



ADDITIVE MANUFACTURING CONFERENCE TÜRKİYE 2024 CONFERENCE PROGRAM



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Prof. Zachary CORDERO
Massachusetts Institute of
Technology USA

Zack Cordero received his SB in physics from MIT in 2010. After working one year in the materials science division at Lawrence Berkeley National Laboratory, Zack returned to MIT to pursue a PhD in materials science and engineering, where his research focused on the powder-route synthesis of bulk nanostructured tungsten alloys. Upon graduating in 2015, Zack moved to a postdoctoral fellowship appointment in the Manufacturing Demonstration Facility of Oak Ridge National Laboratory where he developed process monitoring, quality control, and microstructure design tools for power-bed, metal additive manufacturing technologies. In 2016, Zack launched his independent career as an assistant professor in the Materials Science and NanoEngineering department at Rice University. In 2020, he moved to MIT's Department of Aeronautics and Astronautics. Zack's research program at MIT integrates his expertise in processing science, mechanics, and design to develop novel materials and structures for emerging aerospace applications.



Prof. Zoran REN
University of Maribor

Prof. Zoran Ren is currently a full professor at University of Maribor. He holds a bachelor's and master's degree from the University of Maribor, along with a PhD from Swansea University in Wales, UK.

With over 35 years of dedicated research experience, Prof. Ren has made significant contributions to the computational analysis of non-linear solid dynamics, with a specific focus on transient dynamic modelling and analysis. Over the past two decades, Dr. Ren's research group has played a pivotal role in the development and characterization of groundbreaking cellular metamaterials and structures, usually fabricated with use of advanced additive manufacturing technologies. This remarkable work has been carried out through collaborative international research efforts with esteemed institutions, including Kumamoto University in Japan, the University of Aveiro in Portugal, the University of Split in Croatia, IFAM Fraunhofer Institutes in Bremen and Dresden, Germany, and more recently, the Middle East Technical University in Ankara.

Prof. Ren's expertise is widely recognized in the academic community, evident in his numerous scientific publications and contributions to relevant books. As an accomplished researcher, he has been invited to lecture at prestigious scientific conferences and universities across the globe. Prof. Ren has also actively served as a member of organizing, scientific, and editorial boards for various conferences and international journals focused on computational mechanics and metamaterials.

His remarkable achievements have garnered notable distinctions, including his appointment as an Alexander von Humboldt Research Fellow in Germany and his role as an IROAST visiting professor at Kumamoto University in Japan. Prof. Ren's exceptional contributions were further acknowledged with the 21st Century CoE award from Osaka University in Japan.



Dr. James HUGHES
AMRC North West

Dr James Hughes is the Research Director of the University of Sheffield's Advanced Manufacturing Research Centre North West, a new expansion of internationally renowned AMRC group.

With more that 20 years in advanced manufacturing research and development, James began working at the University of Sheffield's AMRC with Boeing at its inception in 2002, specialising in the analysis of surface integrity of machined aerospace alloys.

Before his current role, James held the position of Director of the UK's National Metals Technology Centre, a research and support centre established to help metals and related engineering companies.

James received his PhD from the University of Sheffield and is a Fellow of the Institute of Mechanical Engineers. Current research interests include powder metallurgy and additive manufacturing. To date, James' publications have won two annual prizes from the Institute of Mechanical Engineers and is investigator on live research projects worth >£10M



Prof. José L. OCAÑA
Polytechnical University of Madrid

Prof. Dr. Ing. José L. Ocaña is MSc. (1979) and PhD. (1982) in Industrial Engineering (Energy) at the Polytechnical University of Madrid (Spain).

Chair Professor of Mechanical Engineering at the ETSII-UPM School of Engineering and Founder Director of the UPM Laser Centre at this University (1999-2016).

Active promoter and participant in national (Spain) and worldwide R&D initiatives in the field of scientific and industrial applications of high power lasers, especially in high-intensity laser-matter interaction, laser welding, laser surface treatments, laser micromachining, laser additive manufacturing and on-line monitoring and control of industrial laser applications. Author/coauthor of more than 200 scientific papers and more than 250 communications in the field of laser technology and applications.

Member of multiple scientific committees and editorial boards in the field of laser technology and applications. Former Chairman of EULASNET II (Eureka Umbrella Network for Laser Technology and Applications; 2006-2010)) and Vice-President of the Executive Board of the European Laser Institute (ELI; since 2013).

Awarded by several prizes related to his research activity.

DAY 1 - April 25th

8:00 - 9:00 am	Registraton
9:00 - 9:30 am	Opening Ceremony
9:30 - 10:15 am	Keynote Speaker: Prof. Zachary Cordero, "The End (of a Print) is only the Beginning"
10:30 - 10:50 am	Coffee Break
10:50- 11:50 am	Technical Sessions
11:50 am-12:10 pm	Coffee Break
12:10 - 1:10 pm	Technical Sessions
01:10 - 2:05 pm	Lunch
2:15- 3:00 pm	Keynote Speaker: Prof. Zoran Ren, "Mechanical Performance of Additively Manufactured Cellular Metamaterials "
3:20 - 3:50 pm	Coffee Break
3:50- 5:20 pm	Technical Sessions
6:00 - 8:00 pm	AMC 2024 Welcome Reception

DAY 2 - April 26th

8:30 - 9:30 am	Registraton
9:30 - 10:15 am	Keynote Speaker: Prof. Jose Luis Ocaña Moreno, "The Role of Process Design and Modelling in the Quality Assurance of Additively Manufactured Metallic Components"
10:30 - 10:50 am	Coffee Break
10:50 - 11:50 am	Technical Sessions
11:50 am - 12:10 pm	Coffee Break
12:10 - 12:55 pm	Technical Sessions
12:55 - 2:20 pm	Lunch
2:30- 3:00 pm	Technical Session
3:35 - 4:00 pm	Desserts & Coffee Break
4:00 - 5:30 pm	Technical Sessions

DAY 3 - April 27th

9:30 - 9:45 am	Opening Ceremony of TAMA Annual Assembly 2024
9:45 - 10:30 am	Keynote Speaker: Dr. James Hughes "Additive Manufacturing Roadmapping at AMRC"
10:30 - 1045 am	2023 Türkiye Eklemeli İmalat Anketi Sonuçları
10:45 - 11:10 am	Coffee Break
11:10 am - 12:10 pm	Panel
12:10 - 12:20 pm	Closing Session of TAMA Annual Assembly 2024

MAIN HALL - ATTALIA

DAY 1

8:00 - 9:00 am

Registration

You can also register during the day.

9:00- 9:30 am

Opening Ceremony

Chair: Prof. Emrecaan Soylemez

9:30 - 10:15 am

Keynote Speaker: Prof. Zachary Cordero,
"The End (of a Print) is only the Beginning"

Chair: Prof. Emrecaan Soylemez

10:15 - 10:30 am

Platinum Sponsor:



10:30 - 10:50am

Coffee Break

Novel Studies on Additive Manufacturing

Chair : Prof. Recep Onler

10:50 - 11:05am

An Experimental and Numerical Study on the Additive Friction Stir Deposition of Al 6061

Luis E Urena Mendieta, Ozgur Poyraz, [Evren Yasa](#), James Hughes

11:05 - 11:20am

Microstructure and Mechanical Properties of Wire-Based Electron Beam Additively Manufactured Ti-6Al-4V

[Okay Tutar](#), Özlem Gerçek, Tansu Göynük, Murat Yücel, Gökhan Can

11:20 - 11:35am

Effect of Inter-Layer Time on the Microstructure and Mechanical Properties of Co-Cr Alloy Produced by Selective Laser Melting

Hübannur Şeremet, Muhammed Talha Yıldız, [Nazım Babacan](#)

11:35 - 11:50am

Life Cycle Assessment (LCA) of a Newly Designed Metal Additive Manufacturing Process: MAPS (Metal Additive Manufacturing Using Powder Sheets)

[Asli Coban](#), Arnoldas Sasnauskas, Wenyou Zhang, William M. Abbott, Rocco Lupoi, Ramesh P. Babu

11:50 am - 12:10 pm

Coffee Break

Wire Arc Additive Manufacturing - 2

Chair: Prof. Emrecaan Soylemez

12:10 - 12:25 pm

Dot-by-Dot Wire-Arc Additive Manufacturing of Load-Bearing Rods

[Yigit Hergul](#), Murat Yucel, Gokhan Can, Ulas Yaman

12:25 - 12:40 pm

Effect of External Heat Sources on Waam; Dimensional and Macro Structural

[Ebubekir Doğan](#), Oğuzhan Yılmaz, Özge Ece Kara, Nevzat Bol, Levent Kara

12:40 - 12:55 pm

Microstructure Dependent Hardness Prediction of GTAW WAAM Processed Ti-6Al-4V Parts

Mustafa Cagri Ozkader, [Oncu Akyildiz](#), Cengiz Baykasoglu

12:55 - 1:10 pm

Industrialisation of Wire Arc Additive Manufacturing: Opportunities and Challenges

[Muhammad Shamir](#), Erkan Bugra Tureyen, Evren Yasa, James Hughes

1:10 - 2:05 pm

Lunch

2:05 - 2:15 pm

Gold Sponsor:



2:15 - 3:00 pm

Keynote Speaker: Prof. Zoran Ren,

Mechanical Performance of Additively Manufactured Cellular Metamaterials

Chair: Prof. Ulas Yaman

3:00 - 3:10 pm

Gold Sponsor:



3:10 - 3:20 pm

Gold Sponsor:



MAIN HALL - ATTALIA

DAY 1

3:20 - 3:50 pm

Coffee Break

Wire Arc Additive Manufacturing - 3

Chair: Prof. Oğuzhan Yılmaz

3:50 - 4:20 pm

Invited Speaker : Prof. Michele Palermo
Geometrical, Microstructural and Mechanical Characterization of dot-by-dot WAAM Bars for Applications in Structural Engineering

4:20 - 4:35 pm

Group Technology Based Path Planning for Wire-Arc Additive Manufacturing
Yigit Hergul, Ulas Yaman

4:35 - 4:50 pm

Digital Twin Manufacturing of Aerospace Tooling in Wire Arc Additive Manufacturing
Ahmet Suat Yildiz, Oğuzhan Yılmaz, Yusuf Yamaner, Nevzat Bol, Baris Damgaci, Remzi Ecmel Ece

4:50 - 5:05 pm

Comparison Of Corrosion Behavior Of Wire Arc Additive Manufactured Various Stainless Steel Components
Hulya Kumek, Batuhan Turgut, Recep Onler, Ugur Gurol

6:00 - 8:00 pm

AMC 2024 Welcome Reception

HALL - 1 - ASPENDOS

DAY 1

Post Processing - 1

Chair: Prof. Yusuf Kaynak

10:50 - 11:05 am

Microstructural Evaluation of the Heat Treated post Additive Manufacture by Selective Laser Melting from the Mixed Ni and Ti Powders

Eduardo Hoisler Sallet, Rodolfo da Silva Teixeira, Rebeca Vieira de Oliveira, Patricia Freitas Rodrigues, Alita Gama de Sousa, Naiara Vieira Le Sénéchal, Gor Pereira de Lima, Danilo Abílio Corrêa Gonçalves, Edilainea Alves Oliveira Melo, Paulo Inforçatti Neto, Jorge Vicente Lopes da Silva, Luiz Paulo Mendonça Brandão, Andersan dos Santos Paula

11:05 - 11:20 am

Optimum Milling Parameters for Finishing of 3D-printed Thermoplastics

Ugur Mecid Dilberoglu, Ulas Yaman, Melik Dolen

11:20 - 11:35 am

Heat Treatment Effects on Mechanical Properties and Microstructure of 18Ni-300 Maraging Steel Manufactured via Laser Powder Bed Fusion

Tugce Tekin, Francesco Naclerio, Rasim Ipek, Alberto Molinari

11:35 - 11:50 am

Effect of Electrochemical Machining on Surface Roughness of Electron Beam Melted Ti-48Al-2Cr-2Nb Parts

Abdulkadir Cebi, Hasan Demirtas, Muhammed Turan Aslan, Oguzhan Yilmaz, Levent Subasi, Aydemir Günaydin, Guney Mert Bilgin, Akin Orhangul, Guray Akbulut, Safak Nesli

11:50 am - 12:10 pm

Coffee Break

Post Processing - 2

Chair: Prof. Yusuf Kaynak

12:10 - 12:25 pm

Effects Of Heat Treatment and Hot Isostatic Pressing Parameters on Mechanical Properties of EBM Ti6AL4V

Mutlu Karasoglu, Evren Yasa, Emrecaan Söylemez, Sina Kavak, Evren Tan

12:25 - 12:40 pm

The Effect of Different Heat Treatments on L-PBF Alloy 718

Alican Tas, Beyzanur Ertekin, Muhammed Baybars Gökcan, Güney Mert Bilgin, Emre Özeren, Çağlar Ünver, Gürol Aldıç, Asım Efe Arsal, Gökтуğ Kara, Akin Orhangül

12:40 - 12:55 pm

The Fatigue Properties of Additively Manufactured γ -TiAl After Laser Shock Processing

Mahmut Ozer, Oguzhan Yilmaz, Levent Subasi, Aydemir Günaydin, Güney Mert Bilgin, Sanin Zulic, Jan Kaufman

12:55 - 1:10 pm

Optimization Of Fluid Rotary Union Design For Electron Beam Powder Fusion: Achieving Consolidation, Energy Efficiency And Leak-Free Performance By Using Dfam

Atakan Koc, Cengiz Koseoglu, Sina Kavak, Umut Govez, Melisa Altintas, Evren Tan, Berk Izgi Danis

1:10 - 2:05 pm

Lunch

Directed Energy Deposition

Chair: Dr. Evren Yasa

3:50 - 4:05 pm

Laser Metal Wire Deposition of A High Strength Steel Grade for Construction Applications

Francesco Galbusera, Fabio Guaglione, Andrea Crosato, Ali Gökhan Demir, Barbara Previtali

4:05 - 4:20 pm

Localization of Acoustical Events in Laser Metal Deposition

Julian Ulrich Weber, Nils Hoffmann, Claus Emmelmann

4:20 - 4:35 pm

The Potential of Manufacturing by Additive Manufacturing NiTi Alloy by DED on TiGr 2 Substrate

Naiara Le Sénéchal, Danilo Gonçalves, Fabio de Oliveira, Rafael Ramos, Hélder Vicente, Paulo Dyer, Getúlio de Vasconcelos, Andersan Paula

4:35 - 4:50 pm

Coating and repair of molds and dies using Laser Metal Deposition

Igor Ortiz, Piera Alvarez, Maria Azpeleta, Diego Montoya-Zapata, Francisco Cordovilla, José Luis Ocaña

4:50 - 5:05 pm

Microstructural Aspects of a Laser Direct Energy Deposition (DED) Multi-layered As-built H13 Tool Steel Specimen

Rafael Ramos, Naiara Vieira Le Sénéchal, Helder de Paula Vicente, Paulo Paiva Oliveira Leite Dyer, Andersan dos Santos Paula, Getúlio de Vasconcelos

5:05 - 5:20 pm

Assessing the Environmental and Economic Impact of Wire-Arc Additive Manufacturing

Thomas Derra, Khoulood Belghith, Stefan Gräfe, Robin Day

5:20 - 5:30 pm

Silver Sponsor:



6:00 - 8:00 pm

AMC 2024 Welcome Reception

HALL - 2 - OLYMPOS

DAY 1

Computational Methods for Additive Manufacturing - 1

Chair: Prof. Ulaş Yaman

- 10:50 - 11:05 am** **Comparison of Machine Learning Algorithms in the Prediction of Binder Viscosity for Ceramic Vat-Photopolymerization**
Fatih Tarak, Basar Ozkan, Gerald Schaefer, Ehsan Sabet
- 11:05 - 11:20 am** **Enhancing Generative Design selection with MCDM to mitigate human-bias in Additive Manufacturing**
Kartikeya Walia, Azfar Khalid, Ahmed Khan, Philip Breedon
- 11:20 - 11:35 am** **Developing an Image Processing-Based Quality Control Method for Evaluating Surface Roughness of Parts Manufactured by L-PBF**
Firat Mavi, Ibrahim Etem Saklakoglu
- 11:35 - 11:50 am** **Topology Optimization Using Peridynamic Approach for Minimizing Residual Stresses in Additive Manufacturing**
Abdullah Kendibilir, Sina Khalilvandi Behrouzvar, Peyman Lahe Motlagh, Bahattin Koç, Adnan Kefal
- 11:50 am - 12:10 pm** **Coffee Break**

Computational Methods for Additive Manufacturing - 2

Chair: Prof. Mevlüt Yunus Kayacan

- 12:10 - 12:25pm** **Compact Representation and Generative Design of 3-D Voronoi Structures Using 2-D Slices in Additive Manufacturing**
Onat Aşık, Ulaş Yaman
- 12:25 - 12:40 pm** **Numerical Analysis of Additive Manufactured Nozzle Guided Vane**
Andrea Fardelli, Ivan Senegaglia, Girolamo Tripoli, Francesco Morante, Giuseppe Macoretta, Bernardo Disma Monelli, Simone Colantoni
- 12:40 - 12:55 pm** **Development of Peridynamics Topology Optimization Software For Additive Manufacturing-Oriented Designs**
Rozerin Yıldız, Abdullah Kendibilir, Helin Varoğlu, Bahattin Koç, Adnan Kefal
- 12:55 - 1:10 pm** **Evaluating path planning software in Wire Arc Additive Manufacturing (WAAM): A case study with a redesigned drainwater downspout**
Francesca Paradiso, Akshay Ashok Benni, Simone D'Arcangelo, Barbara Previtali
- 1:10 - 2:05 pm** **Lunch**

Powders for Additive Manufacturing

Chair: Prof. I. Etem Saklakoğlu

- 3:50 - 4:05pm** **Costumized Acoustic Mixing as a Novel Approach for Preparing ODS Alloys Powders**
Dilara Çelik, Bahattin Koç
- 4:05 - 4:20pm** **Hybrid Atomization Method for Metals With High Melting Temperatures and Analysis with Computational Fluid Dynamics**
Emre Yurtkuran, Aleyna Atılgan, Deniz Aktürk, RahmiÜnal
- 4:20 - 4:35pm** **The Effects of Atomizer Type on the Characteristics of Co-Cr Dental Alloy Powder and The Thermal Properties of Laser Powder Bed Parts**
Bülent Genç, Beyza Bilgiler, Furkan Erdoğan, Egehan Kızıklıoğlu, İrem Yaren Siyah, Onur Ertuğrul
- 4:35 - 4:50pm** **Hybrid Manufacturing Method of Multifunctional by Selective Laser Melting and Powder Metallurgy**
Mevlüt Yunus Kayacan, Mustafa Safa Yılmaz, Mamoun Alshihabi
- 4:50 - 5:05pm** **FGM with DED Technology**
Han-Zu Haller
- 5:05 - 5:15 pm** **Silver Sponsor: **

6:00 - 8:00 pm

AMC 2024 Welcome Reception

HALL - 3 - PATARA

DAY 1

Wire Arc Additive Manufacturing - 1

Chair: Prof. Mehmet Cengiz Kayacan

- 10:50 - 11:05 am** Investigation of Ultrasonic Vibration Distribution in Parts Produced by Additive Manufacturing and a System Design
Muhammed Enes Gebel, Serkan Toros, Erdal Çelik, Oğuzhan Yılmaz
- 11:05 - 11:20 am** Quantitative Assessment of Phase Constituents and Morphologies in Low-Alloy Steel Welding Wires Employed in Wire Arc Additive Manufacturing via Calphad Computational Thermodynamics
Adem Kayadelen, Hakan ATEŞ, Oğuzhan Yılmaz
- 11:20 - 11:35 am** Design of Experiments Approach in Wire-Arc Additive Manufacturing: Optimization in Pressure Tank Production
Tansu Goynuk, Gokhan Can, Yigit Hergul, Murat Yucel, Ulas Yaman
- 11:35 - 11:50 am** Comparative Process Parameter Optimization For Wire Arc Additive Manufacturing (WAAM) of E120C-GH4 Metal Cored and ER120S-G Solid Wire
Mustafa Harman, Cemil Çetinkaya, Nevzat Bol, Oğuzhan Yılmaz

11:50 am - 12:10 pm Coffee Break

Design

Chair: Prof. Ulaş Yaman

- 12:10 - 12:25 pm** A Graphite-Based Approach to Elevate Replication Quality in Rapid Injection Molding of Microfluidic Devices with Recycled PMMA
Mehmet Oğulcan Güngör, Miray Sanem Sarı, Parya Teymoory, Jérôme Charmet, Ender Yıldırım
- 12:25 - 12:40 pm** Desing of a Lattice-Core Sandwich Panel for Additive Manufacturing
Kaan Akın Arı, Recep Muhammet Gorguluarslan, Hacer İrem Erten, Mustafa Guden, İstemihan Gökdağ, Mehmet Şahin, Akın Dağkolu
- 12:40 - 12:55 pm** Enhancing the Strength of the Parts Manufactured via Fused Filament Fabrication Through Dense Infills
Meral Şahin, Ahmet Hakan Dursun, UlaşYaman
- 12:55 - 1:10 pm** Biomimetic Design and Additive Manufacturing Integration for the Lightweight Optimization of Mechanical Hard Stop Brackets
Umut Govez, Cengiz Koseoglu, Berk İzgi Danis, Onat Asik, Evren Tan, Turgut Emre Erturk, Gokhan Aydogan, Engin Gunaydin, Erhan Gursoy

1:10 - 2:05 pm Lunch

Composite Materials for Material Extrusion

Chair: Prof. Mustafa Safa Yılmaz

- 3:50 - 4:05 pm** Investigation of the Warpage at FDM Printed Carbon Fiber Reinforced Composites
Seymanur Sirtli, Hamed Tanabi, Matin Ghaziani
- 4:05 - 4:20 pm** A Comprehensive Study for Fiber Reinforced High Denstiy Polyethylene (Hdpe) Composite Filament for Fused Filament Fabrication
Ayberk Sözen, Gökdeniz Neşer
- 4:20 - 4:35 pm** Investigation of Ultem 9085 Material Reinforcement with Nylon12-CF Material
Onur Konan, Ataberk Yapıcı, Okan Gümüşel
- 4:35 - 4:50 pm** Effect of Raster Orientation in 3D Printing on the Shear Strength of Dowels for Furniture Construction
Mesut Uysal

4:50 - 5:00 pm Silver Sponsor:



6:00 - 8:00 pm

AMC 2024 Welcome Reception

MAIN HALL - ATTALIA

DAY 2

8:30 - 9:30 am Registration
You can also register during the day.

9:30 - 10:15 am **Keynote Speaker: Prof. Jose Luis Ocaña**
"The Role of Process Design and Modelling in the Quality Assurance of Additively Manufactured Metallic Components"
Chair: Prof. Mustafa Safa Yilmaz

10:15 - 10:30 am Platinum Sponsor:  Chair: Dr. Mustafa Safa Yilmaz

10:30 - 10:50 am Coffee Break

Various Topics in AM-1 Chair: Dr. Evren Yasa

10:50 - 11:05 am **Nickel Vaporization in the NiTi Alloy Manufacturing by SLM**
Danilo Corrêa Gonçalves, Naiara Le Sénéchal, Milton Lima, Daniel Bayerlein, Getúlio Vasconcelos, Andersan Paula

11:05 - 11:20 am **In-Situ Alloying of Nb-47Ti Superconductors Using Laser Powder Bed Fusion**
Tugrul Talha Ersoz, Abdelmoez Hussein, Moataz Attallah

11:20 - 11:35 am **3D Mesh Lattice Segmentation and Classification: SVD Clustering, CNN-Based Typing, and Few-Shot Learning via Autoencoder Novelty Detection**
Alptuğ Öztaşkın, Ulaş Yaman

11:35 - 11:50 am **Effect of Transition Type at FGM to High-Temperature Oxidation Properties**
Mustafa Kaş, Wei Xiong, Oğuzhan Yılmaz

11:50am - 12:10pm Coffee Break

Alloying for Powder Bed Fusion - 2 Chair: Prof. Moataz Attallah

12:10 - 12:25 pm **Influence of Defocused Laser Beam And Ring-Mode Laser on the LPBF-Process of A Scancromal® Concept Alloy**
Luke Schüller, Andreas Vogelpoth

12:25 - 12:40 pm **Oxidation of Ti6Al4V Alloy Produced by SLM and During Heat Treatment without Protective Atmosphere**
Fabio Silva de Oliveira, Andersan dos Santos Paula, Carlos Nelson Elias

12:40 - 12:55 pm **Investigation of the Properties of Heat Treated 17-4 PH Stainless Steel Produced by Selective Laser Melting with the Repeated Use of Powders**
Ece Kahraman Ulaş, Yusuf Alptuğ Polat, Oğuzcan Dedeci, Orkun Umur Önem

12:55 - 2:20 pm Lunch

2:20 - 2:30 pm Gold Sponsor:  Chair: Prof. I. Etem Saklakoğlu

2:30 - 3:00 pm Invited Speaker : Prof. Moataz Attallah
From the Lab to the Industry in 3D Printing
Chair: Prof. I. Etem Saklakoğlu

3:00 - 3:10 pm Gold Sponsor:  Chair: Prof. I. Etem Saklakoğlu

3:10 - 3:20 pm Gold Sponsor:  Chair: Prof. I. Etem Saklakoğlu

3:20 - 3:35 pm Gratitude to Our Esteemed Sponsors

3:35 - 4:00 pm Deserts & Coffee Break

MAIN HALL - ATTALIA

DAY 2

Various Topics in AM - 2

Chair: Prof. Nazım Babacan

4:00 - 4:15 pm

Soft Magnetic Toroidal Inductor Enabled by Binder Jetting Additive Manufacturing

Emrecan Soylemez, Emre Sari, Ali Cem Cetin, Zeki Aslan, Baran Bulut, Halil Emin Unluturk

4:15 - 4:30 pm

Non-Destructive Defect Detection of LPBF-Manufactured A205 Aluminium Alloy Lattice Structures

Berk Baris Celik, Emilie Beevers, Brecht Van Hooreweder

4:30 - 4:45 pm

Non-Destructive Evaluation Of Material Properties And Defects In Additively Manufactured Parts

Tuğçe Kaleli Alay, Başak Orhan, Ulaş Yaman

4:45 - 5:00 pm

A 4500 Year Old Manufacturing Method - Additive Manufacturing From Ancient Anatolian Civilization To Modern World

Hasan İlker Yelbay, Murat Türkteki

HALL - 1 - ASPENDOS

DAY 2

Heat Sinks and Exchangers

Chair: Prof. Mihriğül Altan

10:50 - 11:05 am

Enhanced Heat Dissipation of Electronic Devices by 3D Printing Nanocomposites of Hexagonal Boron Nitride Nanosheets/Polylactic Acid

Mustafa Caner Gorur, Doga Doganay, Mete Batuhan Durukan, Melih Ogeday Cicek, Yunus Eren Kalay Cem Kincal, Nuri Solak, Husnu Emrah Unalan

11:05 - 11:20 am

Design for Additive Manufacturing of a Triply Minimal Periodic Surfaces Based Heat Sink

Buğra Cebiroğlu, Ali İstif, Emir Tuna Korkmaz, Recep Onler

11:20 - 11:35 am

Enhancement of Saturated Pool Boiling in Dielectric Liquid Using Honeycomb Structures Produced by Additive Manufacturing

Muhammed Çağlar Malyemez, Murat Parlak

11:35 - 11:50 am

Investigation of Double Layered Heat Sink Produced with Additive Manufacturing Technology

Murat Parlak

11:50 am - 12:10pm

Coffee Break

Implants

Chair: Prof. Bahattin Koç

12:10 - 12:25pm

3D Bio Printed Biodegradable Composite Material for Pediatric Craniomaxillofacial Implants

İpek Tuğçe Döş, Zeynep Kırımlıer, Ece Tutsak, Onur Demirak

12:25 - 12:40pm

Improvement of Porous Customized Cranial Implant from Titanium Alloy Using Additive Manufacturing

Eren Külle, Berke Apaydın, Abdulkadir Günay, Yeliz Güldorum, Seyhan Özen, Alperen Acar, Mihriğül Ekşi Altan

12:40 - 12:55 pm

At the Intersection of Additive Manufacturing and New Generation Implants: Comparative Success of EBM and SLM Technologies in Manufacturing Lattice Structures for Metal Implants

Zeynep Kırımlıer, EceTutsak, Onur Demirak, Alptuğ Öztaşkın, İpek Döş

12:55 - 2:20 pm

Lunch

Characterization of Powder Bed Fusion Parts

Chair: Prof. Bahattin Koç

4:00 - 4:15 pm

Surface Features of Tailored High-strength Al Alloys from LPBF

Theresa Buchenau, Luke Schueller, Andreas Vogelpoth, Marc Amkreutz

4:15 - 4:30 pm

Micromechanical Characterization of AlSi10Mg Produced By Selective Laser Melting

Amir Fadaie, Tufan Güngören, Amir Motallebzadeh, Oğuzhan Yılmaz, Sezer Özerinç

4:30 - 4:45 pm

The Impact of Stitch Line Configuration and Orientation on SLM Printed AlSi10Mg Alloys

Doğuş Zeren, Cenk Kılıçaslan, Korhan Ondoğan, Bülent Horuz, Aykut Öğüt

4:45 - 5:00 pm

Investigation of the Oxidation Behavior of Additively Manufactured Inconel 718

Melih Işık, Yasemin Küçükaltun, Mustafa Uzun, Batuhan Başbozkurt, Cevat Sarıoğlu

5:00 - 5:15 pm

Effect of Layer Thickness on Mechanical Properties for Ti-48Al-2Cr-2Nb Produced by Electron Beam Powder Bed Fusion

Alican Taş, Güneş Mert Bilgin, Gürol Aldıç, Asım Efe Arsal, Göktuğ Kara, Akın Orhangül

HALL - 2 - OLYMPOS

DAY 2

Computational Methods for Additive Manufacturing - 3

Chair: Dr. Ugur Mecid Dilberoglu

10:50 - 11:05am

Design Thermal Analysis and Optimization of the Novel Geometry Based Scan Strategies
Omer Safa Cavus, Sina Khalilvandi Behrouzayar, Bahattin Koç

11:05 - 11:20 am

A Field-Driven Infill Design Methodology for Material Extrusion Additive Manufacturing
Rahman Uncu, Ulas Yaman

11:20 - 11:35 am

Density Prediction In Additive Manufactured 17-4 PH Stainless Steel By Using Machine Learning
Oguzcan Dedeci, Ozlem Demirtas Altintas, Yusuf Alptug Polat, Ece Kahraman Ulas

11:50 am - 12:10 pm

Coffee Break

Metal Material Extrusion

Chair: Dr. Asli Coban

12:10 - 12:25 pm

Revolutionizing Copper Production: Processing and Properties of Extrusion-based Additive Manufacturing for Diverse Applications
Mahrukh Sadaf, Santiago Cano, Joamin Gonzalez-Gutierrez, Mario Bragaglia, Stephan Schuschnigg

12:25 - 12:40 pm

Additive Manufacturing and Characterization of Metal Particle Incorporated Polymer Matrix Functionally Enhanced Composites
Özgür Uyar, Arcan F.Dericioğlu

12:40 - 12:55 pm

Manufacturing of Copper Cold Plates via Metal Fused Filament Fabrication and Their Comparison with Commonly Used Methods
Mehmet Canberk Bacikoglu, Vedat Yagci, Ulas Yaman

12:55 - 2:20 pm

Lunch

Additive Manufacturing Applications

Chair: Prof. Recep Muhammet Görgülüarslan

4:00 - 4:15 pm

Use of Different Additive Manufacturing Methods for the fabrication of an X-Band Horn Antenna
Burak Çalışkan, Ulaş Yaman

4:15 - 4:30 pm

An Advanced Additive Manufacturing Application Example: 3d Printing of the Helicopter Rotor Blade Tip Cap Part via PBF Method
Muge Gurgun, Yusuf Yamaner, Burcu Arslan Hamat, Remzi Ecmel Ece, Fahrettin Öztürk

4:30 - 4:45 pm

Additive Manufacturing of Toughened PLA Blends for Airplane Cabin Interior Parts: Mechanical Properties
Yusuf Kahraman, Melih Beşir Arvas, Ömer Yunus Gümüş

4:45 - 5:00 pm

Optimizing Ribbed Structure Stability: A Comparative Analysis of PBF and Cold Spraying Techniques
Burak Sivri, Davut Başaran, Ahmet Okudan, Alper Tokkuş, Furkan Yakın

5:00 - 5:15 pm

3D Printed Composite Ship Propeller Design and Tests
Erkin Altunsaray, Ayberk Sozen, Alperen Doğru, Akile Neşe Halilbeşe, Serkan Türkmen, Gökdeniz Neşer

5:15 - 5:30 pm

Development of a Consolidated and Optimized Aircraft Fuel Pipe Structure with Additive Manufacturing
Yusuf Yamaner, Bora Acur, Muhammed Hasan Arıkan, Safi Serdar Çınar, İlhan Şen, Burcu Arslan Hamat, Fatih Uysal, Remzi Ecmel Ece

HALL - 3 - PATARA

DAY 2

Material Extrusion

Chair: Dr. Burçin Özbay Kısasöz

10:50 - 11:05 am

Experimental Investigation of Model/II/III Fracture Behaviors of Additively Manufactured Polymer
Bahman Paygozar, [Recep M. Gorguluarslan](#)

11:05 - 11:20 am

Shear Modulus Investigation of Novel Infill Patterns in FFF: Random and Spiral
[Hüseyin Kaya](#), Ulaş Yaman

11:20 - 11:35 am

3-D Printed Soft Pneumatic Adjustable Gripper with FDM Printer
[Dağhan Serpiciler](#), Emre Güney, Baver Tüysüz, İbrahim Başar Aka

11:35 - 11:50 am

3d printing of Several Technologies In One: A New Approach To Shape Technical Ceramics
[Arnaud Roux](#), Siddharth Tiwari

11:50 am - 12:10 pm

Coffee Break

Mechanical Performance of AM Parts

Chair: Dr. Burçin Özbay Kısasöz

12:10 - 12:25 pm

Exploring Strain Rate Sensitivity and Mechanical Performance of Cellular Structures Based on Photopolymer : Emphasizing Base Material and Cell-Graded Gyroid Configurations
[Yunus Emre Yılmaz](#), Ulaş Yaman, Zoran Ren

12:25 - 12:40 pm

Buckling Behaviour of Additively Manufactured AISi10Mg Lattice Structure
[Hacer İrem Erten](#), Kaan Akin Ari, Mustafa Güden, Recep M. Görgülüarslan, Mehmet Şahin İstemihan Gökdağ, Akın Dağkolu

12:40 - 12:55 pm

Exploring Ballistic Performance of Additively Manufactured AISi10Mg Alloy Lattice Structures
[Ahsen Sultan Kılıç](#), Hakan Hafizoğlu, Nazım Babacan

12:55 - 2:20 pm

Lunch

Post Processing - 3

Chair: Dr. Evren Tan

4:00 - 4:15 pm

Investigation of Laser Polishing Process on the Form Surfaces of γ -TiAl Components Produced via Electron Beam Melting
[Safak Nesli](#), Oguzhan Yılmaz, Levent Subasi, Aydemir Gunaydin, Guney Mert Bilgin, Akin Orhangul, Guray Akbulut, Kubilay Yildirim, Hakan Demir, Cankat Kus

4:15 - 4:30 pm

Enhancing the Mechanical Properties of Additively Manufactured Ti6Al4V Through Surface Finishing Processes
[İlhan Şen](#), Safi Serdar Çınar, Burcu Arslan Hamat, Fahrettin Öztürk, Remzi Ecmel Ece

4:30 - 4:45 pm

Robotic Arm-Assisted Depowdering of Additive Manufactured Parts: A DEM Analysis
[Ahmet Okudan](#), Burak Sivri, Barış Pehlivanogulları, Gökhan Dursun, Bengü Zuhul Kutlu, Akin Orhangül, Erva Deniz Sağlam, Bilal Şen

4:45 - 5:00 pm

Development of Injection Molds for Compatibility with Additive Manufacturing and Comparison of Cooling Performance
[Furkan Aykanat](#), Oguz Kaan Ozturk

5:00 - 5:15 pm

A Preliminary Study on Corrosion and Wear Behaviours of Artificially Aged AISi10Mg Produced by Additive Manufacturing
[Burçin Özbay Kısasöz](#), İbrahim Tütük, Ebubekir Koç, Alptekin Kısasöz

5:15 - 5:30 pm

Determination Of The Spectral Reflectivity Distribution Of White Resins For The Manufacture Of Optimum Performing Integrating Sphere (Ulbricht Sphere)
[Ali Avcı](#), K. Kamil Yeşilkaya



9:30 - 9:45 am

Opening Ceremony of TAMA Annual Assembly 2024

Chair: Prof. Oguzhan Yılmaz

9:45 - 10:30 am

Keynote Speaker: Dr. James Hughes
"Additive Manufacturing Roadmapping at AMRC"

Chair: Prof. Oguzhan Yılmaz

10:30 - 10:45 am

[Turkish] 2023 Türkiye Eklemeli İmalat Anketi Sonuçları

10:45 - 11:10 am

Coffee Break

11:10 - 12:10 am

[Turkish] Eklemeli İmalat Teknolojileri Yol Haritası
(Türkiye ve Dünya) - Polimer/Kompozit/Seramik
kullanan Eklemeli İmalat Teknolojileri

Location: Hall 1
Chair: Prof. Ulas Yaman

[Turkish] Eklemeli İmalat Teknolojileri Yol Haritası
(Türkiye ve Dünya) - Metal Alaşım kullanan
Eklemeli İmalat Teknolojileri

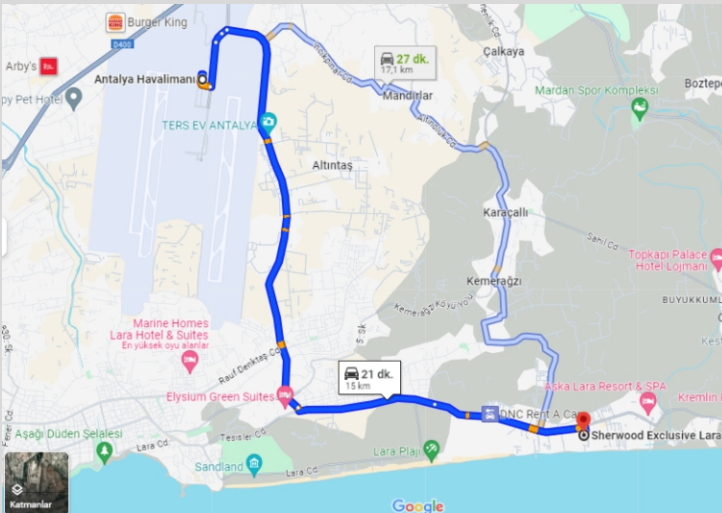
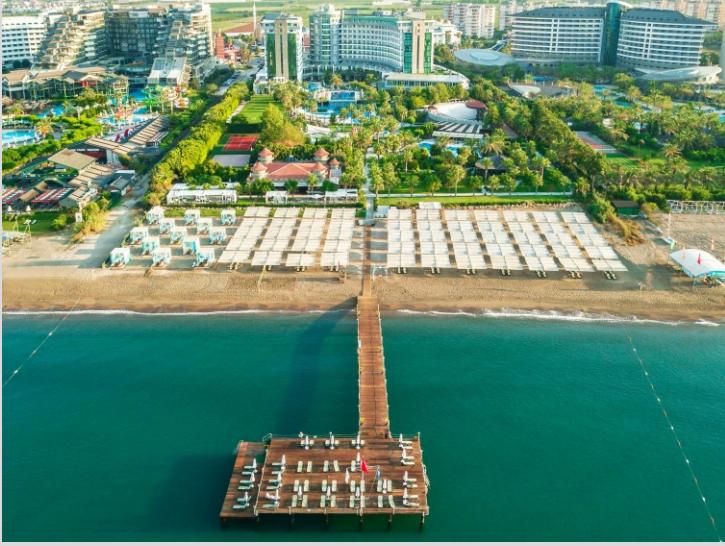
Location: Main Hall
Chair: Prof. I. Etem Saklakoğlu

12:10 am - 12:20 pm

Closing Session of TAMA Annual Assembly 2024
Location: Main Hall



SHERWOOD
exclusive Lara



Sherwood Exclusive Lara

Kemerağzı Kopak Çay Mevkii Kemerağzı Mahallesi,
Lara Cd., 07112 Aksu/Antalya, Türkiye

Tel: +90 242 352 28 00

15 km - Antalya Airport to Sherwood Exclusive Lara



Transportation from the Airport:

Antalya Airport (AYT) - Sherwood Exclusive Lara Hotel

Taxi: It takes approximately 15-20 minutes by taxi from the airport to Sherwood Exclusive Lara Hotel.

Shuttle Schedule on April 24th:

Shuttle service will be available at **10:30am, 2pm, and 8pm** from the airport to the hotel.

Shuttle on April 25th:

Shuttle service will be available from the airport to the hotel at **8am**.

Shuttle on April 26th:

Shuttle service will be available from the hotel to airport at **6pm**.

Shuttle on April 27th:

Shuttle service will be available from the hotel to airport at **2pm**.

"Participants who wish to use the shuttle service from the airport to the hotel are kindly requested to email info@amctr.org with the date and time of their intended use."

Transportation by Public Bus:

There are regular bus services from various points in Antalya to the Lara region. You can take a taxi from Lara Bus Station to Sherwood Exclusive Lara Hotel.

From the Airport to Sherwood Exclusive Lara Hotel:

You can use public buses to reach Sherwood Exclusive Lara Hotel from Antalya Airport. Here's the route on Google Maps:



From the Bus Terminal to Sherwood Exclusive Lara Hotel:

Public buses are available from Antalya Bus Terminal to Sherwood Exclusive Lara Hotel. You can find the route on Google Maps:



Transportation by Private Car:

Sherwood Exclusive Lara Hotel is located in the touristic Lara region of Antalya. You can easily find the hotel's location using GPS or map applications. The hotel offers ample parking facilities.



Local Transportation:

Antalya has an extensive public transportation network. From Lara, you can use public buses, minibusses, or trams to reach other parts of Antalya. Taxis or private cars are the most common options for transportation from Lara to



Lower Duden Waterfalls



Perge Ancient City



Kaleici



Aspendos



Goynuk Canyon



St Nicholas Church



AMC 2024

Additive Manufacturing Conference

Türkiye

