Topics at TU Bergakademie Freiberg

Field	Topic	Supervisor	Description	Duration
Mining Engineering	Ground Movements in Mining Areas: Monitoring and Prediction Methods	Dr. Teras Shepel	The visiting researcher will, together with scientists from the Institute of Mine Surveying and Geodesy at TU Bergakademie Freiberg, compare the state of the art in methods for prediction and monitoring of mining-induced ground movements in Germany and Uzbekistan, and develop recommendations for future collaboration in this scientific field.	2 months
Environmental Impact Management in Mining	Bodenbewegungen in Bergbaugebieten: Monitoring und Prognosemethoden	Prof. Jörg Benndorf	Der Gastwissenschaftler wird gemeinsam mit Wissenschaftlern des Instituts für Markscheidewesen und Geodäsie der TU Bergakademie Freiberg den SOTA zu Methoden der Prognose und des Monitoring bergbauinduzierter Bodenbewegungen in Deutschland und Usbekistan gegenüberstellen und Empfehlungen zur zukünftigen Zusammenarbeit in diesem Wissenschaftsgebiet erarbeiten.	2 months
Geodesy	Multi-Sensor Systems for Deformation Monitoring in Geo-engineering	Prof. Jörg Benndorf	The researcher will work sith Terrestrial and hand held Laser Scanner combined with RGB Cameras to establish geodetic monitoring concepts for deformation control in mining and construction applications.	2 months
Geometallurgy	Scanning Electron Microscope Automated Mineralogy (SEM-AM) Mineral Liberation Analysis (MLA) on processed metal ores and mineral resource exploration targets	Prof. Bernhard Schulz	Colleagues and guests from Usbekistan may send 12 samples per project several weeks previous to the intended research stay. This is necessary for preparation of samples. During the resaerch stay in our laboratory these samples will be analysed by SEM-AM methods and data extraction will be performed and trained. This offer concerns geoscientists and mineral processing engineers.	2 months
Mining Economics	*Technical and economic analysis of the key criteria for the transition to in-pit crushing and conveying (IPCC) technology and the derivation of generalised decision-making rules.*	Prof. Martin Kreßner	Objective of the visiting researcher's stay at the Chair of Opencast Mining and Reclamation is to draw on the Chair's extensive experience in process modelling and, in collaboration with an international manufacturer of mining machinery and equipment, to develop practical decision-making criteria for the introduction of IPCC technology, using Uzbek opencast mines as a case study.	2 months

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