June 7th 2024, ZeHS, Winklerstraße 5, 09599 Freiberg				
Time	**Speaker**	**Affiliation**	**Topic**	**Chair**
09:00	**Greeting**			
09:10	**Keynote Presentation**			**Julien Göthel**
9:10 – 9:40	Dr. Peter Steinbach	Team Lead Helmholtz AI Consulting, Helmholtz Center Dresden-Rossendorf		
09:40 – 10:20	**Oral Presentations: Session 1 – Material Science I**			**Julien Göthel**
09:40	Nina Oehlsen	Institute of Nanoscale and Biobased Materials, TUBAF	Replacing commodity plastics: Using *Aspergillus niger* mycelium biomass as a new engineering material with tunable mechanical properties	
10:00	Abid Shah	Institute for Machine Elements, Design and Manufacturing, TUBAF	Wire arc additive manufacturing (WAAM) of copper-based alloys and bi-material WAAM	
10:20 – 11:05	**Poster Session 1 and Coffee Break**			
A1	Benjamin Monneron	Institute of Bioscineces, Workgroup Environmental Microbiology, TUBAF	Biodismantling – advance of a new biotechnology for recycling of electronic waste	
A2	Cristian Felipe Jorquera Román	Institute of Bioscineces, Workgroup Environmental Microbiology, TUBAF	Transcriptomic response of *Acidiphilium acidophilum* CJR1, an arsenite-oxidizing autotrophic acidophile to As(III): A glimpse into its arsenite oxidizing and heterotrophic lifestyle	

A3	Luise Malik	Institute of Bioscineces, Workgroup Biohydrometallurgy & Microbiology, TUBAF	Anaerobic iron reduction by *Metallosphaera prunae* to recover base metals from limonitic laterites
A4	Volker Göhler	Institute of Computer Science, TUBAF	Insights into Understanding and Learning in University-Level AI Education: Graph Convolutional Network-Based Analysis of Concept Maps in a Multidisciplinary Classroom
A6	Amir Mohammad	Institute of Experimental Physiscs, TUBAF	Ionic polymer electrolyte for aluminium batteries
A8	Hannes Stapf	Institute of Nanoscale and Biobased Materials, TUBAF	Aptamer Biofunctionalization for MEMS Biosensors
A9	Samaneh Mollashahi	Institute of Thermal Engineering, TUBAF	Using of previously unused substrates in the production of biogas and biomass as a renewable energy source for Saxony
A10	Deepak Varma Thota	Institute of Thermal Engineering, TUBAF	Sustainable additively manufactured high-temperature materials for hydrogen combustion processes
A11	Mohsen Mollashahi	Institute of Geotechnics, TUBAF	Environmental Risks and Costs of Surface Mining
11:05	**Keynote Presentation**		**Alexander Weiß**
11:05 – 11:50	Dr. Dirk Wilken	Head of Knowledge and Technology Transfer, University Leipzig	
11:50 – 12:30	**Oral Presentations: Session 2 – Bioinformatics**		**Alexander Weiß**
11:50	Maximillian Jugl	Institute for Medical Informatics, Statistics and Epidemiology, University Leipzig	Gecko: generation and mutation of realistic identification data at scale for record linkage evaluation

12:10	Christoph Bloß	Helmholtz Institute for Resource Technology, Freiberg	Differential Expression Analysis of Next-Generation Sequencing Data in Phage Display Trials: A Bioinformatics Approach for Recycling Rare Earth Elements from Fluorescent Light Bulbs
12:30 – 13:30	**Break**		
13:30 – 14:50	**Oral Presentations: Session 3 – Material Science II**		**Yongzhen Lin**
13:30	Jenny Köckritz	Institute for Machine Elements, Design and Manufacturing, TUBAF	Effect of roughness on the structure and fatigue life of topology optimized parts
13:50	Tatiane Isabel Hentges	Institute for Mineral Processing Machines and Recycling Systems Technology; Civil and Urban Construction Engineering Department, University of São Paulo, TUBAF	Electrodynamic fragmentation as treatment for concrete comminution
14:10	Sahra Homaee	Helmholtz Institute for Resource Technology, Freiberg	Investigations on Carbon Dioxide Sequestration through Wet Carbonation of Wollastonite
14:30	Junnile Romero	Helmholtz Center Dresden-Rossendorf; Helmholtz Institute for Resource Technology, Freiberg	Valorization of Recyclable Materials from Waelz Slag

14:50 – 15:45	**Poster Session 2 and Coffee Break**		
B1	Konrad Burkmann	Institute of Physical Chemistry, TUBAF	Investigation of the Potential for Hydrogen Storage in a Portfolio of Selected Boranates by Calorimetry and other Methods
B2	Naiema Shirafkan	Faculty of Business Administration, Chair of Innovation and Risk Management, TUBAF	Competitive Dynamics in Blockchain-Based Supply Chains Under Cryptocurrency Volatility: A Game Theory Approach
B3	Szymon Kwiecień	Institute for Metal Forming, TUBAF	Correlation of Digital Twin and roll surface sensor results for AZ31 alloy in TRC process
B4	Ali Navid	Institute of Thermal Engineering, TUBAF	Combustion, emission, and performance analysis of a Methane engine in experiment and simulation
B5	Alexander Weiß	Institute of Analytical Chemistry, TUBAF	Determination of Carbohydrate Receptor Complex Stabilities Using High-Resolution Native Mass Spectrometry
B6	Md Naziat Hossain	Institute of Nonferrous Metallurgy and High-Purity Materials, TUBAF	Utilization of calcium- and zinc-containing wastewater treatment precipitates as fluxes for the sustainable pyrometallurgical processing of metal-rich fine-grained waste streams
B7	Julia Richter	Institute of Theoretical Physics, TUBAF	Raman Spectroscopy and Photoluminescence Studies on Recyclate-based MgO-C Composites
B8			
B9	Sebastian Pose	Scientific Diving Center, TUBAF	3D printing of geopolymer for the conversation of underwater wracks
	Andrej Kačenka	Institute of Electrical Engineering, TUBAF	Simulation of a Power-Steering Motor Control Technique by various simulation tools

B10	Shalini Singh	Helmholtz Center Dresden-Rossendorf	Towards cost effective production of siderophore (Desferrioxamine B) for metal recovery applications	
15:45 – 16:45	**Oral Presentations: Session 4 – Batteries**			**Betty Fuhrmann**
15:45	Bastian Wiggershaus	Institute of Analytical Chemistry, TUBAF	Micro-Discharge Optical Emission Spectroscopy – On-site monitoring of the lithium hydroxide process chain	
16:05	Laura Buarque Andrade	Helmholtz Institute for Resource Technology, Freiberg	Understanding the Timelines of Developing a By-Product Mining Operation: the case of nickel cobalt (and Copper)	
16:25	Mohammad Mostafizar Rahman	Institute of Experimental Physics, TUBAF	Impurity Effects of $AlCl_3$ on the Performance of Polyamide-Ionic-Liquid-based Polymer Electrolytes for Aluminium Batteries	
16:45 - 17:00	**Closing Remarks**			