7th INTERNATIONAL SYMPOSIUM ON 3D PRINTING (Additive Manufacturing) TECHNOLOGIES and DIGITAL INDUSTRY (3D-PTC2023)

SCIENTIFIC PROGRAM

25 October 2023-Wednesday Main Hall (On line/In Person)

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09:30 – 10:00	**REGISTRATION**	
10:00 – 10:30	Dr. Binnur SAĞBAŞ Prof. Dr. Kerim ÇETİNKAYA	Opening Speeches
10:30 – 11:00	Prof. Dr. Tamer YILMAZ	Rector
11:00 – 11:30	Dr. Denis Dowling "In-process monitoring and process feedback during the printing of Ti-6Al-4V alloy parts"	Keynote Speaker
11:30 – 12:00	**COFFE BREAK**	
12:00 – 12:30	Dr. Jon Molina-Aldareguia "4D printing of metallic alloys towards novel shape morphing medical devices"	Keynote Speaker
12:30 – 13:00	Dr. Mahdi Bodaghi "Harmonizing Sustainability, 4D Printing, and Metamaterials in the Future of Soft Robotics"	Keynote Speaker
13:30-14:30	**LUNCH**	
	Session Chairman: Dr. Binnur SAĞBAŞ	
14:30-14:50	"Novel Approach to manufacture powders with tailored chemical composition for additive manufacturing" AMAZEMET	Tomasz Choma
14:50-15:10	"From Powder to Performance with ZEISS Industrial Quality Solutions" ZEISS	Benedikt Krist
15:10-15:30	"The Position and Future of Additive Manufacturing Technologies at ASELSAN" ASELSAN	Dr. Evren TAN
15:30-15:50	"Additive Manufacturing Vision in Turkey with infoTRON" INFOTRON	Cihat AYAN
15:50-16:10	"Additive Manufacturing Solutions" DIGIMODE	Elif Zeynep EMİR
16:10-16:30	**COFFE BREAK**	

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Session Chairman: Dr. Cem Bülent ÜSTÜNDAĞ

16:30-16:50	"Brief Introduction to AM & Related Technologies in Voksel's Portfolio" VOKSEL	Çetin Öney
16:50-17:10	TMC POWDER METAL	Prof. Dr. Mustafa BOZ
17:10-17:30	"Digitalization in the Manufacturing Sector" AUTODESK	Sercan Posacı
17:30-17:50	"Green management Journey in Koluman" KOLUMAN	Dr. Banu Özkeser
17:50-18:10	ZEBRA PROJECT	

25 October 2023-Wednesday **Hall-2** **(On line/In Person)**

Session Chairman: Dr. Ahu ÇELEBİ

16:30-16:50	"Analysis Of Defects During the Manufacturing Of Lattice Parts By Selective Laser Sintering"	Kayacan, Mevlüt Yunus*; Yılmaz, Mustafa Safa; Üzün, Ahmet
16:50-17:10	"Comparative Study of Gas Flow Dynamics in Gas Atomization with Different Melt Tube Geometries"	Yurtkuran, Emre*; Aktürk, Deniz
17:10-17:30	"Effects Of Heat Treatment on Wear And Microstructure Properties Of AlSi10Mg Alloys Produced By Selective Laser Sintering And Casting Method"	Çelebi, Ahu*; Çetinkaya, Semih; İMANÇ, Mustafa Mertcan
17:30-17:50	"Garments Industry 5.0: Transforming Through Digital Integration Of 3d Virtual Measurement Data and Characteristics"	DONMEZER, Semih*; DEMIRCIOGLU, Pinar; BOGREKCI, Ismail; Baş, Gökçen; Durakbasa, M. Numan
17:50-18:10	"Optimization of Process Parameters and Mechanical Property Analysis Of PLA Parts Manufactured By FDM Using A Grey Relational Analysis"	Kıtay, Özhan*; Alaca, Ömer

25 October 2023-Wednesday **Hall-3** **(On line/In Person)**

Session Chairman: Dr. Ömer EYERCİOĞLU

16:30-16:50	"A Design for Additive Manufacturing Methodology applied to Boat Bow Chock"	Kılıç, Altuğ*; Ayaydın, Mehmet; Tasdemir, Ahmet; Hayran, Necip; Oğuz, Ali
16:50-17:10	"Design, Analysis, And Additive Manufacturing of The Lattice Structure Cored Brake Disc For Laser Powder Bed Fusion"	Bayar, Abdülcelil*; Duran, Abdullah
17:10-17:30	"Joining Parts Manufactured by Additive Manufacturing Method With Welding Method Using Filling Material"	Eraslan , Cansu Sibel*; Küçüktürk, Gökhan
17:30-17:50	"Finite Element Analysis of Residual Stresses In Conformal Hybrid Non-Planar Large-Scale Additive Manufacturing: Evaluating Thermal Effects After Abs – Steel Bonding"	Aladag, Mehmet*; Eyercioğlu, Ömer; Tek, Engin; Akeloglu, Mehmet Ali; Zglobicka, Izabela ; Kurzydłowski, Krzysztof Jan

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	Session Chairman: Dr. Binnur SAĞBAŞ	
10.00-10.30	"Industrialized metal additive manufacturing" Prof Ian Gibson	Keynote Speaker
10.30-11.00	"From single methylcellulose-based bioinks to complex bioinks" Miguel A. Mateos Timoneda	Keynote Speaker
11.00-11.30	**COFFE BREAK**	
	Session Chairman: Dr. Mustafa BOZ	
11.30-11.50	ALPOMET	Yağız Akyıldız
11.50-12.10	ADDVALUE	Sadık Sinan Koşumcu
12.10-12.30	ARTUK HAVACILIK	Önder Artuk
12.30-12:50	METAM	Mustafa Arslan
13.30--14.30	**LUNCH**	
	Session Chairman: Dr. Murat AYDIN	
14:30-14:50	"Taguchi Analysis of FDM 3D Printed PLA Parts Based on Their Tensile Strength"	Temiz, Abdurrahim *; Öztürk, Fatih Huzeyfe; Aydın, Murat
14:50-15:10	"Fused filament fabrication for application of magnetorheological elastomers in soft robotics"	Fatr, Jan*
15:10-15:30	"Process Parameter Optimization Through Energy Consumption In 3D Printing Of PLA And GFRP"	Göktaş, Anıl Gökhan*; Karagüzel, Umut; Kuzu, Ali Taner
15:30-15:50	"3d Printing Machine Design And Manufacturing Of Low Melting Temperature Metals"	ÜNAL, Galip*
15:50-16:10	"Efficiency Evaluation of Smart Manufacturing Systems for Monitoring Production Efficiency and Quality"	Zurnaci, Erman*; Uzuner, Sabri; Nas, Engin
16:10-16:30	**COFFE BREAK**	
	Session Chairman: Dr. Binnur SAĞBAŞ	
16:30-16:50	"PLA/HA Biocomposite Filament Production for 3D Printing Applications"	Öztürk, Eren*
16:50-17:10	"Production of Alginate/Gelatin Scaffolds Loaded with Cinnamaldehyde and Meropenem Using a 3D Bioprinter for Corneal Injuries"	Cesur, Sümeyye ; Gunduz, Oguzhan; Aydoğdu, Perihan*; Örnek, Emine Beyza; Babür, Ece; Akpek, Ali
17:10-17:30	"Molten Metal Deposition: The Single-Step Direct Aluminium Additive Manufacturing Technology"	Galle, Jonas*
17:30-17:50	"Effect of artificial aging procedures on flexural strength of different 3D printed resins for pediatric dental crowns"	Buyuk, Kutalmış*; Korkmaz, Yasemin Nur; Simsek, Huseyin; Abay, Feridun
17:50-18:10	"A Combined Finite Element-Machine Learning Framework for Developing Printability Maps in Laser Powder Bed Fusion of AISI 316L Stainless Steel"	Muhammad Arif Mahmood and Marwan Khraisheh*

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	Session Chairman: Dr. Ömer EYERCİOĞLU	
11.30-11.50	"Sliding wear characteristic of HVOF sprayed WC-12Co composite coating: Effect of the applying load"	Avcı, Ali *; Akdogan Eker, Aysegul; Karabas, Muhammet
11.50-12.10	"Numerical Modelling of the Warping Behaviour in Filament-Based 3D-Printed Models"	Ramful,Raviduth*
12.10-12.30	"Design And Performance Analysis of Different Flame Hidden Structures"	Özaslan Halil; Bozdemir, Mustafa*
12.30-12:50	"Investigation of Ultem 9085 Material Reinforcement with Nylon12-CF Material"	Konan, Onur*; Yapici, Ataberk; Gümüşel, Okan
12.50-13.10	"Surface Quality Enhancing Of Internal Channels Of Additively Manufactured Parts By Using Abrasive Flow Machining (Afm)"	EYERCİOĞLU, Ömer*; Karadağ, Mustafa Emre; Akeloğlu, Mehmet Ali; Aladag, Mehmet
13:10-13:30	"Investigating Mode-I Fracture Toughness of Additively Manufactured PLA via Semi-circular Bending Specimen"	Paygozar, Bahman*; Görgülüarslan, Recep Muhammet
13.30--14.30	**LUNCH**	
	Session Chairman: Dr. Ayşegül ASLAN	
14:30-14:50	"Design And Physical Property Evaluation Of Prototype Models Produced Within The Scope Of The Teachers' 3d Material Journey Project"	Aslan, Ayşegül*; Aslan, Mustafa; Çava, Kutay; Özpınar, İrem
14:50-15:10	"The Systematic Review of the Studies Conducted in Turkey on the Topic of Applying 3D Printing in Mathematics Education"	Akın, Ayça*; Sezgin, H. Seda
15:10-15:30	"Strength Testing Device Treadmill Incline Motor Gear Design With 3D Printer"	Şahin, Mehmet Erhan*; Elbir, Ahmet
15:30-15:50	"Bending Behaviour of Additively Manufactured Gyroid-Based Lattice Beams"	Kazemivand, Saeed; Nikaeen, Golbarg; Sadeghi, Mohammad Hossein*; Koc, Bahattin
15:50-16:10	"The Effects of Inter Layer Pressurized Air Cooling on Mechanical Properties and Microstructure of Thin Wall Manufactured by CMT WAAM"	Eken, Gökçe*; Mert, Tolga
16:10-16:30	**COFFE BREAK**	
	Session Chairman: Dr. Tolga Mert	
16:30-16:50	"Wire arc additive manufacturing of AlMg4.5Mn with TiC nanoparticles"	Karimi, Javad*
16:50-17:10	"Manufacturing of Jig and Fixtures Used In Assembly Activities Of Unmanned Aerial Vehicle (UAV) By Using Additive Manufacturing Technologies And The Benefits"	Çorbacı,Fikret Kamil*
17:10-17:30	"Homogenized Properties Of Periodic Lattice Materials"	Demirtunç, Mehmet*; Görgülüarslan, Recep Muhammet
17:30-17:50	"Navigation of 3D Printed Delivery Mobile Robot Based on Robotic Operating System"	Göktaş, Anıl Gökhan*; Sezer, Semih

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	Session Chairman: Dr. Nazım BABACAN	
11.30-11.50	"Effect Of Design And Manufacturing Criteria On Tensile Behaviour Of Ti6al4v Lattice Structures Produced By Laser Powder Bed Fusion"	Sagbas, Binnur*; Gürkan, Doruk; Kıran, Kadir
11.50-12.10	"Investigation of Porcelain Bond Strength of Metal Frameworks Produced by SLM at Different Laser Powers"	Karahasan, Betül*; Özdemir Doğan, Derya; Babacan, Nazim
12.10-12.30	"Custom Design and Manufacturing of Orthopedic Grip Used in Defense Sports Fencing"	Buldum, Berat Barış*; Uysal, Elif Sena ; Çağan, Süleyman Çınar
12.30-12:50	"Estimating of Performance Coefficient in Absorption Cooling System By Artificial Intelligence Model"	Elbir, Ahmet ; Şahin, Mehmet Erhan*;
12.50-13.10	"Manufacturing of Gyroid-Based Lattice Structures Using A Combined Method of Investment Casting And Additive Manufacturing"	Heydari, Hassan; Nikaeen, Golbarg; Sadeghi, Mohammad Hossein*
13.10-13.30	"Investigation Of The Compression Behavior Of The Additively Manufactured Glass-Fiber Reinforced Composites Via Vat-Photopolymerization"	Çava, Kutay; İpek, Hüseyin; Usun, Altug; Aksa, Hüseyin Can; Aslan, Mustafa*
13.30--14.30	**LUNCH**	
	Session Chairman: Dr. Berat Barış BULDUM	
14:30-14:50	"The Advantages Of Using 3d Printing Technology In The Food Industry"	Tiryaki, Gizem*; Nakilcioğlu, Emine
14:50-15:10	"The Impact of Sustainable Innovation on Business Performance"	Sarikaya Ozkeser, Banu*
15:10-15:30	"Using Of 3d Bioprinter On Bresat Implant"	Buldum, Berat Barış*; Buldum, Aysu
15:30-15:50	"Investigation of Mechanical Properties and Microstructures of Three Different Biocompatible Co-Cr Alloys Produced by Laser Powder Bed Fusion"	Yildiz, Muhammed Taha; Babacan, Nazim*
15:50-16:10	"Gas Atomization of Ni-Hard Alloy"	Muratal, Onur*; Yamanoğlu, Ridvan ; Duran, Can; Gönülalan, Yiğit; Akyildiz, Yağiz ; Gül Koç, Funda ; Barutcuoğlu, Burak
16:10-16:30	**COFFE BREAK**	
	Session Chairman: Dr. Mustafa Aslan	
16:30-16:50	"Thermal Treatment And Characterization Of Ti-6al-4v Alloy Produced By Slm (Selective Laser Melting) Method"	Appavuravther, Esra Zerina*
16:50-17:10	"Adoption of Metal Additive Manufacturing In NNPC Limited: Current State And Challenges"	Umar, Al-Amin B*
17:10-17:30	"Double-Layer Drug-Loaded Tumor Dressing Production By 3d Printing And Electrospining Method"	Bingöl, Ayşe Betül*; Üstündağ, Cem Bülent
17:30-17:50	"Production Of A Personalized Mandible Prosthesis From Ct Images Using The Powder Bed Fusion Process Method"	Aksa, Hüseyin Can; Çava, Kutay; Usun, Altug; İpek, Hüseyin; Aslan, Mustafa*; Varol, Temel

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	Session Chairman: Dr. Fuat KARTAL	
10.00-10.20	"Part Production Time Estimation Model In 3d Printer: Data-Based Machine Learning Approach And Parameter Analysis"	Kartal, Fuat*; Kaptan, Arslan
10.20-10.40	"Road accident forecasting using machine learning algorithms "	Zermane, Hanane*; Zermane, Abderrahim
10:40-11.00	"The Effect Of Milling Speed On The Properties Of Co-Cr-Mo-W Particles Recycled From Slm Support Scraps"	Aksa, Hüseyin Can; Varol, Temel*; Akçay, Serhatcan Berk
11.00-11.30	**COFFE BREAK**	
	Session Chairman: Dr. Burhan DUMAN	
11.30-11.50	"Development And Dosimetric Verification Of 3d Mould Applicator In Brachytherapy"	Çavdar Karaçam, Songül*; Tunçman, Duygu; Dağdelen, Meltem; Uzel, Ömer Erol
11.50-12.10	"Radiological Evaluation Of The Effects Of Infill Density On 3d Printed Pla Samples"	Azaklıoğlu, Deniz*; Çavdar Karaçam, Songül; Pastacı Özsobacı, Nural; Özçelik, Derviş
12.10-12.30	"Determining Mechanical Properties Of Ti6al4v Additive Manufactured Parts At Different Test Conditions"	Sagbas, Binnur*; Ovacık, Taylan
13.30--14.30	**LUNCH**	
	Session Chairman: Dr. Yusuf Cengiz TOKLU	
14:30-14:50	"Dosimetric Evaluation Of Pla And Abs Materials Produced By Two Different Production Techniques"	Çavdar Karaçam, Songül*; Tunçman, Duygu; Şahin, tülin; Şahin, Şenol; Ergen, Şefika Arzu; Dağdelen, Meltem; Uzel, Ömer Erol; Çolpan Öksüz, Didem
14:50-15:10	"Additive Manufacturing of Concrete Structures and Concrete Elements, Optimization of the Time Consumed"	Toklu, Yusuf Cengiz; ÇERÇEVİK, Ali Erdem*
15:10-15:30	"Design, Manufacturing and Finite Element Assessment of Functionally Graded Auxetic Structures"	Özen, Mert*; Kenan, Hamit; Azeloğlu, Cumhur Oktay
15:30-15:50	"Restoring the Functionality of Gears Using 3D Printing"	Voropay, Alexey V.*; Yehorov, Pavlo; Gnatenko, Grygoriy; Koriak, Oleksandr; Sharapata, Andrey
16:10-16:30	**COFFE BREAK**	

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	Session Chairman: Dr. Binnur Sagbas	
10.00-10.20	"Prediction Of Surface Roughness Of Additive Manufactured Alsi10mg Parts Via Machine Learning"	Sagbas, Binnur*; Güngör, Hikmet Ayberk; Coşkun, Mert
10.20-10.40	"3d Printing Personalized Treatment Methods For Bone Tissue Engineering Applications"	Oktay, Büşra*; Bingöl, Ayşe Betül; Oktay, Aysel; Üstündağ, Cem Bülent
10:40-11.00	"Time And Cost Evaluation Of The Use Of Filament And Granule Material In Polymer Material Fed Additive Manufacturing Technology"	Köbeloğlu, Ahmet*; Çetinkaya, Kerim; Altun, Suat
11.00-11.30	**COFFE BREAK**	
	Session Chairman: Dr. Koray ÖZSOY	
11.30-11.50	Investigation Of The Mechanical Properties Of Ti6al4v Alloy Flexural Test Samples Fabricated By Electron Beam Melting Method	Sıcakdemir, Burak*; Pazarcıkcı, Arda; Özsoy, Koray
11.50-12.10	"3d Printing Biofunctional Wound Dressing Design For Diabetic Foot Ulcer"	Yıldız, Ertuğrul*; Tuğlu, Sude; Karadağ , Zahide; Gençaslan, Pınar; Baya, Aya ; Qasim, Anas Ayman; Bingöl, Ayşe Betül; Oktay, Büşra; Üstündağ, Cem Bülent
12.10-12.30	"A New Industrial Microwave-Assisted Distillation System for Essential Oil Extraction from Medicinal and Aromatic Plants "	Doğan, Habib*; Temiz, Ahmet Faruk; Genç, Abdullah
13.30--14.30	**LUNCH**	
	Session Chairman: Dr. Burhan DUMAN	
14:30-14:50	"The Use Of Orthoses Made With 3d Printer In Upper Extremity Rehabilitation: A Systematic Review"	Sarışahin, Sümeyye*; Çorakçı Yazıcıoğlu, Zeynep
14:50-15:10	"Development Of Low and High Pressure Components As A Single Product"	Maden, Hakan*; Özsarıkaya , Bilal; Kocer, Mustafa
15:10-15:30	"Simulation And Experimental Validation Of Deformation In A Laser Powder Bed Fusion Manufactured Bracket"	Gülcan, Orhan*; Gunaydin, Kadir; Kundakcıoglu, Erdem
15:50-16:10	"The Effect of Academic Staff for University"	Duman, Burhan*
16:10-16:30	**COFFE BREAK**	

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	Session Chairman: Dr. Savaş DİLİBAL	
10.00-10.20	"The Design Of The Organic-Structured Unmanned Aerial Vehicle Body Produced By 3d Printing Process Using Topology Optimization"	Uslu Uysal, Mine *; Kahveci, Nursen
10:20-10.40	"Hardness Variation And Microstructural Characterization Of Bimetallic 316l Stainless Steel/Inconel 625 Waam Component"	Kumek, Hülya; Gürol, Uğur*; Dilibal, Savaş; Koçak, Mustafa
10.40-11.00	"Investigation Of The Effect Of Gas Pressure On Grain Size In The Production Of Alsi10mg Aluminum Alloy Powder By Gas Atomisation Method"	Boz, Mustafa; Korkmaz, Selim*; Kılıç, Namık; Güngör, Yeşim; Gök, Ertuğrul
11.00-11.30	**COFFE BREAK**	
	Session Chairman: Dr. Hossein Mohammad Sadeghi	
11.30-11.50	"Investigation Of Microstructure And Porosity Properties Of Alsi10mg Alloys Produced Via Laser Powder Bed Fusion"	Sagbas, Binnur*; Coşkun, Mert
11.50-12.10	"An Initial Evaluation of The Biological Properties Of The Surface-Modified 3d-Printed Porous 316l Stainless Steel Samples"	Yelten, Azade*; Haliloglu, Alper; Ercan, Batur
12.10-12.30	"Numerical And Experimental Investigation On Mechanical Properties Of Gyroid-Based Lattice Structures With Different Cell Orientations"	Nikaeen, Golbarg; Sadeghi, Mohammad Hossein*; Jamshidi, Maryam;
13.30-14.30	**LUNCH**	
	Session Chairman: Dr. Koray ÖZSOY	
14:30-14:50	"Investigation Of A Liquid-Cooled Cold Plate Produced With Additive Manufacturing Technologies"	Parlak, Murat*; Doğan, Oğuz ; Örs, Ergun
14:50-15:10	"10 Areas Of 3d Printing Technology Has Significantly Impacted Our Lives"	Appavuravther, Esra Zerina*
15:10-15:30	"Design and Production of a Microneedle Patch-Based Drug Delivery System for Melanoma Skin Cancer Treatment"	Saraj, shhd*; Karzoun, Louna; ÜSTÜNDAĞ, Cem Bülent; Bingöl, Ayşe Betül; Oktay, Büşra; şenel, Ilkay; SÜLEYMAN, SIMAF; altabel, Ahmad; bedir, Tuba
15:30-15.50	"Investigating the machinability of metal additive manufacturing: A conceptual frame"	Pazarcıkcı, Arda; Çevik Zihni Alp; Özsoy Koray
15:50-16.10	"Investigation Of Fuzzy Logic Approaches In FDM Method Processing Parameters"	Özsoy, Koray*; Kuruoğlan, Ebru
16:10-16:30	**COFFE BREAK**	