

DETAILED PROGRAMME

NOVEMBER 27

09:30 Opening Ceremony WITH PEDRO DOMINGUINHOS (CNA-PRR)

10:00 PLENARY LECTURE 1 WITH JOSÉ GRESES

10:40 Coffee break / Exhibition

11:10 HYBRID MOULDS

11:10 An automated approach to conformal cooling design for hybrid injection molds *Eleonora Caneve*, Nuno Agostinho, Luís Santos and António R. Silva

11:30 Mold5G - Using Additive Manufacturing to enhance the production of injection tools *Nuno Agostinho*, Eleonora Caneve, Luís Santos and António R. Silva

11:50 Improving Efficiency in Injection Moulding Tools: The Role of Simulation in Modelling Conventional and Conformal Cooling Channels *Luís Dias* and Rui Soares

12:10 Revolutionizing Injection Moulds: Large-Scale Conformal Cooling Channels via DED-Arc *Tiago Nuncio*, Paulo J. Morais, C. Sofia Proença and *Eurico Assunção*

12:30 Lunch break / Exhibition

14:00 PLENARY LECTURE 2 WITH PAULO BARTOLO

14:40 HYBRID AND ADDITIVE MANUFACTURING SYSTEMS

14:40 A new approach to multi-material metamaterials via fused filament fabrication *João Ferreira*, Sérgio Tavares and Victor Neto

15:00 Robotic extrusion-based additive manufacturing for urban spaces: a study of materials and large-scale production *Afonso Santos*, Artur Costa, Álvaro M. Sampaio and António Pontes

15:20 Electric Field Assisted AM for improved piezoelectric behavior of PLLA *Artur Basta*, Paula M. Vilarinho and Paula Ferreira

15:40 Coffee break / Exhibition

16:10 DIGITAL TOOLS FOR ADDITIVE MANUFACTURING

16:10 Industrial Robot Trajectory Generation and Execution for 3D Printing using an ABB IRB 1200 *Marcella Cavalcanti*, Hugo Costelha and Carlos Neves

16:30 Computational Design: an application to geometry and 3D printing *Carlos Costa*, Ana Simões, Violeta Clemente and *João Dias-de-Oliveira*

16:50 Predictive modeling of morphing behavior in 4D printed PLA-based polymers *Mylene Cadete*, Idalina Gonçalves and Victor Neto

17:10 Digital-Enabled Certification and Qualification in Additive Manufacturing: The DILAPRO Approach *Ana Queiroz Barbosa*, Rita Bola, Eurico Assunção

17:30 Use of waste from the stone industry for decorative ceramic application *Pedro Custódio*, *Liliana Gouveia* and Alexandre Vieira

17:50 Additive manufacturing by extrusion of thermoplastics polymers applied to the naval industry *P. J. Novo*, F. J. P. Simões, Patrício Banda, Sérgio Leirinha, Patrícia Agostinho, Tânia Carvalho, Marco Lagares and P. G. Martinho

19:30 Conference Dinner
Cooperativa João Paulo II - Espaço Vita

NOVEMBER 28

09:30 PLENARY LECTURE 3 WITH IAN GIBSON

10:10 MATERIALS FOR ADDITIVE MANUFACTURING

10:10 Road to the "perfect" 3D-printed fruit and vegetable-based structure *Tatiana Pereira* and Maria Manuel Gil

10:30 Metal chips as a sustainable feedstock for AM *Catarina Batista*, Patrícia Rodrigues, Daniel Gatões, Fátima Barreiros, Tânia Carvalho and Teresa Vieira

10:50 Relative Permittivity Extraction using Fast Prototyped Standards with the Waveguide Method *Saúl Carvalho*, *João Reis*, Samuel Heleno, Luís Duarte, Telmo Fernandes and Rafael Caldeirinha

11:10 Coffee break / Exhibition

11:40 Sustainable faience additive manufacturing by the incorporation of limestone residues *Paulo Novo*, Fátima Barreiros, Liliana Gouveia and Alexandre Vieira

12:00 Study of composite materials obtained by Automated Fibre Placement with thermoplastic matrix and carbon fibre reinforcement *M. L. Silva*, P. J. Novo, P. Esfandiari, A. Carreiras, Tânia Carvalho, P. G. Martinho and J. F. Silva

12:20 Impact of Energy Density and Energy Intensity on Laser Powder Bed Fusion-Based Pure Iron Additive Manufacturing *Pedro Lopes*, Luís Oliveira and Jorge L. Alves

12:40 Lunch break / Exhibition

14:00 HYBRID PRODUCTS

14:00 2D metallic metamaterials produced by material extrusion *Daniel Gatões*, Luís Cacho, Patrícia Rodrigues, Diogo Neto and Teresa Vieira

14:20 Design of 3D Printed Horn Antennas for Millimeter-Wave Applications in the 18-26.5 GHz Band *Samuel Heleno*, Saúl Carvalho, João Reis, Luís Duarte, Telmo Fernandes and *Rafael Caldeirinha*

14:40 Design and Optimization of an Amplitude-Tapered Corporate Feeding Network for Large Array Antennas with Fixed Beam Steering at 50-75 GHz *Samuel Heleno*, Saúl Carvalho, João Reis, Luís Duarte, Telmo Fernandes and *Rafael Caldeirinha*

15:00 C-Band Laminate And 3D Printed Patch Antennas: A Comparative Study *Samuel Heleno*, Saúl Carvalho, João Reis, Luís Duarte, *Telmo Fernandes* and *Rafael Caldeirinha*

15:20 Influence of the macro-interlocking design on the mechanical behaviour of dissimilar joints produced by additive manufacturing *Teresa Abreu*, Rui M. Leal, Carlos Leitão and Ivan Galvão

15:40 Machine Qualification Methods and Capability Analysis of DMLS machines *Aydın Yagmur*

16:00 Closing Ceremony WITH MANUEL NOVO (ERDFIO)