Contents

l	Future Mine Project	1
1	Mining Scenarios: In Search of a Future for Mining	3
II	Internationalization/Globalisation of Mining Education	7
2	Mining and Mining Education in Afghanistan	9
3	New Development of Mining Education in Asia – AJ-BCEP School on the Move Program	24
111	New Developments and Challenges in Mining Education	29
4	Safety and Health Leadership and Human Factors	31
5	Role of Minerals Education Institutions in Improving Small Scale Mining – A Namibian Case Study	39
6	Measuring the Effectivity of a Combined Teaching and Learning Approach on the Professional Performance, Acquisition of Competences and Students' Motivation	45
7	The Biohydrometallurgical Centre for Strategic Elements – A modern Approach of Interdisciplinary Research and Education in a University Environment	51
8	Globalisation, Chances or Challenges for Minerals Education: The Case of Polytechnic of Namibia	59
9	Work Integrated Learning for South African Mine Surveyors, a Seven Year Journey	67
IV	New Strategies, Evaluations and Re-Assessments on Deposits	75
10	An Evaluation of Mars Water Extraction Mission	77
11	Sustainability Oriented Assessment of Rare Earth Values: a User Cost Approach	85
12	Redefining Deposit's Reserves by Advanced Mineral Processing Approaches	93
13	Setting the REE Industry-Specific Criteria and their Significant Role in the Viability of Rare Earth Underground Mining Projects	101
V	New Technologies in Mining Engineering	109
14	Rock Fracture Network Modelling and Simulation with Particular Application to Hot Dry Rock Geothermal Reservoirs	111



15	The Performance of a Through-the-Earth (TTE) Magnetic Communications System (MCS) a Two Tetal/non-Metal Mines in the United States	it 123
16	Bucket Design for Deep-Sea Excavation of Cohesive Sediments	133
VI	Geotechnical Engineering and Mine Safety Optimization	141
17	Development of a Geotechnical Data Management System for Mining Operations	143
18	Effect of Mining Rate on Seismic Activity	151
19	Optimization of Design and Operation of Mine Ventilation Systems	159
20	Dust Suppression on Open Pit Haul Roads – A Field Study	169
VI	I Poster Session	179
21	INTRAW - International Cooperation on Raw Materials - Developing New Opportunities	181
22	Coal Mine Methane as an Energy Resource for Romania	187
23	Mining in Sensitive Areas: A Case Study of Namibia's Minerals Industry	195
24	Critical Raw Materials in Hungary - a Basic Research Project	201
25	European Union Programme and Activities to Support Sustainable Supply of Raw Materials	205
26	Utilizing Selective Extraction, Crushing and Separation of Sedimentary Mineral Resources	209
27	Diamond Wire Sawing in the Mining Industry	215
28	Considerations on the Possibility to Improve the Supporting of Underground Workings in the Mining Basins from Romania	e 221
29	The Mining Engineering PQM Strategy at a South African Comprehensive University, whos Core Business is the Development of Mining Engineering Technologists for the Southern African Mining Industry through Contact Offering	

241

30 The Young South African Mining Engineer in the 21st Century