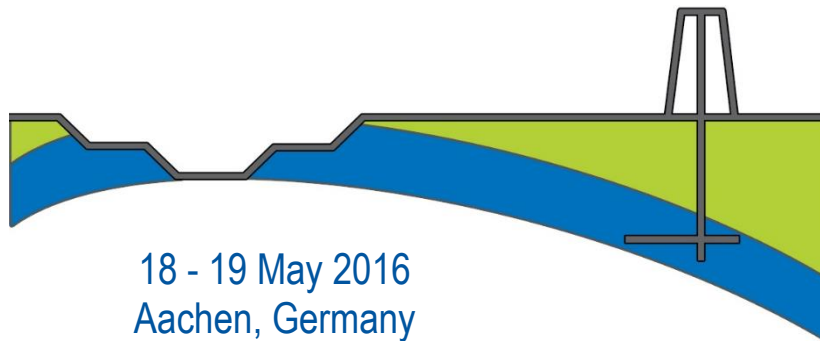


# CONFERENCE PROGRAMME

FIRST INTERNATIONAL CONFERENCE  
**MINING IN EUROPE**



**Tuesday 17 May** (Kármán Auditorium, Eilfschornsteinstr. 15)

	Start
<b>Registration at Kármán Auditorium</b>	16:00
Familiarization presentation hall and equipment	-
Poster installation	18:00

**Tuesday 17 May** (Institute of Mineral Resources Engineering, Wüllnerstr. 2)

<b>Informal Welcome Reception</b>	18:00
	-
	19:00

**Wednesday 18 May** (Kármán Auditorium, Eilfschornsteinstr. 15)

	Start
<b>Registration</b>	08:00
<b>Welcome Coffee</b>	08:00
<b>Welcome (Lecture Hall FO1)</b> Conference Chair Bernd Lottermoser	08:50
<b>Keynote: Dr Frank Bierlein, Qatar Mining, QATAR:</b> Project Generation in Mineral Exploration – from Conceptual Targeting to Resource Definition	09:00
<b>Keynote: Dr Nick Cook, Mawson Resources Ltd, CANADA:</b> Mineral Exploration at All Scales: from the Continent to the Mass Spectrometer	09:30
<b>Keynote: Dr Karen Hanghøj, EIT RawMaterials, GERMANY:</b> EIT RawMaterials, a European Knowledge and Innovation Community in Raw Materials	10:00
<b>Morning Tea</b> <i>Exhibition &amp; Poster Session</i>	10:30

**Wednesday 18 May** (Kármán Auditorium, Eilfschornsteinstr. 15)

<p><b>Session (Lecture Hall FO1): Responsible Mining – Collaborative Opportunities</b>  <b>Chair: Hanghøj (EIT RawMaterials, Germany)</b>  Tröster (University of Ulm, Germany):  <i>Determining Aspects of Institutional Design of Sustainability Initiatives Including the Mining Sector</i></p> <p>Amirkhanian (AUA Center for Responsible Mining, Armenia):  <i>Institutionalizing Responsible Mining: A University-Based Approach</i></p> <p>Preusse (RWTH Aachen University, Germany):  <i>Subsurface Spatial Planning – Challenges for Research and Practice</i></p> <p>Leroy (University of Liège, Belgium):  <i>OreVal – A European Network for Ore Characterization and Valuation</i></p> <p>Novák (Watrads, Czech Republic):  <i>Competence Centre for Effective and Ecological Mining of Mineral Resources (CEEMIR) – Reevaluation of Raw Minerals in the Czech Republic</i></p> <p>Kretschmann (TH Georg Agricola Bochum, Germany):  <i>Cooperation Opportunities Between German and Iranian Mining Companies</i></p>	<p><b>Session (Lecture Hall FO2): Mining Technologies – Real Time Planning</b>  <b>Chair: Glass (University of Exeter, UK)</b>  Bartnitzki (RWTH Aachen University, Germany):  <i>Mining 4.0 – More than Automation</i></p> <p>Buxton (TU Delft, Netherlands):  <i>Real-Time Mining: Sensor Based Continuous Process Control and Optimization in Mineral Resource Extraction</i></p> <p>Behrens (Bruker AXS, Germany):  <i>Process Control Made Easy – Which Technology Do You Prefer?</i></p> <p>Niestroj (RWTH Aachen University, Germany):  <i>Ultra-Wideband Technology for Mining Automation</i></p> <p>Thapa (Sandvik Mining and Construction, Finland):  <i>Integrated Mine Management System</i></p> <p>Dohmen (Dohmen, Herzog &amp; Partner GmbH, Germany):  <i>Information System in the Mining Industry</i></p>	11:00
<b>Lunch</b> <i>Exhibition &amp; Poster Session</i>		12:45
<b>Keynote (Lecture Hall FO1): Dr Corina Hebestreit, Euromines, BELGIUM:</b> EU Raw Materials Production till 2050 – a Critical Outlook		13:45

**Wednesday 18 May** (Kármán Auditorium, Eilfschornsteinstr. 15)

<p><b>Session (Lecture Hall FO1): Responsible Mining – Mine Closure and Environment</b>  <b>Chair: Wedig (VRB, Germany)</b>          Junker (RAG Deutsche Steinkohle AG, Germany): <i>Research and Development in the German Coal Industry – Reflecting on Company Development through the Years</i></p> <p>Beckett (Laurentian University, Canada): <i>Sudbury, Canada – A Lifetime of Healing and Creating a Novel Functional Ecosystem on a Smelter-Impacted Landscape</i></p> <p>Gosse (HeidelbergCement, Belgium): <i>HeidelbergCement’s Biodiversity Strategy and Partnership Approach: A Win-Win for Business and Nature</i></p> <p>Sasaoka (Kyushu University, Japan): <i>Evaluation Method of Soil Conditions in Rehabilitation Area in Consideration of the Effects of Acid Soil on Vegetation in Coal Mines in Indonesia</i></p> <p>Kallmeier (Beak Consultants GmbH, Germany): <i>Temporal and Spatial Prediction of Lignite Mining Waste Rock Pile Stability by Using Artificial Neural Networks</i></p> <p>Van Nes (VITO, Belgium): <i>METALert – An Emergency Response System for Heavy Metals in the Environment</i></p>	<p><b>Session (Lecture Hall FO2): Mining Technologies – Alternative Extraction Methods</b>  <b>Chair: Buxton (TU Delft, Netherlands)</b>          Hamanaka (Muroran Institute of Technology, Japan): <i>Numerical Simulation on Product Gas of Underground Coal Gasification Based on Laboratory Scale Experiment</i></p> <p>Semíková (Watrad, Czech Republic): <i>The Stimulation of Rock Massive</i></p> <p>Zauner (Umwelt- und Ingenieurtechnik Dresden GmbH, Germany): <i>Advances In-Situ Leaching Technology for Uranium – From Innovative Exploration to Optimized Recovery</i></p> <p>Mundry (Caterpillar Global Mining, Germany): <i>Efficient Mining of High Seams with LTCC Operations</i></p> <p>Thote (VNIT, India): <i>Highwall Mining: A New Futuristic Coal Mining Technology for Recovery of Locked Coal</i></p> <p>Haneklaus (RWTH Aachen University, Germany): <i>Energy Neutral Mineral Development Processes – An Overview</i></p>	14:15
<b>Afternoon Tea</b> <i>Exhibition &amp; Poster Session</i>		16:00

**Wednesday 18 May** (Kármán Auditorium, Eilfschornsteinstr. 15)

<p><b>Session (Lecture Hall FO1): Responsible Mining – Health and Safety</b>                  Chair: Hebestreit (Euromines, Belgium)                  Füllenbach (Colorado School of Mines, USA):  <i>Economic Benefits of Mine Safety Improvements</i>                  Hettrich (Becker Mining Systems, Germany):  <i>Small Spaces, Big Machines - Collision Awareness Systems for Hazardous Areas</i>                  Brune (Colorado School of Mines, USA):  <i>Underground Mine Communications Technology</i>                  Hermülheim (Clausthal University of Technology, Germany):  <i>Open Questions of Mine Rescue Hazard Evaluation – How Can Academic Research Assist?</i>                  Rott (PRAKLA Bohrtechnik GmbH, Germany):  <i>Mine Rescue: Drilling Criteria Explained by the Pingyi Rescue Operations in China</i>                  Nazarova (Russian Academy of Sciences, Russia):  <i>Estimation of State and Properties of Coal-Rock Mass Based on Inverse Problem Solution</i></p>	<p><b>Session (Lecture Hall FO2): Mining Technologies – Innovative Machinery</b>                  Chair: Ozkan (Istanbul University, Turkey)                  Stöckmann (VDMA Mining, Germany):  <i>Areas of Expertise of the German Mining Equipment Manufacturers</i>                  Peters (DMT GmbH &amp; Co. KG, Germany):  <i>Special Applications of Optical Borehole Tools for Geotechnical Rock Mass Assessment Under Difficult Mining Conditions</i>                  Roeters (DSM Dyneema, Netherlands):  <i>The Benefit of HMPE Fiber in Mining</i>                  Schroeder (ThyssenKrupp Industrial Solutions AG, Germany):  <i>BARRACUDA – A Revolutionary New Mining Concept</i>                  Mesutoglu (Selçuk University, Turkey):  <i>Evaluations of Inclinator Measurement Results in a Lignite Open-Pit Mine</i>                  Brecht (Martin Engineering GmbH, Germany):  <i>Martin Cleanscrape – A Revolutionary Innovation in Belt Cleaning Technology for the Mining Industry</i></p>	<p>16:30</p>
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**Wednesday 18 May** (Aula Carolina, Pontstr. 7-9)

<p style="text-align: center;"><b>Networking Drinks</b> Dinner</p>	<p>19:00</p>
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**Thursday 19 May (Kármán Auditorium, Eilfschornsteinstr. 15)**

	Start	
<b>Registration</b>	08:00	
<b>Welcome Coffee</b>	08:00	
<b>Keynote (Lecture Hall FO1): Dr Michael Drobniowski, RAG, GERMANY:</b> Mine Water Concept of the RAG AG	08:30	
<b>Keynote: Dr Adam Jarvis, Newcastle University, UK:</b> The Importance and Management of Point and Diffuse Source Pollution in the UK's Abandoned Mining Districts	09:00	
<b>Keynote: Dr Friedrich von Bismarck, GS StuBA, GERMANY:</b> 20 Years of the Governmental Rehabilitation Program in East Germany	09:30	
<b>Morning Tea</b> <i>Exhibition &amp; Poster Session</i>	10:00	
<b>Session (Lecture Hall FO1): Mineral Resources – Exploration</b> <b>Chair: Langefeld (TU Clausthal, Germany)</b> Nykänen (Geological Survey of Finland, Finland): <i>Dynamic Prospectivity Mapping Tools for Mineral Exploration</i>  Beswick (Marriott Drilling Group, UK): <i>Exploration Drilling for a Major Potash Deposit in NE England</i>  Hensler (RWTH Aachen University, Germany): <i>Application of Portable Spectrometers to Mineralogical and Geochemical Exploration: State-of-the-Art, Limitations and Potential</i>  Ellefmo (NTNU, Norway): <i>Quantifying the Potential for Deep Marine Mineral Resources Along the North Atlantic MAR</i>  Knodt (MHWirth GmbH, Germany): <i>A Review of the German Pilot Mining Tests for Marine Minerals in the Late 70's of the Last Century and Future Perspectives for Manganese Nodules</i>  Binder (Clausthal University of Technology, Germany): <i>From Waste to Value – Resource Estimation for Mine Tailings</i>  Krause (Ruhr-University Bochum, Germany): <i>GIS Based Resource Identification and Resource Cadastres for Existing Buildings</i>  Allen (Dassault Systèmes GEOVIA, France): <i>Mining Productivity Re-imagined</i>	<b>Session (Lecture Hall FO2): Mining Technologies – Mineral Processing</b> <b>Chair: Kahraman (Hacettepe University, Turkey)</b> Komnitsas (Technical University Crete, Greece): <i>Production of Alkali Activated Materials from Chalcopyrite Tailings and Industrial Wastes</i>  Rousseau (ERAMET Research, France): <i>Slag Valorisation by Ore Dressing Processes</i>  Palm (Kleemann GmbH – Wirtgen Group, Germany): <i>In-Pit Crushing – Iron Ore Mining in Australia</i>  Sharifi (Imperial College London, UK): <i>Reframing Design Objectives for Fine Grinding Equipment</i>  Borg (PMS GmbH, Germany): <i>How to Combine Better Particle Liberation and Particle Size Reduction with Significantly Less Energy Consumption? High-Velocity Comminution by VeRo Liberator</i>  De Vicente (Ingeteam Power Technology, SA, Spain): <i>Speed Is the Key Factor: Optimizing Grinding Process in Comminution Circuits by Using Variable Speed Drives</i>  Ozkan (Istanbul University, Turkey): <i>Investigation of a Newly Designed Ultrasonically Assisted Flotation Cell</i>  Galetakis (Technical University Crete, Greece): <i>Prediction of the Short-Term Quality Fluctuations of the Nickeliferous Ores and Mineral Fuels Used in LARCO Ferronickel Plant by Using Autoregressive Neural Networks</i>	10:30

**Thursday 19 May** (Kármán Auditorium, Eilfschornsteinstr. 15)

<b>Lunch</b> <i>Exhibition &amp; Poster Session</i>		12:45
<p><b>Session (Lecture Hall FO1): Mineral Resources – Future Mines</b> Chair: Pirard (University of Liège, Belgium)</p> <p>Safirova (United States Geological Survey, USA): <i>Trends in Mineral Production in Europe, 2005-2014</i></p> <p>Lauri (Geological Survey of Finland, Finland): <i>Critical Raw Material Potential in Finland</i></p> <p>Hennig (RWTH Aachen University, Germany): <i>Distribution of By-Products in Coarse Aggregate Production</i></p> <p>Schnug (Julius Kühn-Institut, Germany): <i>The Contribution of Urban Mining to Alleviate Phosphorus Supply Security Concerns</i></p> <p>Langefeld (Clausthal University of Technology, Germany): <i>“Blue Mining” – The Sustainable Future of Mines</i></p> <p>Bartlett (Micon International Co Limited, UK): <i>Why Mines Fail</i></p> <p>Bartkowiak (Independent Coal Industry Advisor, Germany): <i>The Effect of the Commodity Downturn on the Coal Export Industry</i></p> <p>Vinzelberg (RWE Power AG, Germany): <i>The Future of Lignite Mining in North-Rhine-Westphalia</i></p>	<p><b>Session (Lecture Hall FO2): Mining Technologies – Mine Development</b> Chair: Komnitsas (Technical University of Crete, Greece)</p> <p>Neye (Herrenknecht AG, Germany): <i>Update on Mechanized Shaft Sinking</i></p> <p>Benecke (DMT GmbH % Co. KG, Germany): <i>iDeepMon – Intelligent Deep Mine Shaft Monitoring</i></p> <p>Kluge (DBE mbH, Germany): <i>Repository Konrad – Challenges Regarding the Expansion of the Shaft Landing Station</i></p> <p>Katz (GHH Fahrzeuge / HAZEMAG &amp; EPR, Germany): <i>The HRE – A Narrow Tunnel Roadheading System</i></p> <p>Rennkamp (Herrenknecht AG, Germany): <i>New Developments for Tunnel Boring Machines in Mining</i></p> <p>Kahraman (Hacettepe University, Turkey): <i>Predicting the Performance of Transverse Type Roadheaders From the Needle Penetration Index in Mine Roadway Excavation</i></p> <p>Hartlieb (Montanuniversitaet Leoben, Austria): <i>Microwave Irradiation as Means of Alternative rock Extraction Technology</i></p> <p>Sasaoka (Kyushu University, Japan): <i>Quantitative Evaluation and Prediction Method of Cutter Bit Wear for Driving Machine</i></p>	13:45
<b>Afternoon Tea</b> <i>Exhibition &amp; Poster Session</i>		16:00
<b>Award Ceremony (Lecture Hall FO1):</b> Best Technical Paper, Best Scientific Paper, Best Poster, Best Exhibition Stand <b>Closing Remarks</b> Conference Chair Bernd Lottermoser		16:15



## Poster Presentations (Kármán Auditorium, Eilfschornsteinstr. 15)

Buxbaum-Conradi (RWTH Aachen University, Germany): *Compositional Variations of Selected Rock Salt Horizons in Context of an Increase of Deposit Utilization*

Dammers (RWTH Aachen University, Germany): *Evaluation of the New HRE Roadheading Excavator – A Scenario Based Comparison Using Discrete-Event Simulation*

Dammers (RWTH Aachen University, Germany): *Latest Developments in Modularized Rail Haulage Systems - Is the Underground Mining Industry Missing a Chance?*

Evrard (University of Liège, Belgium): *Electromagnetic Investigation of the Pb-Zn Deposit of Lontzen, Belgium*

Greassidis (Ruhr University Bochum, Germany): *Integrated Planning Concept on Post-Mining Land Use for Quang Ninh, Vietnam*

Hosoi (Akita University and Natural Resources of Japan, Japan): *Mine Development, Mine Closure, Community and Activation of Mine Town*

Hunt (University of Liège, Belgium): *Gold Department and Geometallurgical Variability, Certej, Romania*

Ingendahl (Caterpillar Global Mining, Germany): *Operational Experiences of the Cat® GH800B Plow Systems in Very Low Coal Seams at the Ibbenbueren Mine*

Kahraman (Hacettepe University, Turkey): *The Effect of Water Saturation on the Strength of Sedimentary Rocks*

Kamradt (Martin Luther University Halle-Wittenberg, Germany): *Potential Advances in the Comminution of Kupferschiefer-Type Black Shale Ore by the Utilization of Alternative Impact Crushing Technology*

Leroy (University of Liège, Belgium): *Bulk Mineralogy of Particles in Mineral Slurries*

Matshusa (Council for Geoscience, Republic of South Africa): *Occurrence of Potential Harmful Elements (PHEs) around Abandoned Mines in South Africa: A Case Study at Albert Silver Mine, Mpumalanga Province*

Oppong (University of Cape Coast, Ghana): *Management Localisation in Ghanaian Mining Industry: A Case Study of Policy and Practice*

Shungu (University of Goma, D.R. Congo): *Impact of Artisanal Mining in Idjwi Sud (D.R. Congo) According to Environment Protection and Sustainable Development*

Simon (TU Bergakademie Freiberg, Germany): *Mine Water Related Mine Design - Hydrogeochemical Carbonat Buffering and Geochemical Initial Effects to Sediment Liquefaction*

Spürk (RWTH Aachen University, Germany): *Development of an Indicator to Assess Resource Efficiency in Mining*

Sunjay (Geophysics BHU, India): *Capacitively Coupled Resistivity Imaging*

Tetteh (Synergy HR, Ghana): *Impact of Structural Adjustment Programmes on the Ghanaian Mining Industry*

Tsafack (RWTH Aachen University, Germany): *Productivity Improvement in Mining Operation through Flexibility: Which Potential Does it Have?*

Van Nes (VITO, Belgium): *In-Situ Zinc Bioprecipitation with Glycerol and Vegetable Oil in a High-Flow Aquifer*

Vardanyan (NAS of Armenia, Armenia): *Chemical Oxidation Integrated into Bioleaching of Pyrite and Chalcopyrite Using Immobilized Biomass*

Volkmann (RWTH Aachen University, Germany): *Deep-Sea Mining - Giving Inside into the Blue Mining Project with Special Focus on the Exploitation of Polymetallic Nodules*

Vossen (RWTH Aachen University, Germany): *Seascape as a Sustainable Transformation of the Lignite Surface Mine Inden*

Zarjabad (University of Birjand, Iran): *Archaeometallurgical Research in Eastern Iran (South Khorasan) Based on Archaeological Evidence Case Study: Mesgaran and Arabkhaneh*



## **Exhibition Stands (Kármán Auditorium, Eilfschornsteinstr. 15)**

Becker Mining Europe GmbH

Blue Mining – EU FP7 Project on breakthrough solutions for sustainable deep sea mining

Caterpillar Global Mining Europe GmbH

Deilmann-Haniel Mining Systems GmbH

DMT GmbH & Co. KG

DOHMEN, HERZOG & Partner GmbH

Georesources

HeidelbergCement

Herrenknecht

IMR – Institute for Mineral Resources Machine Technology (RWTH Aachen University)

Kalenborn Kalprotect GmbH & Co. KG

KIC/EIT Raw Materials

Martin Engineering

Mining Report GLÜCKAUF

OREVAL

Sandvik

SEEBACH GmbH

Springer Verlag / BHM

SST Prof. Dr.-Ing. Stoll & Partner Ingenieurgesellschaft mbH



### Aachen City Map with AIMS Locations and selected Hotels

