



IWAM - International Workshop on Additive Manufacturing and Sustainability

October 9th, 2026

Hybrid Symposium: Bragança

PROGRAMME OF IWAM2026

Friday October 9th, 2026

9:00 IWAM 2026 Opening

Session A – Bioengineering, PDMS and Microfluidic Systems (Chair: João Ribeiro & João Rocha)

9:05	Opening session
9:20	Lecture Note – <u>Rui Ribeiro</u>: Carbon Materials for a Sustainable Future: Rethinking Resources, Processing, and Composition
9:45	Colored PDMS Microparticles for Flow Visualization in a Microneedle-Based Microfluidic Device Online presentation – Japan <i>Akari Hayakawa, Mariana Ferreira, Glauco Nobrega, Carlos Faria, Violeta Carvalho, João Ribeiro, Diana Pinho, Ayako Yamamoto, Senhorinha Teixeira, Rui Lima</i>
10:00	Size-Controlled PDMS Microparticles by Batch Emulsification and Droplet Microfluidics <i>M. Pereira, G. Nobrega, L. Neves, M. Ferreira, C. Faria, D. Pinho, E. Fernandes, R. Lima</i>
10:15	Liposomal Drug Transport Across a Placental Barrier-on-a-Chip Model <i>Margarida Gonçalves, Valéria Gomes, Paulo Sousa, Elisabete M. S. Castanheira, Rui Lima, Diana Pinho</i>
10:30	Optical Optimization for In Vitro Hemodynamics: Development of a DMSO Blood Analogue for Translucent Resin Vascular Models <i>Lucas Boniatti Neves, Ana Moita, João E. Ribeiro, Pablo Fuciños, Rui A. Lima</i>
10:45	Fabrication and Thermal Validation of a PDMS Organ-on-a-Chip Device with an Embedded Resistive Heater <i>M. Ferreira, S. Costa, G. Nobrega, L. Neves, C. Faria, D. Pinho, Graça Minas, R. A. Lima</i>

11:00-11:30 COFFEE BREAK (Coffee Lounge)

Session B1 – Additive Manufacturing, Design and Industrial Applications (Chair: Leonel Deusdado &)

11:30	Additive Manufacturing-Assisted Bi-Functional Grinding Wheel Fabrication <i>P. Capela, S. M. Costa, M. Correia, J. Gomes, J. C. Teixeira, M. Pereira, D. Soares</i>
11:45	Additively Manufactured Transparent Replicas for Experimental Validation of Coolant Flow in Structured Grinding Wheels <i>S. Costa, A. Souza, P. Capela, L. Neves, J. Ribeiro, M. Pereira, D. Soares</i>
12:00	Development of a Virtual Motion Control Framework for Robotic Cement Projection Prototype <i>Mariana Moreiras, Leonel Deusdado, Luís Afonso</i>
12:15	Structural Biomimetics Applied to the Human Femur: Topology Optimization and Experimental Comparison of Models Fabricated by Additive Manufacturing <i>Luana Aparecida Grachei da Costa, J. Rocha, João Eduardo Pinto Castro Ribeiro</i>
12:30	3DGS Heritage Models: Semantic Authoring and Fabrication Pathways <i>Leonel Deusdado, Mariana Moreiras, J. Rocha.</i>

Session B2 – Advanced Materials, Energy and Circular Economy (Chair: José Barbosa & Arnaldo Pereira)

11:30	Methane/Hydrogen Separation Using a Hierarchically Structured 3D-Printed Porous Carbon Monolith <i>Laura Bueno, Jose A. C. Silva, Adriano Henrique</i>
11:45	Screening Conductive Networks: A Comparative Study of Filler Strategies in Silicone Elastomers <i>Inês S. Afonso, Reinaldo Souza, Glauco Nobrega, Diana Pinho, João Eduardo Ribeiro, Ana Moita, Rui A. Lima</i>
12:00	Sustainable Industry and the Goodhart's Law Trap: Specific Energy Consumption in Additive Manufacturing <i>Larysa Savosh, Luís Frólen Ribeiro</i>
12:15	Remanufacturing of Metal Storage Cabinets as a Circular Economy Strategy <i>Karen Alejandra Garcia Vasquez</i>
12:30	Chestnut Shell Valorization in Composite Filaments for 3D Printing: A Review of Processing Challenges and Research Gaps <i>Sara Rocha, J. Rocha, J. Santos, Leonel Deusdado, J. Ribeiro</i>

14:30 LECTURE NOTE

14:30 Lecture Note – **Inês M. Gonçalves: PDMS in Biomedical Applications****Session C1 – Sustainable Manufacturing and Environmental Applications** (Chair: Flora Silva & Isabel Lopes)

- 15:00 Water Efficiency in a Metalworking Industry Building: Behavioral, Physical and Conceptual Approaches
Maria A. S. dos Santos, Mariane Kempka, Paula Maria Barros, João Ribeiro, Ana M. Antão-Geraldes, Flora Silva
- 15:15 Investigation of 3D-Printed Filter Design Alternatives for Treating Runoff from a Green-Roof Prototype
Maria A. S. dos Santos, Carlos E. B. Rodrigues, Paula Maria Barros, João Ribeiro, Ana M. Antão-Geraldes, J. Rocha, Flora Silva
- 15:30 Additive Manufacturing for Metalworking Fluid Filtration: Design Strategies, Biomimetic Architectures and Sustainability Opportunities
G. H. S. Cangussu, J. E. Ribeiro, J. Rocha, M. Rodríguez-Martín
- 15:45 Corrosion Behaviour of Metallic Materials in Olive Mill Wastewater and the Potential of Phenolic-Rich Fractions as Green Corrosion Inhibitors
Inês S. Afonso, David Araújo, Patrícia C. Sousa, João Eduardo Ribeiro, Rui A. Lima
- 16:00 Digital Manufacturing and Industry 4.0 - Technologies for Sustainable and Intelligent Production
Isabel Lopes, Pedro Oliveira

Session C2 – Education, Health and Societal Sustainability (Chair: José Gonçalves & Paula Barros)

- 15:00 The Use of Active and Multisensory Methodologies in the Literacy Process to Promote Educational Sustainability and Inclusion
Alessandra de Oliveira Baroni
- 15:15 Early Literacy as a Foundational Pillar for Educational Sustainability and SDG 4 Quality Education
Alessandra de Oliveira Baroni
- 15:30 Development of an Experimental Didactic Model for Blood Flow Visualization in Common Carotid Artery Stenosis
Ana Camões, Viviane Varela
- 15:45 From Tradition to Innovation: Sensory Analysis of Alheira Sausage with an Improved Nutritional Profile
Caroline Gama, Gabriella Freitas, Mara Rodrigues, Juliana Almeida, Vera Ferro-Lebres
- 16:00 Artificial Intelligence for Academic and Socioemotional Support of Twice-Exceptional University Students: A Sociotechnical Perspective
João Guilherme Lourêdo, Nara Maria Bernardes Pasinato

16:30 Closing Session

Draft programme – session chairs and final presentation order to be confirmed.

Caso tenha dificuldade contacte por WhatsApp: 919 960 851 – João Rocha/ 919675084 João Ribeiro

Sessão A <https://ipb-pt.zoom.us/j/86836393858?pwd=86WVgS3nD0XC2IKPJefLsb4Xpt43v6.1>
 Sessão B1 <https://ipb-pt.zoom.us/j/86836393858?pwd=86WVgS3nD0XC2IKPJefLsb4Xpt43v6.1>
 Sessão B2 <https://ipb-pt.zoom.us/j/82792771023?pwd=kOd8YqRI7IFTIOyzEa10M0owTWRHRt.1>
 Sessão C1 <https://ipb-pt.zoom.us/j/86836393858?pwd=86WVgS3nD0XC2IKPJefLsb4Xpt43v6.1>
 Sessão C2 <https://ipb-pt.zoom.us/j/82792771023?pwd=kOd8YqRI7IFTIOyzEa10M0owTWRHRt.1>