



## 5<sup>th</sup> EUROMAGH International Conference



## Biobased Materials for Circular Economy

*Djerba, 15-17 May 2025*



## Thursday 15-05-2025

9h00-10h00	Registration
10h00-11h30	Conference Opening
11h30-12h30	<b>Keynote speaker 1: Pr. Flavia Braghiroli -Valorisation et recyclage de produits forestiers - Production et caractérisation de bioproduits et matériaux biosourcés poreux et carbonés</b> Institut de recherches sur les forêts (IRF)-UQAT-Canada
12h30-14h00	Lunch
15h00-16h00	Room 2: (online session) Chairman : Pr. Mohamed khelif/Co-Chairman :Pr. Philippe Michaud
15h00-15h15	Hot pressing of self-bonded panels made from extrusion-refined chestnut wood ( <i>Castanea sativa</i> ) fibres: influence of moulding conditions on their properties; <i>Philippe Evon- Laboratoire de Chimie Agro-industrielle (LCA)-France</i>
15h15-15h30	Efficient biotransformation of organic wastes into green energy using hydrolytic treatment and anaerobic digestion; <i>Zaineb Dhaouefi-UQAT-Canada</i>
15h30-15h45	Biodegradation of 3D-Printed biocomposites from polylactic acid and industrial forest residues: A step toward the circular economy; <i>Sarra Helaoui- UQAT-Canada</i>
15h45-16h00	Home Compostability and Multiscale Characterization of PLA PBS and PBAT Biocomposites with Agro-Industrial Fillers (Brewer's Spent Grain Orange Peel) for Sustainable Packaging; <i>Jules Bellon- UniLaSalle Transformation and Agro-Resources Research Unit Mont-Saint-Aignan-France</i>
15h00-15h45	Room 1: Circular Economy and Waste Valorization in Bio-Based Materials Chairman : Pr. Hedi Nouri/Co-Chairman : Pr. Sofiane Guessesma
15h00-15h15	Exergy-driven optimisation of an integrated Flared gas-fuel GT-SOFC hybrid energy system; <i>Mariam Hentati-ENIM-Tunisia</i>
15h15-15h30	Development and mechanical characterization of Date palm fiber / PLA biocomposites: effect of fiber content and particle size; <i>Ismail Dhaou-ENIS-Tunisia</i>
15h30-15h45	Effect of aging on the damage mechanisms of 3D-printed bio-sourced composite sandwiches under 3-points bending; <i>Zhenyi WANG-University of Technology of Troyes-France</i>
15h00-15h45	Room 3: 3D Printing and Additive Manufacturing of Bio-Based Composites Chairman : Pr. Ridha Mnif /Co-Chairman : Pr. Hatem Mrad
15h00-15h15	Study of the Impact of FDM 3D Printing Parameters on the Wear and Hardness of Parts; <i>Maroua Jabeur-ISGIS-Tunisia</i>
15h15-15h30	Formulation of a low-carbon 3D printable mortar reinforced with flax fibers: X-ray tomography study of the structure; <i>Dounia ZAID- ESTP , Troyes campus-France</i>
15h30-15h45	Resonance ultrasound spectroscopy as a new method to characterize the effective properties of PLA fabricated by FFF technology; <i>Mayssa BOUZID-ENIS-Tunisia</i>
16h00-16h30	Break
16h30-18h15	Room 2 : (online session) Chairman : Pr. Fatima ezzahra/Co-Chairman : Pr. Dorra Hammami
16h30-16h45	Degradation of bamboo fiber/epoxy composites after a wet-dry aging cycle; <i>Mouad CHAKKOUR- Arts et Métiers Campus of Rabat- Morocco</i>
16h45-17h00	3D Printing of biodegradable PLA Biocomposites: Evaluating the Impact of Lignin and Coffee Grounds Fillers on Mechanical Thermal and Morphological Properties ; <i>Zeineb Siala- UQAT-Canada</i>
17h00-17h15	<i>Sustainability Study of High-Fibre Fully BioBased Composites</i> , <i>Mohamed Yassine Elloumi -UQAT-Canada</i>
17h15-17h30	Comparative Analysis of the Dimensional Accuracy of Gears Printed by FDM in PLA PA and PETG Using Taguchi Methods; <i>Sosso kondo - LASEM-Tunisia</i>
17h30-17h45	Numerical investigation of the impact of PVT design on their thermal performance; <i>Mohamed Fterich-LASEM-Tunisia</i>
17h45-18h00	Enhancing Transparent Thermoset Biocomposites: A Comparative Study of Transparent Wood and Cellulose-Reinforced Resins; <i>Hamza Bradai-UQAT-Canada</i>
18h00-18h15	Development of Cellulose-Based Filters for Efficient Capture of Particulate Contaminants; <i>Aziz Bentis- UQAT-Canada</i>

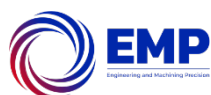


16h30-17h30	<b>Room 1 : Modeling, Simulation and Advanced Characterization of Bio-Composites</b> <b>Chairman : Pr. Slim Souissi/Co-Chairman : Pr. Ahmed Koubaa</b>
16h30-16h45	Natural Composite Manufacturing Defects and their Effects on Mechanical Performance of Composite Structures; <i>OUZGAN Ahmed- EST of Fez- Morocco</i>
16h45-17h00	Numerical Modeling and Simulation of Mechanical Properties of 3D-Printed specimens using COMSOL Multiphysics : Influence of Raster Angles and Strain Rates; <i>Rania Ben Amor-ISIS-Tunisia</i>
17h00-17h15	Electrochemical Monitoring of Oxidoreductases Enzymatic Kinetics: Validation of a New Method on a Laccase with Model Substrate ABTS; <i>AUDONNET Fabrice- Clermont Auvergne INP-France</i>
17h15-17h30	I-kaz and M-Z-N Signal Statistical Analysis for PLA 3D Printed Parts Using Impulse Excitation Technique: Effect of Infill Density and Raster Angles ; <i>Nadia F. M. ALRawi- Enis-Tunisia</i>
16h30-17h15	<b>Room 3 : Bio-Based Functional Biocomposites for Energy and Smart Applications</b> <b>Chairman : Pr. Ahmed Elloumi /Co-Chairman : Pr. Flavia Braghioli</b>
16h30-16h45	Enhanced PVDF-BT Composites with Ionic Liquids for High-Performance Haptic Actuators, <i>Ayda Bouhamed-LASEM-ENIS-Tunisia</i>
16h45-17h00	Impact of Hemp Fibers on the Rheological Mechanical and Dielectric Properties of Cellulose Acetate-Based Biocomposites; <i>Asma Khouaja-UQAT-Canada</i>
17h00-17h15	Enhanced Performance of PDMS/BaTiO <sub>3</sub> -based Piezoelectric Nanogenerator via Seashell Incorporation: A Study of Energy Harvesting Performance and Mechanical Properties, <i>Slim Naifar-LASEM-ENIS-Tunisia</i>
<b>Friday 16-05-2025</b>	
08h30-09h30	<b>Keynote speaker 2: Dr. Sofiane Guessasma</b> , Research Director of French National Institute for Agriculture, Food and Environment- INRAE- Nantes- France
09h30-11h00	<b>Room 2 : (online session)</b> <b>Chairman : Pr. Mohamed Khelif/Co-Chairman : Pr. Hedi Nouri</b>
09h30-09h45	Optimization of FDM technological parameters for dimensional accuracy of polylactic acid spur gear using Taguchi method; <i>Rakib Youmni-ENIS-Tunisia</i>
09h45-10h00	Thermomechanical Characterization Of Ecological Waste Material For Use As Thermal Insulation In Buildings; <i>Ouiam Elghamraoui- Cadi Ayyad University- Morocco</i>
10h00-10h15	Rehabilitate corroded HDPE pipes Using hybrid composites to improve durability and reduce maintenance costs; <i>REGAD ABDELMALEK- Center of Research in Mechanics (CRM)-Algeria</i>
10h15-10h30	Effect of tannic acid on antimicrobial and mechanical properties of cellulose acetate films, José Marcelo Queiroz et al, UQAT Canada
10h30-10h45	A comparative analysis of mortars reinforced with vegetable fibers; Abdessamad El Hassnaoui, <i>Cadi Ayyad University, Morocco</i>
09h30-10h30	<b>Room 1 : Natural and Wood-Derived Fibers in Sustainable Bio-Composites</b> <b>Chairman : Pr. Rezak Ayad /Co-Chairman : Pr. Fatima ezzahra</b>
09h30-09h45	Effects of olive wood flour (OWF) on the mechanical and acoustic properties of Polylactic Acid (PLA); <i>Makki AJMI-Laboratory of Electromechanical Systems-Tunisia</i>
09h45-10h00	Effect of hydrothermal recycling temperature on the physicochemical quality of fibers recovered from medium-density fiberboard waste; <i>Morgan Lecoublet-UQAT-Canada</i>
10h00-10h15	Recycling of phosphate mining by-products for sustainable construction: development of thermal insulated compressed bricks with date palm fibers and cellulose nanocrystals; <i>Khaoula MOUIH- Cadi Ayyad University Morocco</i>
10h15-10h30	Improving Brick Properties through Coffee Waste Addition; <i>Zina SDIRI- Laboratory 3G Faculty of Sciences of Gabes-Tunisia</i>
09h30-10h30	<b>Room 3 : Digital characterization and Structural Evaluation Techniques of Bio-Composites</b> <b>Chairman : Pr. Phillipe Michaud / Co-Chairman : Pr. Mohamed Guerfali</b>
09h30-09h45	Numerical Modelling of Fiber-Reinforced Bio-composites Behavior Using the Projected Fiber Approach and Adaptive Mesh Method; <i>Keyu QU- Université de technologie de Troyes-France</i>
09h45-10h00	Pre-hydrothermal analysis of adhesively bonded CFRP-to-concrete systems ; <i>Zahir Namourah- University of Minho- Portugal</i>
10h00-10h15	Mechanical performance of cementitious mortars incorporating flax fiber residues: compression testing and DIC analysis; <i>Lotfi HEDJAZI- ESTP - Special ESTP - School for Public Works, Building and Industry-France</i>
10h15-10h30	Investigation of adsorptive removal of methylene blue dye from aqueous solution using polystyrene/alqasaba composites ; <i>Anour Nasser Shebani- Libyan Polymer Research Center- Libya</i>

10h15-11h00	<b>Break + Poster Session</b>
	<b>Poster1 : Mechanical properties of Poly(<math>\beta</math>-hydroxybutyrate)(PHB) bio-composites reinforced with reed fiber obtained by injection moulding, Kraiem Dalila et al</b>
	<b>Poster2 : Multiscale modeling of recycled rubber aluminum composites: RVE homogenization and validation, Bouhamed Abir et al</b>
	<b>Poster3 : Performance Evaluation of Bio-Based Mortars Incorporating Chemically Treated Alfa Fibers, Frikha Moez et al</b>
	<b>Poster4 : Three-dimensional Numerical Investigation of Corner Stall Blowing in an Axial Compressor Cascade, Djedai Hayette et al</b>
	<b>Poster5 : 3D Printing of complex shapes with PETG filament, Ghorbel Olfa et al</b>
	<b>Poster6 : Cadmium ion Removal from Aqueous Solutions using local natural Clay, Alburki Salem et al</b>
	<b>Poster7 : Carbon Emissions; Renewable Energy; Sustainable Finance; Circular Economy; Dynamic Spillover Effects, Mallouli Dhoha et al</b>
	<b>Poster8 : Optimizing Maintenance Strategies for Zero Defect Manufacturing Systems in the Era of Industry 5.0 ; A literature review, Soua Sarra et al</b>
	<b>Poster9 : Impact of mineral contaminants on wood panels' dielectric properties, Mrad Hatem et al</b>
	<b>Poster10 : Effect of raster angle on the tribological characteristics of PLA printed samples, Benthifallah Basma et al</b>
	<b>Poster11 : Impact of Printing Temperature on 3D Printed Flax/PP Composite Properties; Wang Baoxing-UTT, France</b>
11h00-12h00	<b>Room 2 : Bio-Based Composites for Sustainable Construction Applications Chairman : Pr. Mohamed Khelif/Co-Chairman : Pr. Hatem Bentaher</b>
11h00-11h15	<b>Development and characterization of hemp shive-based biocomposites: Impact of processing parameters on density porosity thermal and mechanical properties; Brahim MAZIAN- CentraleSupélec-France</b>
11h15-11h30	<b>Fibers for biocomposites in traditional construction: Enhancing sustainability and performance; El Abbassi Fatima Ezzahra-FST Marrakech-Morocco</b>
11h30-11h45	<b>Physical and mechanical characterization of new Bio-based construction materials reinforced with date palm and pomegranate fibers; Nessrine Essid-National Engineering School of Gabes-Tunisia</b>
11h45-12h00	<b>Biocomposites based on PLA biochar and tanin for construction and art applications; Faouz Zrafi-UQAT-Canada</b>
11h00-12h15	<b>Room 1 : Processing and Treatment Techniques for Bio-Based Composite Materials Chairman : Pr. Ahmed Koubaa /Co-Chairman : Pr. Moez Frikha</b>
11h00-11h15	<b>Study of the of potential turmeric dyeing of PLA /PBS biocomposites for 3D printing filament; TRAORE ADAMA- Ecole Nationale d'Ingénieurs de Sfax-Tunisia</b>
11h15-11h30	<b>Effects of Moisture Exposure on the Mechanical Properties of 3D-Printed PLA: A Comparative Study of Distilled water and Ocean Water Aging; Lahiani Cyrine- Higher Institute of Industrial Management of Sfax-Tunisia</b>
11h30-11h45	<b>Authenticating the green synthesised CuONPs through XRD profiles; Ferid Ben Nasr- Faculty of Sciences of Sfax-Tunisia</b>
11h45-12h00	<b>Biochar-derived materials from forest residues for environmental applications, Ahmed Koubaa –UQAT-Canada</b>
12h00-12h15	<b>Multi-Objective Optimization of PV Equipment Distribution: A Time-Constrained Genetic Algorithm Approach for Sustainable Energy Logistics; Amal Belmabrouk, LASEM -ENIS</b>
11h00-12h00	<b>Room 3 : Mechanical, Thermal and Structural Optimization of Bio-Composites Chairman : Pr. Ridha Mnif /Co-Chairman : Pr. Maher Dammak</b>
11h00-11h15	<b>Development of biocomposites based on PLA reinforced with biochar and nanocellulose; Laura Daniela Ceron Daza-UQAT-Canada</b>
11h15-11h30	<b>Development of a Bio-Based Composite Material Using Bio-filler and Polymeric Matrix: Physicochemical and Mechanical Properties; Rihab Khelifi-LASEM-Tunisia</b>
11h30-11h45	<b>Influence of hemp reinforcements on thermo-mechanical properties of bio-inspired structures from PolyButylene Succinate biocomposites; LEROUX Coraline-IThEMM - Université de Reims Champagne Ardenne-France</b>
11h45-12h00	<b>Influence of specific Date Palm Fibers (DPF) fraction on the mechanical behavior under tension of hybrid matrix composite; Ismail HADRICHE-LASEM/ENIS-Sfax University-Tunisia</b>
12h30-14h00	<b>Lunch</b>
15h00-19h00	<b>Social program</b>

## Saturday 17-05-2025

08h30-09h30	<b>Keynote speaker 3: Pr. Nouredine Hamdi- Full Professor in Materials Sciences and Environment CNRSM- ISSTEG- University of Gabes-Tunisia</b>
09h30-10h30	<b>Room 1 : Durability, Aging and Damage Mechanisms in Bio-Composites Chairman Pr. Slim Souissi/Co-Chairman : Pr. Mohamed Khelif</b>
09h30-09h45	Effect of hygroscopic ageing on the flexural properties and damage mechanisms of flax/cork sandwich panels manufactured by liquid thermoplastic resin; <i>AIT TALAOUH Anas-ITheMM-France</i>
09h45-10h00	Assessment of PLA-based bio-composites for sustainable flooring: Influence of environmental and surface parameters on adhesion properties; <i>Houssein Abdelkefi-UQAT-Canada</i>
10h00-10h15	Effect of 3D printing parameters and water absorption aging on mechanical properties of PLA and Nylon6 parts; <i>Rahma Khammassi- ISGIS- Tunisia</i>
10h15-10h30	A Comparative study of Structural, Thermal and Dielectric Performances Of nano-composite Films for enhancing bioavailability, <i>Hanan CHAKER- Sfax University-Tunisia</i>
09h30-10h15	<b>Room 2 : Online Session Chairman : Pr. Fatima Ezzahra/Co-Chairman : Pr. Anas El Maliki</b>
09h30-09h45	Physico-chemical and mineralogical evaluation of raw earths and earth/corn starch gel interactions for the stabilization of CEB for raw earth construction ; <i>Malonga Berthia-Ecole Centrale Nantes, CNRS -France</i>
09h45-10h00	A Hybrid CFD Model for PTC Systems: Integrating Transient Analysis; <i>Qussay Hroub - Electromechanical System Laboratory, National School of Engineers of Sfax, University of Sfax, Tunisia.</i>
10h00-10h15	Improving Red Globe Grape Ripening and Antioxidant Content with tetraclinis artulata Essential Oil Nanoemulsion; <i>Safa Rguez-Laboratory of Medicinal and Aromatic Plants, Centre of Biotechnology of Borj-Cedria-Tunisia</i>
09h30-10h30	<b>Room 3 : Agricultural and Food Waste Valorization in Biocomposites Chairman : Pr. Hatem Bentaher/Co-Chairman : Pr. Hatem Mrad</b>
09h30-09h45	Mycelium Bio-Composites Derived from Spent Coffee Grounds: Characterisation and biodegradation performances; <i>Dalel Daâssi-Centre of Biotechnology Of Sfax-Tunisia</i>
09h45-10h00	Spent Coffee Grounds Reinforced Composites: A review based on preparation and manufacturing processes; <i>Oumaima Boughanmi-UQAT-Canada</i>
10h00-10h15	Analysis of Brewer's spent grain potential as a filler in PP composites; <i>POIRIER Adèle-ITheMM - Université de Reims Champagne Ardenne-France</i>
10h15-10h30	Purification of recombinant VEGF proteins through aluminium oxide adsorption. <i>Awatef TAKTAK, Centre de Biotechnologie de Sfax</i>
10h30-11h00	<b>Break</b>
11h00	<b>Conference Synthesis</b>



For further information, please contact us: (+216) 27 326 887