

LIST OF PRESENTATIONS 21 November 2024

Hall A - Opening Session

8.00 – 8.30	Registration	
8.30– 9.00	Opening Session and Welcome Hülya Gedik , Chair of the Board of the Trustees, İstanbul Gedik University Prof. Dr. Ahmet Kesik , Rector of İstanbul Gedik University Prof. Dr. Mustafa Koçak , Chair WAM 2023 International Conference	
9.00– 9.30	Keynote Lecture Wire + Arc Additive Manufacture (WAAM) Qualification – The Last Remaining Challenge for Widespread Industrial Applications? Stewart Williams , Cranfield University, UK (INVITED LECTURE)	
9.30– 10.00	Solid-State Joining of Additive Manufactured Metals for Lightweight Applications Sergio Amancio , Graz University of Technology, Austria IIW 2024 Halil Kaya Gedik Award Winner (INVITED LECTURE)	
10.00– 10.30	COFFEE BREAK and POSTER SESSION	
	SESSION A1 Hall A - Advances in AM&WAAM Technologies - I Chair: Prof. Dr. Mustafa Koçak , İstanbul Gedik University, TÜRKİYE	SESSION B1 Hall B - Advances in Welding Technologies Chair: Prof. Dr. Güney Güven Yapıcı , Özyeğin University, TÜRKİYE
10.30– 11.00	Towards a Digital Twin for Laser Metal Deposition Peter Mayr and Stephan Hartmann , Technical University of Munich, Germany (INVITED LECTURE)	Factors Affecting Arc Stability in Tandem Pulsed GMA Welding Process Tomoyuki Ueyama , OTC Daihen, Japan (INVITED LECTURE)
11.00– 11.30	Fitness-for-Purpose Based Acceptance Criteria for Distributed Discontinuities in Metallic AM Components Pingsha Dong , University of Michigan, USA (INVITED LECTURE)	Innovative Control of Robots for Manual Welding Application Shahram Sheikhi , Hamburg Technology University, Germany (INVITED LECTURE)
11.30– 12.00	Increasing LPBF Machines Availability By Using Machine Tool Design Principles Hashan Wijesundara , DMG MORI, Germany	Potentials of Handheld Laser Beam Welding Simon Jahn , IFW Jena, Germany (INVITED LECTURE)
12.00– 12.30	Challenges in Welding of Additively Manufactured (WAAM and PBF LB) Aluminum Alloy Components Rafael Nunes , K. Faes, W. Verlinde, W. D. Waele, M. Lezaack, A. Simar, Belgian Welding Institute, Belgium (INVITED LECTURE)	Innovative Welding Technologies for Enhancing Liquid Propulsion Systems Murat Yücel , ROKETSAN, Türkiye (INVITED LECTURE)
12.30– 13.00	Recent Developments on Aerospace Applications of DED Technologies Remzi Ecmel Ece , Turkish Aerospace Industries, Türkiye (INVITED LECTURE)	Tailoring Laser Properties for Efficient Laser Based Manufacturing Danijela Rostohar , Coventry University, UK (INVITED LECTURE)
13.00– 14.00	LUNCH BREAK and POSTER SESSION	

	SESSION A2 Hall A - Design and Applications of AM&WAAM Technologies - I Chair: Prof. Dr. Savaş Dilibal , İstanbul Gedik University, TÜRKİYE	SESSION B2 HALL B - Testing and Characterization - I Chair: Assoc. Prof. Ulaş Yaman , METU, TÜRKİYE
14.00- 14.30	Titanium Titans - The Remarkable World of Aircraft Manufacturing and the WAAM Evolution Sebastian Recke , GEFERTECH GmbH, Germany (INVITED LECTURE)	Fracture Toughness Characterization of Welds by Using Mini-CT Specimens: FRACTESUS Project Findings Sergio Cicero González , University of Cantabria, Spain (INVITED LECTURE)
14.30- 15.00	Mechanical Properties of Wire Plus Arc Additive Manufactured Steel, Stainless Steel and Nickel Nickel-Based Superalloys and Potential Challenges in Defect Assessment Yin Jin Janin , The Welding Institute (TWI), UK (INVITED LECTURE)	Severe Plastic Deformation for Post-Processing of Additive Additive-Manufactured Alloys Güney Güven Yapıcı , Özyeğin University, Türkiye (INVITED LECTURE)
15.00- 15.30	WAAM of Multi Multi-Material and Functionally Graded Structures and in in-Situ Alloy Development Using Multi Multi-Wire Mixing Jialuo Ding , WAAM3D, UK	Insights into Grain Structure Formation During Friction Stir Welding/Processing of Metals and Alloys Akbar Heidarzadeh , M. Javidani, Rasoul Khajeh, Azarbaijan Shahid Madani University, Iran (INVITED LECTURE)
15.30- 16.00	Effect of Cooling Cycles on Microstructure Formation in Wire Arc Additive Manufacturing Ozan Can Ozaner , R. Talemi, T. Tjahjowidodo, A. Sharma, Katholieke Universiteit Leuven, Belgium (INVITED LECTURE)	Sandwich Welding Design: Improving Ballistic Resistance of High Hardness Armor Steels Ceren Çelik , Uğur Gürol , İstanbul Gedik University , Türkiye
16.00- 16.30	COFFEE BREAK and POSTER SESSION	
	SESSION A3 Hall A - Design and Applications of AM&WAAM Technologies - II Chair: Dr. Remzi Ecmel Ece , TAI, Ankara, TÜRKİYE	SESSION B3 HALL B - Testing and Characterization - II Chair: Dr. Ali İhsan Koruk , BOSAL Energy, Belgium
16.30- 17.00	Improving Printability of Large Directed Energy Deposition Components Alejandro Lázaro , Carretero, F., Olivieri, G. , Escobar, E. , Ramos, A., Robinson,C., MELTIO, Spain (INVITED LECTURE)	Defense Industry Additive Manufacturing Roadmap Deniz Demirci , Secretariat of Defense Industries, Advanced Materials and Energy Program Manager, Türkiye (INVITED)
17.00- 17.30	Keynote Lecture (ONLINE) Materials Design and Additive Manufacturing of Metal Matrix Composites Ju Li , Massachusetts Institute of Technology, USA (INVITED LECTURE)	Recent Advances in the Manufacturing of Magnesium Components Using Directed Energy Deposition Techniques Gürel Çam , A. Günen, Iskenderun Technical University, Türkiye (INVITED LECTURE)
17.30- 18.00	A Multi -Laser Approach for In In-Situ Thermo Thermo-Mechanical Treatment of Metals and Alloys Huang Sheng , Massachusetts Institute of Technology, USA (INVITED LECTURE)	Impact of Volumetric Energy Density on Mechanical Properties of Magnesium Alloy via Selective Laser Melting (ONLINE) Dhanesh G. Mohan , University of Sunderland, UK (INVITED LECTURE)
18.00- 18.30	Design and Applications on SLM-based Additive Manufacturing of Shape Memory Alloys (ONLINE) Mohammad Elahinia , University of Toledo, USA (INVITED)	Advanced In Situ Deformation Monitoring in Wire Arc Additive Manufacturing via Digital Image Correlation (ONLINE) Amir Kordijazi , A. Lanba, University of Southern Maine, USA

LECTURE)

Savaş Dilibal, Doruk Gürkan, İstanbul Gedik University

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SESSION A4		SESSION B4	
Hall A - Advances in AM&WAAM Technologies - II Chair: Ozan Can Ozaner , KU Leuven, Belgium		HALL B - Properties of Welding and AM Parts - I Chair: Prof. Dr. Zuheir Barsoum , KTH Sweden	
8.30- 9.00	Impact and Potential of In-Situ Monitoring on the Development of Metal Laser Powder Bed Fusion (L L-PBF) Technologies Aydın Yağmur , EOS GmbH, Additive Mind, Germany (INVITED LECTURE)	Local Approach for Fracture Assessment of Components with Heterogeneity of Mechanical Properties (ONLINE) Mitsuru Ohata , Osaka University, Japan (INVITED LECTURE)	
9.00- 9.30	A New Method to Control Thermal Behavior of WAAM: Active Heating via Infrared Technology (ONLINE) Oğuzhan Yılmaz , Gazi University, Türkiye (INVITED LECTURE)	Engineering Assessment Procedure of the Local Thin Areas (LTA) in Welded Pipelines Fikri Başar Yalçiner , NMDC Group, Abu Dhabi Mustafa Koçak, İstanbul Gedik University, Türkiye	
9.30- 10.00	Utilization of Additive Manufacturing Methods in the Energy and Emission Sectors Ali İhsan Koruk , BOSAL Energy, Belgium (INVITED LECTURE)	Breaking the Boundaries of Additive Manufacturing: Additive Friction Stir Deposition Evren Yasa , University of Sheffield, UK (INVITED LECTURE)	
10.00- 10.30	Additive Manufacturing and Biomedical Applications Binnur Sagbas , Yıldız Technical University, Türkiye (INVITED LECTURE)	The Influence of Heat Input and Cooling Time on the Residual Stress During Wire Arc Additive Manufacturing Atilla Savaş , Piri Reis University, Türkiye	
10.30- 11.00	COFFEE BREAK and POSTER SESSION		
SESSION A5		SESSION B5	
HALL A - Additive Manufacturing Applications - I Chair: Assoc. Prof. Binnur Sagbas , Yıldız Technical University, Türkiye		HALL B- Properties of Welding and AM Parts - II Chair: Prof. Dr. Gürel Çam , İskenderun University, TÜRKİYE	
11.00- 11.30	Purge Gas for Welding of Stainless-Steel Pipes: Must or Luxury Emel Taban , Kocaeli University, Türkiye (INVITED LECTURE)	Application of Resistance Spot Welding in Cold-Formed Steel Structures Viorel Ungureanu , Ioan Both, J. Hulka, A. Popescu, S. Saraolu, A. A. Cristian, Politehnica University Timisoara, Romania	
11.30- 12.00	Additive Manufacturing Designers: A Comparison Between IAMQS Professional Profiles and Relevant ISO Standards Pedro Catarino , EWF, Portugal (INVITED LECTURE)	Effect of Filler Metals on Strength and Toughness of High Hardness Armor Steel Recep Murat Kurt , Uğur Gürol, Mustafa Koçak, İstanbul Gedik University, Türkiye and VESUVIUS, Türkiye, M. Tümer, Kocaeli University, Türkiye	
12.00- 12.30	Overview of Laser Shock Peening Processing for Improvements of Metal Additive Manufactured Part at HiLASE Centre Sanin Zulic , Hilase Center, Czechia	Potential of Process Gases for the WAAM to Increase Quality and Productivity Çerkez Kaya , Air Liquide Deutschland GmbH, Germany	
12.30- 13.00	High-Speed Laser Laser-Directed Energy Deposition of Ti/Al Multi-Multi-Material Component (ONLINE) Dongsheng Wu , H. Komen, M. Tanaka, Osaka University, Japan J. Sun, Z. Li, Shanghai Jiao Tong University, China	Advanced Process Modeling and Simulation of Multi-Multi-Material Directed Energy Deposition Emre Osmanoglu and Peter Mayr , Technical University of Munich, Germany	

13.00- 14.00	LUNCH BREAK and POSTER SESSION	
	SESSION A6 HALL A - Additive Manufacturing Applications Applications-II Chair: Yin Jin Janin , TWI, UK	SESSION B6 HALL B- Additive Manufacturing - I Chair: Akbar Heidarzadeh , Azarbaijan Shahid Madani University, Iran
14.00- 14.30	Understanding the Thermally Induced Martensitic Transformation in Nitinol Manufactured via Electron Beam Powder Bed Fusion Tymur Sabirov , A. Lanba, University of Maine, USA S. Dilibal, G. Peduk, İstanbul Gedik University Türkiye	Design for Material Properties of Additively Manufactured Metals Using Topology Optimization Can Ayas , Delft University of Technology, The Netherlands (INVITED LECTURE)
14.30- 15.00	Material Selection & Development, and Metal Additive Manufacturing Process for AR/MR/VR Products Ustun Duman , Meta Platforms, California, USA (INVITED LECTURE)	Development of Fast Fast-Paced Modular Microsatellite Production By Additive Manufacturing Sertaç Altınok , Turkish Aerospace Ind. Company, Türkiye (INVITED LECTURE)
15.00- 15.30	Metal Additive Manufacturing and its Unique Corrosion Mechanisms (ONLINE) Iris De Graeve , Vrije Universiteit Brussel, Belgium (INVITED LECTURE)	Enhancing Material Performance: Evaluating Shot Peening and Laser Peening Processes for Industrial Applications (INVITED LECTURE) Simge Gençalp , Manisa Celal Bayar University, Türkiye
15.30- 16.00	Determination Of Solid Particle Erosion Wear Behavior of Aircraft Turbine Blades Specific to Additive Manufacturing Orientation Effects Mehmet Esat Aydın , M. Demirci, M. Bağcı, Konya Technical University, Türkiye	Metallic Additive Manufacturing: Opportunities and Challenges for Passive Microwave Components in Telecommunications and Defense Bülent Alicioğlu , Asartech ARGE Tasarım Mühendislik, Türkiye
16.00- 16.30	COFFEE BREAK and POSTER SESSION	
	SESSION A7 HALL A - Additive Manufacturing Software and Applications Chair: Assoc. Prof. Atilla Savaş , Piri Reis University, Türkiye	SESSION B7 HALL B- Additive Manufacturing - II Chair: Dr. Sertaç Altınok , Turkish Aerospace Ind. Company, Türkiye
16.30- 17.00	Digitized Quality Inspection in Welding Production Role and Significance of the Software for the Development of Additive Manufacturing Technology Zuheir Barsoum , KTH Royal Institute of Technology, Sweden (INVITED LECTURE)	Enhancing Texture in High Entropy Alloys with Nb: In-Situ Synthesis and Microstructural Insights via Laser Powder Bed Fusion Isaqueo A. B. Moura , G. G. Ribamar, J. Shen, W. Zhang, T. S. Nunes, F. Zhang, J. P. Oliveira, Universidade NOVA de Lisboa, Portugal
17.00- 17.30	The Significant Role of Software Development for the Additive Manufacturing Technology Jonas Zielinski , Moduleworks GmbH, Germany (INVITED)	Welding and Characterization of P355GH Steel Used in Pressure Vessels Ismail Oguzhan Ayhan , Hakan Ateş, Gazi University, Ankara, Türkiye
17.30- 18.00	Non-Destructive Evaluation Approaches for Wire Arc Additive Manufacturing Ulaş Yaman , METU, Türkiye (INVITED LECTURE)	A Method for Detecting Bead Geometry of Thin Thin-Wall Structural Aviation Components in Wire Arc Additive Manufacturing (ONLINE)

		Rostislav Palivoda , Transport and Telecommunication Institute, Latvia
18.00- 18.30	Investigating Slag Accumulation in Wire Arc Additive Manufacturing of High Strength Low Alloy Steel Malan Jayawickrama , Mattias Igestrand, Nicolas Coniglio, Paul Kah University West, Sweden Arts Et Métiers Institute of Technology, France	Thermal Modeling of Tungsten Inert Gas Wire Arc Additive Manufacturing of Ti-6Al6Al-4V Alloy Mustafa Çağrı Özkader , Öncü Akyildiz and Cengiz Baykasoğlu, Hitit University, Ankara, TÜRKİYE