Final Program

Thursday, 25th of May ROOM - Auditório José Grácio

Reception to participants	**09:00**
Opening Ceremony (UA Vice Rector, Professor Artur Silva; DEM Director, Professor Robertt Valente; TEMA Director, Professor António Bastos)	**09:30**
I Session - 1. Sustainable Manufacturing Solutions; c. Manufacturing for Circular Economy	**09:45**
Study of Thin-Walled AISI316L LMD Manufactured Parts	Catarina de Lemos
Recovering of recycled expanded polystyrene via extrusion	Pedro Leite
Cork Composites for Sustainable and Eco-friendly Applications in Aerospace Sector	Selim Gürgen
Reuse of residues from the SLS process using the use of alternative production technologies	Inês Praça
Lightweight biocomposites for a new generation of circular economy-enabled visual communication boards	C. M. Correia
Non-destructive reprocessed PLA degradation evaluation and control in FFF filament extrusion	Tiago Gomes
COFFEE BREAK	**11:25 to 11:40**
Developing additive symbiotic networks through the adoption of blokchain technology	Inês A. Ferreira
Uniform Mo2C nanoparticles derived from Mo132 cluster as efficient electrocatalysts for hydrogen evolution	Zheng Zhou
Bismuth-induced synthesis of Au–X (X = Pt, Pd) nanoalloys for electrocatalytic reactions	Nan Wang
LUNCH TIME	**12:55**
II Session - 3. Intelligent Systems; a. Identification systems; b. Digital transformation; d. Machine learning	**14:00**
MyEyes: Garnments Detection and Classification using Region based - CNNs	Mariana Carvalho
Evaluation of semantic reconstruction algorithms for damage detection and recognition in 3D models	Miguel O. da Cruz
Development of a Vision System for Monitoring Cooking in an Autonomous Kitchen	João Tomás
A container-based cloud-to-edge approach to support industry 4.0	P. Nunes
InovDesign: A self assessment tool for product design and development	Sofia B. Rocha
PMSP: An IoT Suite for Smart Industrial Monitoring	Diogo Costa
The Total Innovation Management and the Stage-Gates model: Contributions for the wellbeing and sustainable manufacturing solutions	Trajano Quinhões
Computation design as a tool for ideation (Unblurring computational concepts)	Diogo Carvalho
COFFEE BREAK	**16:05 to 16:20**
Digital Health Factories: Supporting a Comprehensive Digital Transformation by combining Engineering and Health Sciences	Luís Velez Lapão
Digital Transformation in the Water Sector: Present Situation, Future Prospects, Challenges and Opportunities Transforming Water Management with Intelligent Systems: A Case Study on Operational Alerts and Notification	Frederico Lopes
Towards a new technologic world: The evolution industrial revolutions in Maintenance	João Alves
A Machine Learning Approach to Calibrate Elastoplastic Constitutive Models for Sheet Metal Forming Simulations	J. M. Pinto
Towards a personalized healthcare conversational agent using unsupervised learning: Leveraging Artificial intelligence combined with electronic health records	Ana Martins
Implicit constitutive modelling using RNNs and indirect training	R. Lourenço
Closing Time of Room - Auditório José Grácio on Thursday, 25th of May	**18:00**

Thursday, 25th of May ROOM - 22.3.2.

Reception to participants	**09:00**
Opening Ceremony (UA Vice Rector, Professor Artur Silva; DEM Director, Professor Robertt Valente; TEMA Director, Professor António Bastos) at Auditório José Grácio	**09:30**
III Session - 2. Technologies for the Wellbeing; a. Multiscale technologies and devices for medicine, environment and energy	**09:45**
Novel nanocomposites for energy storage: Titania – activated carbon nanocomposite for high capaity hydrogen storage in MgH2 and high density electric energy storage in an Li ion battery	D. Pukazhselvan
Electrolysis for sustainable ammonia production: Electrochemical green ammonia synthesis as a potential hydrogen carrier	Francisco J. A. Loureiro
Development of High Temperature Proton-Conducting Electrolytes for Hydrogen Technologies	Isabel Antunes
Molten salt synthesis of MAX phases Preparation of Ti3AC2 (A = Al, Si) powders in argon and air	Allan J. M. Araújo
Vanadium (oxy)nitride as a potential anode for ammonia solid oxide fuel cells	Laura I.V.Holz
A layered double perovskite as potential electrode for protonic ceramic electrochemical cells: Ba2NiMoO6-δ	Vanessa C. D. Graça
COFFEE BREAK	**11:25 to 11:40**
Fabrication of anode-supported thin film electrolyte membranes for Solid Oxide Fuel Cells	Carlos M. R. Almeida
MnCo2O4 electrocatalyst for water-splitting devices: Oxygen evolution reaction in alkaline environment of nanocatalyst grown on 3D nickel foam	Thayse R. Silva
Sustainable electrochemical syngas production	Alfredo S. B. Luemba
O2 and CO2 electroreduction in solid oxide cells: Electrochemical performance of the promising Sr2Fe1.5Mo0.5O6-δ electrode	Morena B. Farias
LUNCH TIME	**12:55**
III Session - 2. Technologies for the Wellbeing; a. Multiscale technologies and devices for medicine, environment and energy	**14:00**
Artificial Neural Network Modelling of Solar Thermal Hybrid Façade: Artificial Neural Network Modelling Approach and Results	Luís Filipe Martins
Numerical model for domestic hot water tanks integrated in heat pump water heaters: Development and experimenl validation	Francisco Bispo Lamas
The future of adsorption heating and cooling technologies	João M.S. Dias
Improving thermal comfort and water savings in domestic gas water heaters	Tiago Santos
IV Session - 1. Sustainable Manufacturing Solutions; b. Nanoengineering & Bio-inspired manufacturing	**14:55**
Confining materials at the nanoscale for cancer therapy	Gil Gonçalves
Luminescent QR codes of PLA/LnMOF hybrid composites	R. Simões
Carbon Dots@Aminoporphyrin Hybrids for Enhanced Photodynamic Therapy	Ana C. Almeida
Carbon dots for mitigation of metals contamination	João Amaral
COFFEE BREAK	**16:05 to 16:20**
Coral Reef Restoration (A new nature centered design approach)	Miguel Vieira
Characterisation of an additively manufactured 3D cross-based fractal structural for impact energy absorption with different volume fraction	Gabriel Serra
Development of Shear Thickening Fluids for Impacts Mitigation	Lídia de Oliveira
Closing Time of Room - 23.3.2. on Thursday, 25th of May	**17:15**

Friday, 26th of May ROOM - Auditório José Grácio

V Session - 1. Sustainable Manufacturing Solutions; a. Manufacturing processes & Simulation	**09:15**
4D Printing: Can additives influence the morphing performance of PLA-based materials?	Mylene S. Cadete
Characterization and functional properties of carbon nanotube reinforced thermoplastic via fused filament fabrication	Yiyun Wu
Design and customization of an automotive door panel through hybrid additive manufacturing	António Martins
Fabrication of thin walled structure via Wire-based Laser Metal Deposition	M. Ghasempourmouziraji
PCM 3D printing encapsulation: Development and optimization of PCM macroencapsulation processes and systems	Miguel Moreira
Experiments on Fused Filament Fabrication over freeform surfaces	Iara Castro
COFFEE BREAK	**10:55 to 11:10**
Laser Marking on Aluminum Alloys: Process parameters and surface treatment effect on marking quality	Paulo Rosa
Experimental studies of shear thickening fluids with cork	G.J.A. Sousa
Gas tungsten arc welding of as-cast AlCoCrFeNi2.1 eutectic high entropy alloy	Jiajia Shen
Selecting a heterogeneous mechanical test for sheet metal characterization	M. Gonçalves
Analysis of springback in 3rd gen steels	Catarina Pereira
Surface quality in the helical milling of the Ti-6Al-7Nb alloy - a case study	A. J. Festas
LUNCH TIME	**12:50**
V Session - 1. Sustainable Manufacturing Solutions; a. Manufacturing processes & Simulation	**14:00**
Evaluation of the Injection Mold Performance Through the In-Situ Instrumentation and Data Acquisition System	T. Zhiltsova
Machine Leaning for the Geometric Optimization of Injection Moulds	J. F. Caseiro
Mechanical Assessment of Transposed Cable in Power Transformers Windings	José Coimbra
Development of Statistical Model and Experimental validation of Mechanical behavior of fragrant screwpine fiber reinforced polyester	Ananth Rajkumar
Cold crackings on dissimilar welding of differential case	Álvaro F. Pires
Double-depth texturization and bioactive coatings via laser technology for zirconia dental implants	J. Mesquita-Guimarães
Development of a female finite element model of the cervical spine	Afonso J.C. Silva
Process-informed constitutive model selection: Statistical analysis to rank types of constitutive models	M. Conde
On the identifiability of sheet metal constitutive parameters using the Arcan test	J. Henriques
Comparison of Finite Element Methods in Fusion Welding Processes—A Review	Eva S. V. Marques
Fixation of calcaneal fractures with a new type of osteosynthesis plate (Preliminary study)	Beatriz Correia
Rheocasting Simulation: Automobile component manufactured by Rheocasting	Teresa Morgado
COFFEE BREAK	**16:20**
Closing and Awards Ceremony	**16:45**

Friday, 26th of May ROOM - 22.3.2.

VI Session - 2. Technologies for the Wellbeing; b. Innovative technologies for Smart Cities	**09:15**
Forecasting passenger flow in the Lisbon Metro under football events based on multiple match information data	Luís Santos
Design and evaluation of MaaS bundles in the regions of Aveiro and Coimbra	Sofia Suárez
Development of an integrated driving volatility-safety- -emissions indicator for highways	Elisabete Ferreira
Sustainable mobility in an ERASMUS student context	Guilherme Fernandes
Exploring operational and energy-environmental performance using a driving simulator	Rita Madail
Assessment of Noise and Exhaust Emissions Hotspots through Advanced Techniques	Antonio Pascale
COFFEE BREAK	**10:55 to 11:10**
Comparative analysis of metro system data in different European cities	João Bastos
Development of a driving discomfort indicator using a vehicle driving simulator	José Silva
The relevance of validation in the simulation of road conflicts between motor vehicles and vulnerable users	Teresa Gonçalves
Developing public lighting solutions for light pollution reduction A case study on portuguese territory	David Figueiredo
Expanded Cork in Micromobility Helmet	Miguel Mingote
Development of a model for a freezer integrating phase change materials	Ana Delgado
LUNCH TIME	**12:50**
VI Session - 2. Technologies for the Wellbeing; b. Innovative technologies for Smart Cities	**14:00**
Transport solutions for storage and deliver in autonomous kitchen	Carla Marques
Development of an automated packaging system for an automated kitchen	João Ramos
Development of a automatic washing system for an autonomous kitchen	António Rebelo
Development of an Automated Solution for Spice Dispensig	João Ferreira
Smart water supply systems operation with optimization strategies and analytical sensitivity approach	Ana Luís Sousa
Machine Learning models for prediction and optimization of water supply networks	Sara Mota
Pump-storage optimization in Water Supply System: A case study	Flávio Silva
Enhancing Water Supply Systems operations with Smart Predictive Digital Twins and Real-time Orchestration in Multiservice Frameworks	Tiago C. Pereira
COFFEE BREAK	**16:15**
Closing and Awards Ceremony	**16:45**

Friday, 26th of May ROOM - 22.3.17.

VII Session - 2. Technologies for the Wellbeing; a. Multiscale technologies and devices for medicine, environment and energy	09:15
METHIS Digital Services Platform: Primary Health Care Digital Transformation	Mariana Peyroteo
Automated rotational electromagnetic generator with self-adaptive structure by coil switching	Pedro Rolo
An unobtrusive multimodal stress detection model & Recommender System	Simão Ferreira
RehabVerse A Virtual Reality Game for Post-stroke Rehabilitation	Diogo Pereira
A multimaterial multifunctional patch to repair the spinal cord contusion injury	Daniela Silva
Production of Tumour-on-a-chip parts using 3D printing	João F. Gil
An anisotropic magneto-responsive fibre-based hydrogel for spinal cord guided regeneration	Joana P.M. Sousa
COFFEE BREAK	**11:10**
LUNCH TIME	**12:50**
COFFEE BREAK	**16:15**
Closing and Awards Ceremony	**16:45**

Sessions and Topics

Session	Topics	Day/Place
I	**1. Sustainable Manufacturing Solutions** c. Manufacturing for Circular Economy	**Thursday, 25th of May** ROOM - Auditório José Grácio
II	**3. Intelligent Systems** a. Identification systems; b. Digital transformation; d. Machine learning	**Thursday, 25th of May** ROOM - Auditório José Grácio
III	**2. Technologies for the Wellbeing** a. Multiscale technologies and devices for medicine, environment and energy	**Thursday, 25th of May** ROOM - 22.3.2.
IV	**1. Sustainable Manufacturing Solutions** b. Nanoengineering & Bio-inspired manufacturing	**Thursday, 25th of May** ROOM - 22.3.2.
V	**1. Sustainable Manufacturing Solutions** a. Manufacturing processes & Simulation	**Friday, 26th of May** ROOM - Auditório José Grácio
VI	**2. Technologies for the Wellbeing** b. Innovative technologies for Smart Cities	**Friday, 26th of May** ROOM - 22.3.2.
VII	**2. Technologies for the Wellbeing** a. Multiscale technologies and devices for medicine, environment and energy	**Friday, 26th of May** ROOM - 22.3.17.