

1st International Conference on Advanced Materials and Advanced Manufacturing (A2M2C-1)

PROGRAM SCHEDULE

First Day, Wednesday, October 18, 2023

9:00-9:30 Transfer from City to HAB

9:30-10:00 Registration

10:00-10:50 Opening Ceremony

10:50-11:00 Coffee Break

11:00-12:00 Keynote Speaker

Unlocking Innovation: The Road to Commercial Success in Additive Manufacturing
Lars Langhans

12:00-13:15 Lunch Break

13:15-13:30 Transfer to EKTAM

13:30-14:30 Keynote Speaker

Sources of Mesoscale Uncertainty in Modelling and Experiments
Gustavo M. Castelluccio

14:30-14:45 A Study on Beam Shaping Effects on The Mechanical Properties and Residual Stresses in Parts Processed Using Selective Laser Melting, *Ahmad Reshad Bakhtari, Hüseyin Kürşad Sezer, Olcay Ersel Canyurt*

14:45-15:00 Process parameter optimization for directed energy deposition of Inconel 738LC using the response surface methodology, *Hamidreza Javidrad, Mücteba Burak Karakaş, Sertaç Alptekin, Aylin Sahin Kahraman, Huseyin Aydin, Bahattin Koc*

15:00-15:15 A Case Study in Deep Drawing Process: Numerical Simulation and Analysis of Material Behavior and Hardening Models, *M. Usman Sikandar, M. Usama*

15:15-15:30 Effect of heat treatment on the energy absorption and ductility of the imperfect BCC lattice structures, *Muhammad Arslan Bin Riaz, Mustafa Guden*

15:30-15:45 Coffee Break

15:45-16:00 Effect of Surface Roughness on Fatigue Behavior of Ti6Al4v Produced By Selective Laser Melting, *Hilmi Tekdir, Gürkan Kaya, A.Fatih Yetim, Fatih Yıldız, İsmail Hakkı Korkmaz, İrfan Kaymaz, Tuba Yetim*

16:00-16:15 Biodegradable Magnesium Bone Plates; Simulation-based predictive model for controlled degradation, *Muhammad Usama Zaheer, Cenk Aktas, Yogendra Kumar Mishra, Mehmet Fatih Aycan*

16:15-16:30 Defect Analysis and Surface Roughness Characterization of Additively Manufactured Samples Using Computer Tomography, *Muhammad Muteeb Butt, Peyman Ansari, Hüseyin Kızıl*

16:30-16:45 The effect of volumetric energy density on the mechanical behavior of AlSi10Mg alloy manufactured by selective laser melting, *Mian Imran, Mustafa Guden, Çetin Bakıcı, Peyman Ansari, Metin U. Salamci, İlhan Şen, Alper Taşdemirci*

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16:45-17:00 An Ex-Situ Energy Density Computation Method for Selective Laser Melting (SLM) Systems, *Ahmet Hakan Karakurt, Cem Batur, Peyman Ansari, Metin Uymaz Salamci*

17:00-17:30 Transfer from EKTAM to City

19:00 Dinner at MKE

1st International Conference on Advanced Materials and Advanced Manufacturing (A2M2C-1)

PROGRAM SCHEDULE

Second Day, Thursday, October 19, 2023

9:00-10:00 Transfer from City to EKTAM

10:00-11:00 Keynote Speaker

Correlation between Metal Fused Filament Fabrication parameters and material properties of sintered 17-4 PH
Andrea Cini

11:00-11:15 Coffee Break

11:15-11:30 The Role of Dyes in Ceramic-Filled Acrylate Resin Composites for Ceramic Additive Manufacturing,
Buse Çetin, Merve Gürtekin Seden, Kevser Öztürk Yavuz, Emre Özeren, Akin Orhangül

11:30-11:45 Large area growth of ReS₂ Monolayers by CVD,
Muhammad Adnan Saeed

11:45-12:00 From Blueprint to Greenprint: A Case Study on CO₂ Footprint Assessment in Product Design & Manufacturing (PDM),
M. Usman Sikandar, M. Saad

12:00-12:15 Effect of Post Heat Treatments on the Creep and Microstructural Characteristics of Inconel 939 Alloy Fabricated By Selective Laser Melting,
Fatih Guler, Aylin Sahin Kahraman, Merve Canbolat, Ozgul Keles, Huseyin Aydin

12:15-12:30 From Design to Smile: Leveraging AM and Topological Optimization for Jaw Implant Solutions,
Muhammad Hassan Razzaq, Cenk Aktaş, Yogendra Kumar Mishra, Mehmet Fatih Aycan

12:30-13:30 Lunch Brake

13:30-13:45 Standardization of High-Temperature Fatigue Tests for AM Metals,
Osman Tuna Gökgöz, Hüseyin Kürşad Sezer

13:45-14:00 Next Generation Eco-Materials Revolution: CO₂ Emissions Reduction via Lattice-Structured Additive Manufactured Lever Arms,
M. Usman Sikandar, Roozbeh Neshani

14:00-14:15 Microstructural and Nano-mechanical Characterization of Gas Atomized IN738LC Powder,
Aylin Şahin Kahraman, Müge Akdemir, Mertcan Kiraç, Yasemin Kiliç, Deniz Sultan Aydin, Hüseyin Aydin

14:15-14:30 Investigating the Impact of Recoater Speed on Micron-Sized Powder Dispersion on the substrate in Selective Laser Melting (SLM) via DEM,
Varma Kvvssn, Peyman Ansari, Metin U Salamci, Elmas Salamci, Huseyin Kızıl

14:30-14:45 Coffee Break

14:45-15:00 Additive Manufacturing of Molybdenum by Using Electron Beam Melting and Selective Laser Melting,
Tansu Göynük, Orkun Umur Önem, Evren Yasa, İshak Karakaya

15:00-15:15 Defect Analysis of Additively Manufactured AlSi10Mg Samples Using Different Process Parameters in a Single Specimen,
Mussadiq Shah, Mutteb Butt, Nizami Akturk, Celal Sami Tufekci, Metin U. Salamci

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15:15-15:30 Application of Micro Computed Tomography (MiCRO-CT) method for Defect detection in AlSi10Mg parts produced with SLM technology, *Zia Uddin, Huseyin Kizil*

15:30-15:45 Investigating Mechanical and Microstructural Properties of High Entropy Alloys for Aerospace Applications, *Emre Gunes, Y. Eren Kalay*

15:45-16:00 Coffee Break

16:00-16:15 Wire-Arc Additive Manufacturing of Combustion Chamber, *Gökhan Can, Murat Yücel, Orkun Umur Önem*

16:15-16:30 Effect of Beam Shape on Melt Pool Characteristics in Selective Laser Melting, *Ahmad Reshad Bakhtari, Varma KVVSSN, Hüseyin Kürşad Sezer, Olcay Ersel Canyurt, Hüseyin Kızıl*

16:30-16:45 Crystallographic Texture Formation and Mechanical Anisotropy in Additive Manufacturing of Superalloys, *Mahdi Alishavandi, Metin Uymaz Salamcı, Rahmi Ünal*

16:45-17:00 A Solid Solution-Based Tough Polymer Electrolyte for Structural Energy Storage Applications, *Parya Teymoory, Yuchen Chang, Caiwei Shen*

17:00-17:30 Transfer from EKTAM to City

19:00 Gala Dinner at MKE

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PROGRAM SCHEDULE

Third Day, Friday, October 20, 2023

9:00-10:00 Transfer from City to EKTAM

10:00-10:15 Warpage at FDM Printed Composites: Case Study of a Thin-Walled Camera Holder, *Şeymanur Sirtli, Hamed Tanabi, Matin Ghaziani*

10:15-10:30 Additive Manufacturing Design with Overhang Constraint Based on Reliability-Based Topology Optimization Approach, *Fahri Murat, İrfan Kaymaz*

10:30-10:45 Corrosion Behavior in SLM-Produced AlSi10Mg Alloy: Evaluating Process Parameters Effect, *Hossein Laieghi, Fahrettin Ozturk, Hakan Yavas, Burcu Arslan Hamat, Peyman Ansari, Metin U Salamci, Elmas Salamci*

10:45-11:00 Effect of Scanning Strategy on Additively Manufactured Ti6Al4V, *Ahmed Alsakkaf, Rahmi Ünal*

11:00-11:15 Coffee Break

11:15-11:30 Effect of the orientation of the trabecular structure on the comparison strength of bone for future studies, *Ahmed Jawad, Arif Balci, Yogendra Kumar Mishra, Yusuf Usta*

11:30-11:45 Synthesis of 2D MoS₂ polycrystalline for Electro-optical applications, *Muhammad Adnan Saeed, Süleyman Özçelik, Metin U. Salamci*

11:45-12:00 Numerical and Experimental Investigation of the Effect of Process Parameters on Mechanical Properties in Selective Laser Melting, *Murat Yıldız, Kıvanç Sadak, Nureddin Dinler, Kadir Bilen, Peyman Ansari*

12:00-12:15 An Experimental Study on Ultrasonic Atomized 316L Stainless Steel Powder for Additive Manufacturing, *Anıl Emiralioğlu, Eren Yağız Karaca, Nurettin Akın*

12.15-13.00 Lunch

13.30 Transfer from EKTAM to City