislative and political aspects of deep-sea mining.

The School is organised in collaboration with the following universities and organisations: GEOMAR Helmholtz Centre for Ocean Research (Germany), Technical University



Kosice (Slovakia), University of Petrosani (Romania), National Mineral Resources University (Russia), Institute of Oceanology – Bulgarian Academy of Sciences (Bulgaria), and State Higher Education Institution "National Mining University" (Ukraine).

Who should attend?

The Summer School is an ‘advanced studies’ initiative aimed at participants who have some familiarity with mining and are interested to further explore the topic and learn about the most recent developments in underwater mining.



Concept and approach

Self-development through acquiring knowledge and creative self-expression is the main principle of the Summer School. Active participation, open dialogue, discussion, and joint exploration generate learning and enrichment for all participants: experienced scholars (lecturers), young researchers and students. Intensive practice training and the visiting of mining companies are planned. Moreover, the School will acquaint foreign participants with German culture, main principles of educational process and research, and advanced research equipment.





Fees

The Summer School will be run with a view to providing an exceptional event at minimum cost to participants – 100€ per person. The fees are kept at the minimum necessary to make the Summer School economically viable and cover seminar materials, coffee-brakes and excursions.

Accommodation and services

Costs of accommodation, food and transport (except of planned excursions) are covered by participants on their own. The organizers of the Summer School provide possible supporting in search of accommodation (in hotels and guesthouses) and in obtaining other required services.

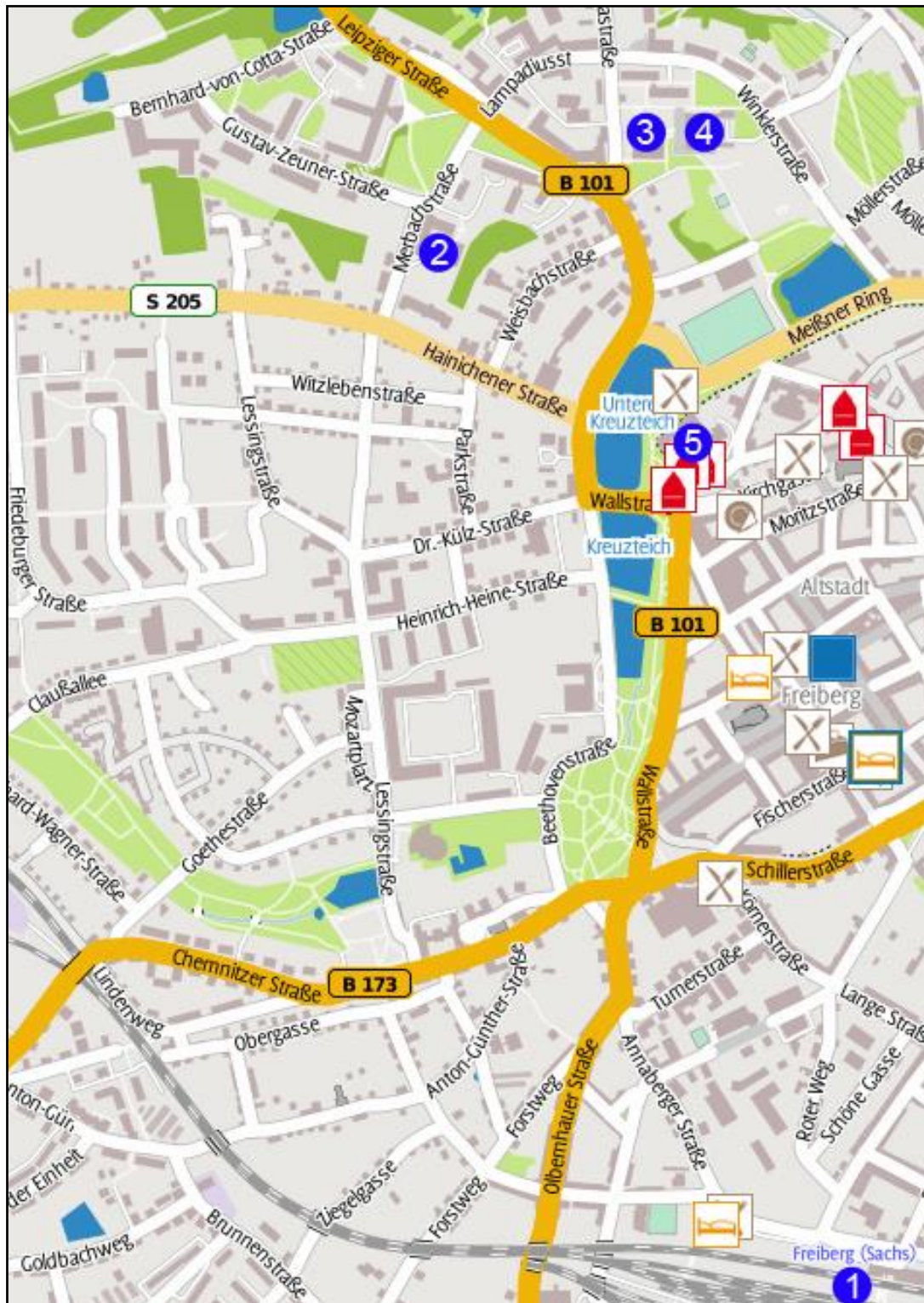
How to participate

If you are a student or a PhD Student, to participate you should: contact a responsible person in your organization, fill required form (see Annex), and pay the fee (100 €). Detailed information you can obtain from the contact person in your organization or from the organizers of the Summer School via e-mail taras.shepel@mabb.tu-freiberg.de.

Program

Sunday (01.07.18)		ARRIVAL OF PARTICIPANTS
14.00–15.00	Familiarity with Freiberg	
15.00–18.00	Visiting the Mineral Exhibition «Terra Mineralia»	
Free time		
Monday (02.07.18)		SYSTEM “LAND AND WATER”. SPECIFICITY OF DEPOSITS
9.00 – 10.00	Opening of the Summer School. Approval of the work program. Assignment of tasks	
10.15 – 11.45	Topic 1: Mining in Shallow Water	
11.45 – 13.00	Lunch time	
13.00 – 14.30	Topic 2: Specificity of Deep-Sea Deposits of Mineral Resources. Economic Background and Legal Aspects of Deep-Sea Mining	
15.00 – 16.30	Work in groups	
Free time		
Tuesday (03.07.18)		UNDERWATER MINING
8.30 – 10.00	Topic 3: Exploration of Deep-Sea Minerals	
10.15 – 11.45	Topic 4: Mining System on Seabed	
11.45 – 13.00	Lunch time	
13.00 – 14.30	Topic 5: Vertical Transport Methods	
15.00 – 16.30	Work in groups	
Free time		
Wednesday (04.07.18)		VISITING MINING COMPANIES
8.30 – 15.00	Excursion to mining companies	
15.00 – 16.30	Work in groups	
Free time		
Thursday (05.07.18)		VISITING GEOMAR HELMHOLTZ CENTRE FOR OCEAN RESEARCH (in Kiel)
6.00 – 13.00	Departure from Freiberg – arrival to Kiel	
13.00 – 17.00	Familiarization with: marine exploration methods and equipment; research vessels; current investigations of deep-sea minerals in GEOMAR.	
17.00 – 24.00	Departure from Kiel – arrival to Freiberg	
Free time		
Friday (06.07.18)		PROCESSING OF DEEP-SEA MINERALS. ENVIRONMENTAL ASPECTS OF DEEP-SEA MINING
8.30 – 10.00	Topic 6: Processing of Deep-Sea Minerals	
10.15 – 11.45	Topic 7: Environmental Aspects of Seabed Mining	
11.45 – 13.00	Lunch time	
13.00 – 14.30	Presentations by participants. Summarizing the results. Completion of the Summer School	
DEPARTURE OF PARTICIPANTS		

Map of Freiberg



- 1 – Railway Station;
- 2 – Institut für Bergbau und Spezialtiefbau (Summer School);
- 3 – Library;
- 4 – Mensa (refectory);
- 5 – Mineral Exhibition “Terra Mineralia”

Glück auf!
See you in Freiberg!

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