



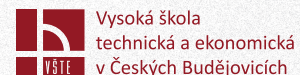
METAL[®] 2026

35th International Conference on Metallurgy and Materials

CONFERENCE PROGRAMME

May 5 - 7, 2026

OREA Congress Hotel Brno, Czech Republic, EU



TANGER Ltd.
The Institute of Technology and Business in České Budějovice
VSB - Technical University of Ostrava
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PLENARY SPEAKERS

Ing. Šárka MIKMEKOVÁ, Ph.D.	Institute of Scientific Instruments of the CAS, Brno, Czech Republic, EU
prof. dr hab. inž. Mariola SATERNUS	Silesian University of Technology, Katowice, Poland, EU

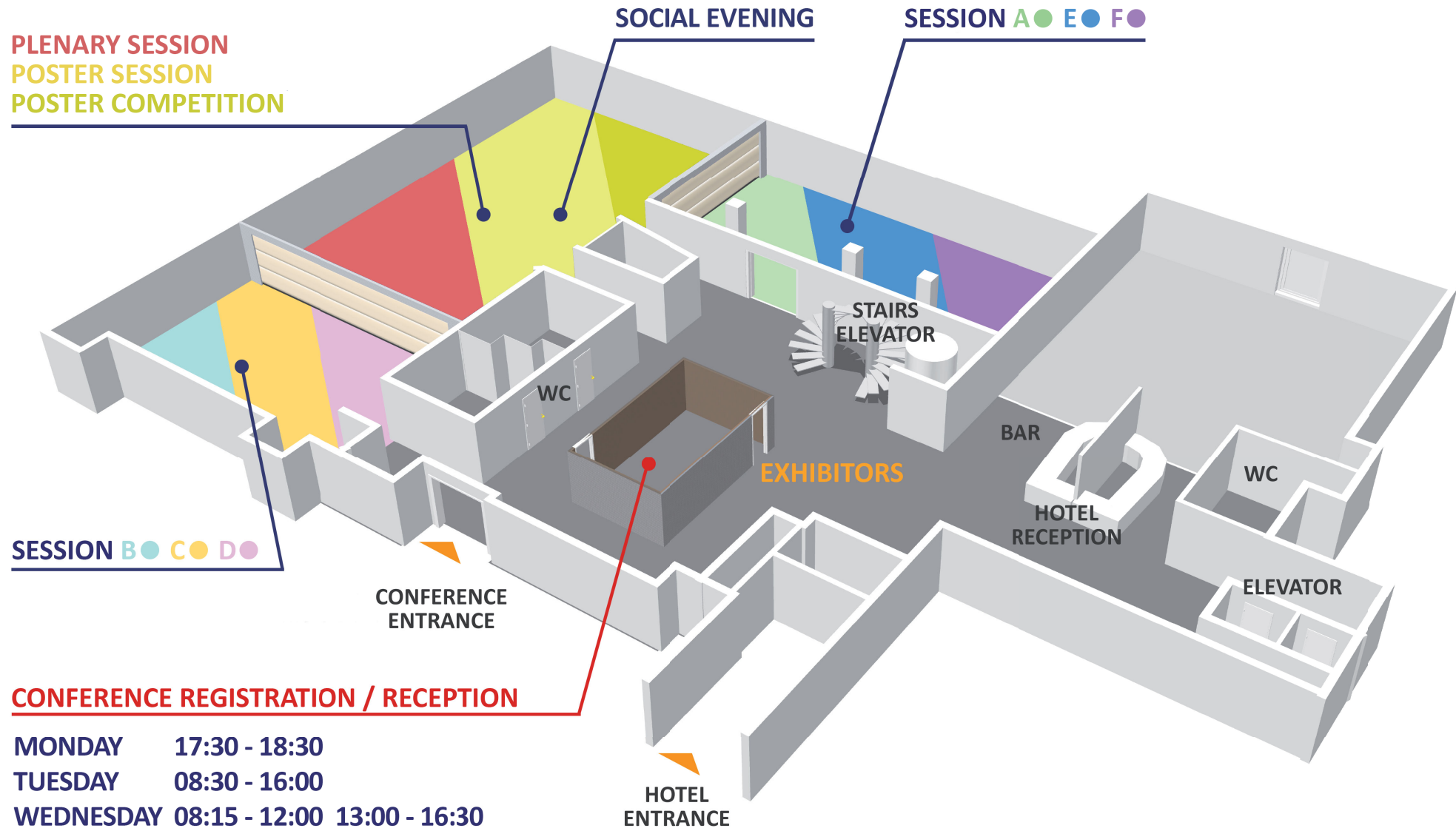
INVITED SPEAKERS

dr hab. inž. Tomasz MERDER, prof. PŚ	Silesian University of Technology, Katowice, Poland, EU
Hasan KOTAN, Ph.D.	Bursa Technical University, Turkey
Assoc. Prof. RNDr. František LOFAJ, DrSc.	Slovak Academy of Sciences (IMR SAS) in Kosice, Slovakia, EU
Dr. Praveenkumar KESAVAN	VSB-Technical University of Ostrava, Czech Republic, EU
Dr-Ing Michel Kalenga WA KALENGA	University of Johannesburg, Republic of South Africa

CONFERENCE SCHEDULE

Time	MONDAY, May 4	TUESDAY, May 5	WEDNESDAY, May 6	THURSDAY, May 7
8:00			REGISTRATION 8:15 - 12:00, 13:00 - 16:30	REGISTRATION 8:45 - 10:00
9:00		REGISTRATION 8:30 - 16:00	C (8:40 - 10:20)	E (8:40 - 10:20)
10:00		CONFERENCE OPENING	B (09:00 - 11:00)	F (09:00 - 10:40)
11:00		PLENARY SESSION (10:15 - 11:45)	COFFEE BREAK 10:20 - 10:40	
12:00		LUNCH 11:45 - 13:00	C (10:40 - 12:20)	LUNCH 11:00 - 12:00
13:00			E (10:40 - 12:20)	
14:00		D (13:00 - 14:20)	LUNCH 12:20 - 13:20	
15:00		A (13:00 - 14:40)	C (13:20 - 14:40)	
16:00		COFFEE BREAK 14:20 - 15:00	E (13:20 - 14:40)	
17:00		B (15:00 - 16:40)	COFFEE BREAK 14:40 - 15:00	
18:00	REGISTRATION 17:30 - 18:30	A (15:00 - 16:00) BREAK	D (15:00 - 16:20)	
19:00		E (16:10 - 17:50)	E (15:00 - 16:20)	
20:00		SOCIAL EVENING - Hotel restaurant 20:00 - 23:00	BREAK	
			POSTER SESSION (16:40 - 18:00)	
			BEST POSTER COMPETITION (18:00)	
			DINNER 18:00 - 20:30 Hotel restaurant	

SUBJECT TO CHANGE - PLEASE CHECK WWW.METALCONFERENCE.EU/EN/CONFERENCE-PROGRAMME



CONFERENCE REGISTRATION / RECEPTION

MONDAY	17:30 - 18:30
TUESDAY	08:30 - 16:00
WEDNESDAY	08:15 - 12:00 13:00 - 16:30
THURSDAY	08:45 - 10:00

10:00 CONFERENCE OPENING / PLENARY SESSION

10:15 **PS1** Pushing the Limits of SEM in Materials Science: Slow Electrons, Intelligent
45' Signal Filtering, and Next-Generation Detection
MIKMEKOVÁ Šárka **INVITED**
 Institute of Scientific Instruments of the CAS, Brno, Czech Republic, EU

11:00 **PS2** Recovery of Valuable Metals from Waste Electrical and Electronic
45' Equipment: Technologies and Challenges
SATERNUS Mariola **INVITED**
 Silesian University of Technology, Gliwice, Poland, EU

11:45 - 13:00 LUNCH

SESSION D

SURFACE ENGINEERING

13:00 **D1** Structure, Mechanical, Electrical, Thermal and Tribological Properties of the Com-
 positionally Complex DC Magnetron Sputtered (NbMoTaW)_{100-z}-(Cn)_z Coatings
LOFAJ František **INVITED**
 Institute of Materials Research of the SAS, Košice, Slovakia, EU

13:20 **D2** Effect of Cycling and Stirring Parameters on Surface Evolution of Ti-6Al-4V
 Alloys by Plasma Electrolytic Polishing
BOLAT Çağın
 Samsun University, Samsun, Turkey

13:40 **D3** Production of Nickel and Copper-Containing PETG and PLA Polymers
 for Electromagnetic Interference Shielding
YENER Suayb Cagri
 Sakarya University, Sakarya, Turkey

14:00 **D4** Effect of Aluminizing on the Surface Performance of Zr-Added CoCrFeNi
 High-Entropy Alloys
YENER Tuba
 Sakarya University, Sakarya, Turkey

SESSION A

ADVANCED TECHNOLOGIES IN IRON, STEEL AND FOUNDRY PRODUCTION

A1 Research of Porous Plug Slot-Type of a New Design - Physical and Numerical
 Modeling
MERDER Tomasz **INVITED**
 Silesian University of Technology, Katowice, Poland, EU

A2 Improving the Design of a 6-Strand Tundish for Production of Clean Steels
 through Virtual Prototyping and Simulations
KRISHNAPISHARODY Krishnakumar
 Saarstahl AG, Völklingen, Germany, EU

A3 Modeling Scrap Composition in EAF and BOF Steelmaking Using State Space
 Models
ZHOU Yiqing
 KU Leuven, Leuven, Belgium, EU

A4 Pore-Scale Simulation of Liquid Metal Infiltration into Ceramic Foam Filters
WERZNER Eric
 TU Bergakademie Freiberg, Freiberg, Germany, EU

14:20 **A5** Characterization of Dust from Pig Iron Desulphurization Units
LANZERSTORFER Christof
 University of Applied Sciences Upper Austria, Wels, Austria, EU

14:20 - 15:00 COFFEE BREAK

SESSION B

METAL FORMING

- 15:00 **B1** Experimental and Numerical Investigation of Strain-Rate and Temperature-Dependent Flow Behaviour of 1.7139 and 1.1303 Steel Alloys
HAMMES Matthias
Leibniz University Hannover, Institute of Forming Technology and Machines, Hanover/Garbsen, Germany, EU
- 15:20 **B2** Metal Surface Quality Drastically Changes Cooling Rate
POHANKA Michal
Brno University of Technology, Brno, Czech Republic, EU
- 15:40 **B3** Modeling Jominy End-Quench Behaviour of Rail Steel and Aluminothermic Weld Metal
ERNST Christian
TU Bergakademie Freiberg, Institute of Thermal Engineering, Freiberg, Germany, EU
- 16:00 **B4** Phase-Transformation-Driven Thermomechanical Processing of Novel Zirconium Alloys
STRNAD Adam
Charles University, Prague, Czech Republic, EU
- 16:20 **B5** Improving FEM Accuracy in Hot Forging Simulations through Hydraulic Press Power Limit Curve Characterisation
MAGHINI Davide
University of Ferrara, Ferrara, Italy, EU

- 15:00 **A6** Improvement of the Technology for Extracting Zinc Compounds from Steel Smelting Dust
MATKARIMOV Sokhibjon
Tashkent State Technical University, Tashkent, Uzbekistan
- 15:20 **A7** Recycling of Fine Scrap and High-Alloy Steel Waste by Electroslag Melting
KOSTETSKYI Yurii
E.O. Paton Electric Welding Institute, Kyiv, Ukraine
- 15:40 **A8** New Parameters Discovery Using AI-Artificial-Intelligence, High Performance Computing – Robotics Titanium Bi-Phasic Extrusion
OLARU Paul - SCO Consulting CH-Luzern, Luzern, Switzerland

SESSION E

NON-FERROUS METALS AND ALLOYS

- 16:10 **E1** Tribocorrosion Behaviour of Additively Manufactured Titanium Alloys: Mechanisms, Damage Evolution, and Mitigation
KESAVAN Praveenkumar **INVITED**
VSB – Technical University of Ostrava, Ostrava, Czech Republic, EU
- 16:30 **E2** TEM Study of Rapidly Solidified Al–Li-Based Alloys
CIESLAR Miroslav
Charles University, Prague, Czech Republic, EU
- 16:50 **E3** Inhomogeneity in Continuous Casting of EN AW 1050A Aluminum Alloy with a Small Zr Addition
SEDLÁČEK Jan - Brno University of Technology, Brno, Czech Republic, EU
- 17:10 **E4** Numerical Investigation of Solidification Behavior of Al-4.5Cu Alloy Using a Zn-graphite Foam Composite PCM Chiller
NOOHI Zohrehsadat
University of Padova, Vicenza, Italy, EU
- 17:30 **E5** Fracture Mechanisms of Metallo-Ceramic Functionally Graded Material Based on Numerical Simulations
SZYMKIEWICZ Krzysztof
Cracow University of Technology, Cracow, Poland, EU

TUESDAY, MAY 5

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20:00 - 23:00 SOCIAL EVENING WITH TASTING OF WINES FROM SOUTH MORAVIA - HOTEL RESTAURANT



WEDNESDAY, MAY 6

SESSION C

STEELS, PROPERTIES, STEEL PRODUCTS, TESTING

- 08:40 **C1** Influence of Solute Element and Ceramic Particle Additions on Grain Growth and Hardness of Nanocrystalline 304L Stainless Steel
KOTAN Hasan **INVITED**
Bursa Technical University, Bursa, Turkey
- 09:00 **C2** The Process of Damage Accumulation Construction Materials Produced Using Additive Manufacturing Technologies
SKÓRA Cyprian - Opole University of Technology, Opole, Poland, EU
- 09:20 **C3** Investigating Microstructural Influences on Edge Cracking during Cold Rolling of DP980 Dual-Phase Steels: A Combined Deep Learning and Micro-Finite Element Study
THOOL Khushahal - Sunchon National University, Suncheon-Si, Republic of Korea
- 09:40 **C4** Temperature-Dependent Displacement Efficiency in Resonance-Controlled Ultrasonic VHCF Testing of Duplex Stainless Steel EN 1.4462
GARALIS Lukas - Vilnius Gediminas Technical University, Vilnius, Lithuania, EU

SESSION E

NON-FERROUS METALS AND ALLOYS

- E6** Tuning the SERS Performance of Nanoporous Copper via Electrodeposition Parameters
SCAGLIONE Federico
University of Turin, Turin, Italy, EU
- E7** Harmonic Grain Structure in Zinc Alloy Containing Magnesium and Silver
MINÁRIK Peter
Charles University, Prague, Czech Republic, EU
- E8** Room-Temperature Superplasticity in a Biodegradable Zn-based Alloy
SAKSL Karel
Technical University of Košice, Košice, Slovakia, EU
- E9** Energy and Environmental Study of Lead Smelting via Ausmelt Process
PATRONOV Georgi
Paisii Hilendarski University of Plovdiv, Plovdiv, Bulgaria, EU

SESSION C**STEELS, PROPERTIES, STEEL PRODUCTS, TESTING**

- 10:00 **C5** Dynamic Recrystallisation Kinetics Effect on the Mechanical Properties of 2205 Duplex Stainless Steel (DSS)
GONYA Elvis
University Johannesburg, Johannesburg, South Africa

10:20 - 10:40 **COFFEE BREAK**

- 10:40 **C6** Comparative Studies of the Properties of Protective Coatings on Steel Sheets
DROZD Kazimierz
Lublin University of Technology, Lublin, Poland, EU
- 11:00 **C7** AI Image Transformation Application: LOM to SEM
ZOUHAR Martin
Institute of Scientific Instruments of the CAS, v. v. i., Brno, Czech Republic, EU
- 11:20 **C8** Optical Microscopy With a Large Field of View, Using Primary Data from a Camera Sensor: A Practical Approach
STYS Dalibor - Institute of Technology and Business in České Budějovice, České Budějovice, Czech Republic, EU
- 11:40 **C9** Application of Small Punch Test for Monitoring Thermal Ageing of Austenitic Primary-Circuit Piping Material of Nuclear Power Plant
ĎURICA Juraj - VUJE a.s., Trnava, Slovakia, EU
- 12:00 **C10** Innovative Heat Treatment Approach to Recover the Microstructure and Mechanical Properties of Cr-Mo-v Rotor Steel
KANDULA Muni Kumar - Triveni Turbine Limited, Bangalore, India

12:20 - 13:20 **LUNCH**

- 13:20 **C11** Development and Characterization of Functionally Graded MoNiCr-316L Materials for Energy Applications
DUCHEK Michal
University of West Bohemia in Pilsen, Dobřany, Czech Republic, EU

SESSION E**NON-FERROUS METALS AND ALLOYS**

- E10** Elemental Assessment of Lead-bismuth Sludge from Copper Smelting With Emphasis on Tellurium Recovery
MATKARIMOV Sokhibjon
Tashkent State Technical University, Tashkent, Uzbekistan
- E11** Graded Titanium Alloys as a Promising Route for Improved Biomedical Materials
BARTHA Kristína
Charles University, Prague, Czech Republic, EU
- E12** Improving Structural Homogeneity and Wear Resistance of FeSi-NiAl Composites by Directional Solidification
KALOČ Václav
VSB - Technical University of Ostrava, Ostrava, Czech Republic, EU
- E13** Radiofrequency Plasma Spheroidization of Complex Concentrated Superalloy AlNbTiVzr Purified by Hydride Powder Addition
LUKÁČ František
Institute of Plasma Physics of the CAS, Prague, Czech Republic, EU
- E14** Avalanche Plasticity Across Scales: From Simple Crystals to High-Entropy Alloys
KNAPEK Michal
Charles University, Prague, Czech Republic, EU
- E15** Scale-Invariant Plasticity and Dynamic Strain Aging in Fe-Al-Ni-Based High-Entropy Alloys
TAYARI Tomáš - Charles University, Prague, Czech Republic, EU
- E16** Combined Theoretical and Experimental Study of Miscibility of Sn in LaNi5
FRIÁK Martin
Institute of Physics of Materials of the CAS, Brno, Czech Republic, EU

SESSION C

STEELS, PROPERTIES, STEEL PRODUCTS, TESTING

- 13:40 **C12** Study of Cladded Bimetals Combinations for H₂ Storage and Transport in High-Pressure H₂ Applications
OSTROUSHKO Dmytro
University of West Bohemia in Pilsen, Plzeň, Czech Republic, EU
- 14:00 **C13** TRIP in Metastable Austenitic Steels: A Combined Synchrotron XRD and MTEX Approach
ČAPEK Jan - Charles University, Prague, Czech Republic, EU
- 14:20 **C14** Two-Stage Isothermal Transformation of Austenite into Nanobainite in a Chemically Inhomogeneous Medium-Alloy Steel Containing 0.5 wt% C
MARCISZ Jarosław - Łukasiewicz - GIT, Gliwice, Poland, EU

14:40 - 15:00 **COFFEE BREAK**

SESSION D

SURFACE ENGINEERING

- 15:00 **D5** Biodegradable Surface Layer of Magnesium Alloys Based on Plasma Electrolytic Oxidation and Polymer Deposition
VERTAĽ Jakub - Charles University, Prague, Czech Republic, EU
- 15:20 **D6** Structural and Thermal Properties of 3D Pillared Graphene Architectures for Thermal Energy Storage
MOORTHI Dharma Rooban
VSB - Technical University of Ostrava, Ostrava, Czech Republic, EU
- 15:40 **D7** Analysis of the Effect of Shot Peening on the Properties of FSW Welded Joints for Aluminum Alloy en AW-2024-T3
BUCIOR Magdalena
Rzeszow University of Technology, Rzeszow, Poland, EU
- 16:00 **D8** A Neural Network Surrogate Model for Predicting Fusion and Heat-Affected Zones in Aluminothermic Rail Welding Based on CFD Simulations
KEWALRAMANI Ravi Govindram
TU Bergakademie Freiberg, Freiberg, Germany, EU

SESSION E

NON-FERROUS METALS AND ALLOYS

- E17** Experimental Study of Hydrogen Absorption and Desorption in LaNi₅ Alloys with Indium Addition
ZOBAČ Ondřej
Institute of Physics of Materials of the CAS, Brno, Czech Republic, EU
- E18** In Situ Study of Phase Transformations in Metastable β Zr–Nb Alloys
VEVERKOVÁ Anna
Charles University, Prague, Czech Republic, EU
- E19** TixSiyCz (x/y/z = 1, 2, 3) MAX Phases: Synthesis via Powder Metallurgy, Characterization and MXene Conversion
SÜZER-ÇIÇEK İlayda - Istanbul Technical University, Istanbul, Turkey

SESSION E

NON-FERROUS METALS AND ALLOYS

- E20** Numerical Investigation of Hybrid Metal and Fibre-Reinforced Plastic Structures Using a Multidirectional Forming Process
HOLT Johannes - Leibniz University Hannover, Hannover, Germany, EU
- E22** Influence of Ambient Storage on the Microstructure and Surface Chemistry of NMC811 Cathode Material
ĎURIŠKA Libor
Slovak University of Technology in Bratislava, Trnava, Slovakia, EU
- E23** Characterization, Growth Kinetics, and Mechanical Properties of Boride Layers on Ti6Al4V Titanium Alloy
KAOUKA Alaeddine
ENSLaghouat, Laghouat, Algeria

WEDNESDAY, MAY 6

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16:40 - 18:00

POSTER SESSION

Poster presentation

18:00

BEST POSTER COMPETITION

Announcement of the winner

18:00 - 20:30

DINNER - HOTEL RESTAURANT



SESSION B

METAL FORMING

- 09:00 **B6** Effect of Shot Peening on the Microstructure, Hardness and Surface Roughness Properties of Ti6Al4V Alloys Produced by SLM and EBM
DEMIR Mert Can
Kocaeli University, Kocaeli, Turkey
- 09:20 **B7** Numerical Study on the Burr Formation in Blanking Processes
STOCKBURGER Eugen
Euscher GmbH & Co. KG, Bielefeld, Germany, EU
- 09:40 **B8** Variable Cross Section Draw Bending of Sheet Metal With Flexible Tools
MIRANDA SILVA Diego Ignacio
Leibniz University Hannover, Hannover, Germany, EU
- 10:00 **B9** Numerical Modelling and Validation of a Coupled Inductive Heating and Forging Process for the Production of Joint Crosses
SEBASTIAN Sona
Leibniz University Hannover, Garbsen, Hannover, Germany, EU
- 10:20 **B10** Modelling of Process Variations in a Powder Metallurgical Process Chain Consisting of Sinter Pressing and Forging
MIRANDA SILVA Diego Ignacio
Leibniz University Hannover, Hannover, Germany, EU
- 10:40 **B11** Microstructure-Texture-Property Correlation in Mg-3Al-0.2Ce Alloy Processed by Symmetric, Asymmetric reverse rolling, and Extrusion with asymmetric reverse rolling
PAKKI VAMSI KRISHNA
Indian Institute of Science Bangalore(IISc)-India, BANGALORE, India

11:00 - 12:00 **LUNCH**

SESSION F

ECONOMICS AND PRODUCTION MANAGEMENT IN THE METALLURGICAL, STEEL AND RELATED INDUSTRIES

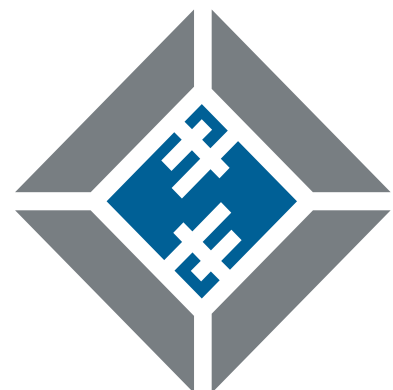
- F1** Review on the Calcium Carbide Production Using Low-Rank Coal
WA KALENGA Michel Kalenga **INVITED**
University of Johannesburg, Johannesburg, South Africa
- F2** Energy Flow and Process Hotspots in Forged Steel Shaft Manufacturing: A Product-Level Analysis of Upstream and Downstream Operations
OSORIO BAENA Mary - EurA AG, Ellwangen, Germany, EU
- F3** Effect of Temperature and Time on the Weight Loss and Phases During Carbothermic Reduction of Basic Manganese Ore in Presence of PKS Hydrogen
WA KALENGA Michel Kalenga
University of Johannesburg, Johannesburg, South Africa
- F4** Smart Guidance System for Manual Welding Processes: Sequential Surface Mapping and Real-Time Torch Orientation
REIS Murat
Bursa Uludag University, Bursa, Turkey
- F5** Selective Germanium Recovery from Fayalitic Copper Slag Using Bioleaching
SUBRUMUNY Kyle
University of Johannesburg, Germiston, South Africa

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you next year**

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