

International **A**ssociation of **R**esearchers
In **M**echanics and **E**nergy

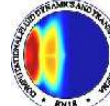


10th International Conference
on Mechanics and Energy

AICME 2025
International Conference on Mechanics and Energy

Conference Program

December 25-27, 2025
Hammamet, TUNISIA



ICME'2025 Conference Program

Day -01

Time	December 25, 2025
08:00	Welcom and Registration
12:30	Lunch
14:00	Official Opening Ceremony
14:30	Keynote 1 / Keynote 2
16:00	Coffee break / Poster session
16:30	Oral session 1 / Workshop "IoT"
19:00	Dinner

Day -02

Time	December 26, 2025
08:45	Keynote 3 / Keynote 4 / Workshop "AI"
10:00	Coffee break / Poster session
10:30	Oral session 2 / Workshop "AI"
12:30	Lunch
14:00	Keynote 5 / Keynote 6
15:00	Social visit
15:00	Workshop "AI"
19:00	Dinner

Day -03

Time	December 27, 2025
08:45	Keynote 7 / Keynote 8
09:30	Oral session 3
10:30	Oral session 3
11:00	Closing Ceremony / Attestation Distribution
11:30	Coffee break

Exam Certification

Thursday - December 25, 2025					
08:00	Welcome and Registration				
12:30	Lunch				
14:00	Official Opening Ceremony				
14:30	Keynote 1 : Pr. Ali BEN MOUSSA				
15:15	Keynote 2 : Pr. Mosbah ZIDANI				
16:00	Coffee break			Poster session 1	
16:30	Workshop “IoT” Room 1		Oral session 1 Innovative Materials Room 2	ICME2025-148	ICME2025-040
17:00	Oral session 1 Artificial Intelligence Room 1	ICME2025-113		ICME2025-159	ICME2025-050
		ICME2025-025		ICME2025-010	ICME2025-070
		ICME2025-059		ICME2025-054	ICME2025-086
		ICME2025-060		ICME2025-108	ICME2025-089
		ICME2025-106		ICME2025-124	ICME2025-122
		ICME2025-141		ICME2025-125	ICME2025-172
		ICME2025-167		ICME2025-146	ICME2025-173
		ICME2025-175		ICME2025-177	ICME2025-179
		ICME2025-178		ICME2025-114	
19:00	Dinner				

Plenary Session 1

Chair: Pr. Hamdi HENTATI

Room 1

Keynote 1

Advanced Extraction Processes Using Supercritical Fluids in Supersonic Flow: From Active Molecules to Rare Earth Elements

Speaker : Pr. Ali BEN MOUSSA

Sfax University, Tunisia

Keynote 2

Characterization of the textural, mechanical and electrical properties of industrially drawn aluminum and copper alloy wires

Speaker : Pr. Mosbah ZIDANI

Batna 2 University, Algeria

Oral session 1 : Artificial Intelligence

Chair: Pr. Mondher Wali & Boutheina BEN FRAJ

Room 1

Workshop 1 : “IoT for Mechanical and Energy Systems Management”

ICME2025-113: Computational intelligence tools based artificial neural networks for optimizing reverse osmosis desalination of brackish water in semi-arid region
Rania Jradi

ICME2025-025: Hybrid FEM–PINN (MDR) Approach for Analyzing Assembly Variations with Micro-Geometric Defects

Ali Radhouan, Marwa Ghali, Nizar Aifaoui

ICME2025-059: Wave Finite Element Analysis of Flexural Vibrations in Uncertain Functionally Graded Material Structures

Mokhtar Juini, Faker Bouchoucha, Issam Abed, Mohamed Azouz Touil, Khaled Taghouti

ICME2025-060: Deep Learning Algorithm for Hydrogen Site Selection in Tunisia

Imed Khabbouchi, Sassi Rekik, Delmaria Richards, Sana Salhi, Varun Kumar B, Yasser Nassar, Hala El-Khozonda

ICME2025-106: A Modular CAD Framework for Deterministic Path Planning and Motion Evaluation

Ahmed Nhouchi, Salma Ben Said, Mohamed Amine Ben Abdallah, Nizar Aifaoui

ICME2025-141: Urban noise prediction using Feed-Forward Neural Networks and Support Vector Machines: A case study along the Sahloul road axis, Sousse, Tunisia

Najah Kechiche, Jawher Bouaziz, Abdessalem Jbara, Nader Boumrifeg, Walid Hassen

ICME2025-167: Forecasting-Enabled Multi-Objective Design of PV and Wind Systems

Amel Chebbi, Wissem Zghal, Mounir Ben Aissa

ICME2025-175: Mechanical and Microstructural Response of SCFR-PLA Composites: Experimental Evaluation and Machine Learning Prediction

Manel Dhouioui, Boutheina Ben Fraj, Wissem Zghal, Hamdi Hentati, Mohamed Haddar

Oral session 1 : Innovative Materials

Chairs: Pr. Mosbah ZIDANI & Pr. Hamdi HENTATI

Room 2

ICME2025-148: Influence of Discharge Current on Machining Efficiency and Surface Integrity in Electrical Discharge Machining of Steel

Ikram Messaoudi, Boutheina Ben Fraj, Hamdi Hentati, Taoufik Kamoun, Walid Meslameni, Mohamed Haddar

ICME2025-159: Hydrogen-Based Cutting for Sustainable Manufacturing: Minimizing Waste and Environmental Impact

Amal Anizi, Mounir Trabelsi, Wissem Zghal, Hamdi Hentati, Taoufik Kamoun, Mohamed Haddar

ICME2025-010: Microstructural Evolution and Soft Magnetic Properties of Mechanically Alloyed Fe ₄₅ Ni ₃₀ Co ₂₅ Nanopowders Fatiha Siahmed, Lotfi Faghi, Ahmed Belgacem
ICME2025-054: Microstructural and Thermal Characterization of Al–Al ₄ C ₃ Nanocomposite Produced by Mechanical Alloying. Fella Kali-Ali, Salim Triaa, Lotfi Faghi
ICME2025-108: Influence of salt treatment on damage to date palm fibers Afef Khlaifia, Neji Rabhi, Faouzi Slimani, Mohamed Guedri, Samir Ghanmi, Mouna Jaouadi
ICME2025-124: Mechanical characterization and modeling of 3D-printed TPU: Anisotropic hyperelastic behavior analysis Hana Mellouli, Kawthar Bouzaïenne, Hanen Mallek, Fakhreddine Dammak
ICME2025-125: Fracture modeling of 3D printed composite material based on phasefield method Hanen Mallek, Yassine Agrebi, Hana Mellouli, Abdesslem Hajlaoui, Fakhreddine Dammak
ICME2025-146: Comparative Study of PLA, PETG, and CNT-Reinforced PETG Materials Fabricated by Fused Filament Fabrication under Compression Marwa Allouch, Hanen Tlili, Mondher Wali, Mohamed Bouaziz
ICME2025-177: Industrial Engineering Analysis of Process Optimization and Thermal Treatment for PLA Components Manufactured by FDM and Injection Molding Rania Ben Amor, Slim Souissi
ICME2025-178: Statistical optimization of FDM process parameters on the functional performance of PLA parts Maroua Jabeur, Slim Souissi, Abdesslem Jerbi, Hmed Elloumi

Oral session 1 : Fluids & Structure

Chair: Pr. Ali BEN MOUSSA & Pr. Mohamed KAFFEL

Room 3

ICME2025-040: Modeling and Interpretation of the Adsorption Mechanism of the Perfluoric Acids on Chitosan Rihab Ghorbali, Lotfi Sellaoui, Houcine Ghalla
ICME2025-050: 2D CFD study of tilted longitudinal walls used in a solar air heater under turbulent regime of flow Amin Ben Mabrouk , Hassene Djmel , Mounir Baccar
ICME2025-070: On the mesh adaptation technique for a yield-stress fluid flow past a circular cylinder Hakim Mkacher, Abdelhak Ayadi
ICME2025-086: Analysis of nanofluid flow characteristics past a square cylinder with slots Lotfi Bouazizi, Said Turki
ICME2025-089: Performance evaluation of a solar chimney integrated with natural ventilation in Tunisian building Sana Dardouri, Mohamed Habib Haddad, Jalila Sghaier
ICME2025-122: Application of the Vortex Panel Method to Transonic Flows Around Turbine Blade Aimadeddine Badereddine, Tahar Rezoug
ICME2025-172: CFD Simulation of Flow Characteristics of CO ₂ Through Porous Building Material Block Haytham Alhanghri, Sirine Chtourou, Jawaher Hamden, Abdelhak Ayadi, Mounir Baccar
ICME2025-173: CFD simulation of changing process in PCM RT35 integrated honeycomb structure Mohamed Zarrog, Sirine Chtourou, Jawaher Hamden, Mounir Baccar, Abdelhak Ayadi
ICME2025-179: Eco-designed approach for the selection of geometric tolerance types Rahma Farjallah, Ezzeddine Ftoutou, Moez Trigui

ICME2025-114: Applying the water quality indices to assessing the suitability of drainage water quality for irrigation purposes in the arid region of Kebili, Southern Tunisia
Rania Jradi

Poster session 1

Chair: Pr. Mariem Ammar & Pr. Alia Khanfir

Room 1

ICME2025-001: Comparative study of different polymers for the manufacture of wind turbine blades by FMD

Wissem Zghal, Hamdi Hentati

ICME2025-002: CFD-Based Numerical Investigation of a New Blade Configuration for a Horizontal-Axis Wind Turbine

Sarhan Karray, Wissem Zghal, Hamdi Hentati

ICME2025-004: Coupled Influence of Porosity and Microcracks on Thermo-Mechanical Degradation in Al/Al₂O₃ Metal–Ceramic Composites

Mohamed Khodjet Kesba, Billel Boukert, Amina Benkhedda

ICME2025-006: Effect of heat treatments on corrosion of X52 pipeline steel

Nadjet Mellak, Sami Zidelmel, Omar Allaoui

ICME2025-014: Microstructural Evolution and Magnetic Behavior of Mechanically Alloyed Fe₄₅Ni₅₅ Nanopowders

Lotfi Faghi, Fatiha Siahmed, Salim Triaa

ICME2025-019: Artificial Neural Network Modeling of the Electrocaloric Effect in 67:33-BST Ceramics for Green Refrigeration

Rafik M'nassri

ICME2025-020: Development of a sustainable hydraulic binder for innovative mortar formulation and the strengthening of earthen construction materials

El Amin Bensaifi, Badreddine Sbartai, Mohammed Benzerara

ICME2025-021: Experimental Investigation into the Impact of Glass Ball Diameter on Water Production Efficiency in Solar Distillation Systems

Imad Kemerchou, Abdelkader Bellila, Abdelkader Boukaroura, Abderrahmane Khechekhouche, Mahboub.m. Abdelbasset, Abdullah Djouahi, Zied Driss

ICME2025-023: Structural and magnetic characterization of La_{0.7-x}Y_xCa_{0.3}MnO₃ manganites for x= 0.025 and 0.1

Fahima Lazghad

ICME2025-026: The influence of filler metal on the welding characteristics of dissimilar joints comprising 316L and ferritic AISI 430 stainless steels

Hind Mansour, Kelthoum Digheche, Nabil Bensaid

ICME2025-028: Convolutional Neural Network Architectures for Vibration-Based Fault Detection in Rotating Machinery

Ali Karim Zita, Abdelkader Djilali Hammou, Sami Zidelmel

ICME2025-031: Hydrogen Storage in two-dimensional (2d) MoSe₂ Materials, first principale calculation

Ouarda Benamara

ICME2025-033: Solvent Extraction Optimization for Hydrocarbon Recovery from Petroleum Sludge in Algeria

Rania Hasseine, Abdelmalek Hasseine, Djemoui Laiadi, Toufik Chabane

ICME2025-039: Design and Fabrication of Rubber Molds for Ball Mill Linings: A Functional and Experimental

Ilyes Agengui, Brahim Bouaziz, Ihssen Jabri

ICME2025-042: The 3D Printing Sentinel: An IoT Solution for Fail-Safe Remote Manufacturing

Ihssen Jabri, Ilyes Agengui, Brahim Bouaziz

ICME2025-046: Investigation of Environmental Effects on Thick Composite Plates Employing High-Order Theorie Billel Boukert, Mohamed Khodjet Kesba, Amina Benkhedda, El Abbas Adda Bedia
ICME2025-047: A new membrane finite element based on the strain approach for enhanced static and elastoplastic analysis Cherif Rebiai
ICME2025-048: From CAD model to subassemblies decomposition using industrial conditions Imen Belhadj, Mohamed Ali Zeddini, Mohamed Amine Ben Abdallah, Nizar Aifaoui
ICME2025-055: Interaction between crack and inclusion using the displacement discontinuity method. Fateh Madania, Brahim Mahfoud, Abdelkader Kirad
ICME2025-065: Advanced MPPT for PV Systems Using Deep Learning and Goniurellia Deception Optimization Bouloukza Ibtissam, Lekhchine Salima, Ladaycia Hania
ICME2025-067: Analysis of a Shear-Thinning Fluids Flow between Two Coaxial Cylinders Brahim Ali Benyahia, Sidali Bensedira, Merouane Salhi
ICME2025-068: Improving the efficiency of photovoltaic solar cells using nanofluids Chahrazed Abdellahoum, Leila Merabti
ICME2025-071: A Nonlinear Static Pushover Approach for Assessing the Seismic Performance of a Typical Box Girder Bridge Mouloud Ouanani, Khaled Sandjak, Tiliouine Boualem, Mohamed Tamahloult
ICME2025-072: CAM toolpath smoothing in HSM, case of study: Morph spiral El Béchir Msaddek, Zoubeir Bouaziz, Maher Baili
ICME2025-074: CAM toolpath smoothing in HSM, case of study: Zig-Zag El Béchir Msaddek, Zoubeir Bouaziz, Maher Baili
ICME2025-076: Optimized design of honeycomb cavity bricks incorporating a PCM to improve the thermal performance of buildings Jawaher Hamden, Sirine Chtourou, Fatma Kriaa, Moez Hammami, Mounir Baccar
ICME2025-077: A Turbulence Analysis of Square Cylinder Flow using Large Eddy Simulation at Multiple Reynolds Numbers Abdelhak Bahlouli, Idir Lasloudji
ICME2025-078: A Benchmark study: validation of open FOAM solvers for Hagen Poiseuille flow Abdelhak Bahlouli, Idir Lasloudji
ICME2025-079: A novel 3D analytical model for evaluating the critical current density distribution in a high-Tc superconducting dynamo Asma Azzouza, Hicham Allag, Jean-Paul Yonnet, Pascal Tixador
ICME2025-091: Numerical investigation of cavitation control with semi-cylindrical rods on NACA foil Sobhi Frikha, Mounir Baccar
ICME2025-176: Numerical study of the effect of inclined jets on turbulent oxy-flame characteristics in a burner with three separated jets Mohamed Mahdi Belhajbrahim, Mohamed Ali Mergheni, Toufik Boushaki, Jean-charles Sautet, Sassi Ben Nasrallah

Friday - December 26, 2025					
08:45	Keynote 3 : Pr. Hamdi HENTATI		Workshop “AI” Theoretical Concepts of Machine Learning and deep learning Trainers: Mariem ZAOUALI & Ilef BEN SLIMA Room 3		
09:30	Keynote 4 : Pr. Fadhel ALOULOU				
10:00	Coffee break / Poster session 2				
10:30	Oral session 2 Energy and Smart Engineering Room 1	ICME2025-003	Oral session 2 Innovative Materials Room 2	ICME2025-022	Workshop “AI” CNN, Data Augmentation, transfer Learning, Introduction to NLP Trainers: Mariem ZAOUALI & Ilef BEN SLIMA Room 3
		ICME2025-041		ICME2025-064	
		ICME2025-069		ICME2025-081	
		ICME2025-080		ICME2025-099	
		ICME2025-110		ICME2025-100	
		ICME2025-127		ICME2025-111	
		ICME2025-128		ICME2025-133	
		ICME2025-143		ICME2025-139	
		ICME2025-144		ICME2025-140	
12:30	Lunch				
14:00	Keynote 5 : Pr. Samir GHANMI				
	Keynote 6 : Pr. Lotfi BEN SAID				
	Keynote 7 : Pr. Müslüm ARICI				
15:00	Social Visit Medina Yasmine Hammamet		Workshop “AI” Hands-on Lab Session Trainers: Mariem ZAOUALI & Ilef BEN SLIMA Room 3		
19:00	Dinner				

Plenary Session 2

Chair: Pr. Ali BEN MOUSSA

Room 1

Keynote 3

Integrating Experimental Data with Statistical Methods and Learning Algorithms for
Cutting and Additive Manufacturing Processes

Speaker : Pr. Hamdi HENTATISousse University, **Tunisia****Keynote 4**

Biomass-based composite phase change material and its applications in thermal storage
building materials

Speaker : Pr. Fadhel ALOULOUSousse University, **Tunisia**

Oral session 2 : Energy and Smart Engineering

Chairs: Pr. Fadhel ALOULOU & Pr. Mariem AMMAR

Room 1

ICME2025-003: CFD Study of Thermal Performance in PCM-Integrated Hollow building
Walls

Jawaher Hamden, Sirine Chtourou, Fatma Kriaa, Moez Hammami, Mounir Baccar

ICME2025-041: Analysis of drilling mud flow in the desander

Khaled Sahnoune, Abderrahmane Benbrik, Zakaria Belimane, Akila Meziane, Mansour Mayouf

ICME2025-069: Optimal sizing of thermal conductivity and heat capacity in green building
for Chevening 3Es(Efficiency, Economy, Environment)

Abdeldjalil Djouahi, Bekhir Negrou, Bilal Benarabi, M. Abdelbaseet Mahboub, Younes Boulaadjoul, M.L.mechri, I. Kemerchou, B. Rouabah

ICME2025-080: Biomass-based composite phase change material and its applications in
thermal storage building materials

Eya Hammrouni, Habib Sammouda, Fadhel Aloulou

ICME2025-110: Combined DEM-FFT numerical framework to evaluate the effective
elastic properties of carbon paper GDLs for PEMFCs

Leclerc Willy, Xu Zhixin, Ahmed Ammar, Hamza Haddad, Toufik Kanit

ICME2025-127: Mechanical Characterization of Vibration-Assisted 3D-Printed PLA.

Amir Kessentini, Fouzi Alhadar, Abraheem Hadeeyah, Mondher Wali

ICME2025-128: Chemical Stability and Microstructural Effects of Vibration-Assisted 3D-
Printed PLA

Amir Kessentini, Fouzi Alhadar, Abraheem Hadeeyah, Mondher Wali

ICME2025-143: Impact of V2I and V2V Communication on Energy Efficiency and Traffic
Flow of Electric Vehicles at Signalized Intersection

Samia Boubaker, Jihen Landolsi, Tarek Othmani

ICME2025-144: Characterization of Tunisian olive fruit blends by PhotoThermal Lens
Spectrometry combined with UV-Vis Spectroscopy methods

Rania Benhmida, Salma Mezghani, Riadh Hannachi

Oral session 2 : Innovative Materials

Chairs: Pr. Hamdi HENTATI & Pr. El Béchir MSADDEK

Room 2

ICME2025-022: Tribological study of borided layers obtained on C35 Steel

Omar Allaoui, Sami Zidelmel, Karim Rayane

ICME2025-081: Characterization of Boro-nitrided layers on 25CrMo4, 42CrMo4 and
55CrMoV4 low alloy steels

Omar Allaoui, Bensalah Benhabib, Sami Zidelmel, Karim Rayane

ICME2025-064: Influence of paste volume on the rheological performance of equivalent mortar concrete Hanene Amara, Nourredine Arabi
ICME2025-099: Effect of zinc bath additives on the properties of intermetallic compounds obtained by hot-dip galvanizing Younès Benarioua
ICME2025-100: Effect of Immersion Time on the Properties of Alumina Films Obtained by Anodizing Treatment on Aluminium Alloys Younès Benarioua, Aimen Mouataz Bilah Dhairi
ICME2025-111: Development of a sustainable and environmentally friendly stabilized phase change material based on biomass Foam aerogel composites for thermal energy storage building Chadia Oun, Habib Sammouda, Fadhel Aloulou
ICME2025-133: Mechanical and biological characterization of PMMA/Clove composite for dental application Fatma Ben Saada , Mabrouk Ben Hemden, Khaled Elleuch, Basma Samet
ICME2025-139: Numerical Analysis of the Friction Behavior of a Snakeskin Inspired Textures Fatma Elwasli, Slah Mzali, Salah Mezlini
ICME2025-140: Buckling behavior of sheet and skeletal bioinspired Gyroid structures Meriem Belhadjamor, Chaima Romdhane, Mohamed Ben Bettaieb, Salah Mezlini , Farid Abed-meraim

Poster session 2

Chair: Pr. Sarhan KARRAY & Pr. Alia KHANFIR

Room 1

ICME2025-057: Development and characterization of bio-sourced cellular mortars based on biomass adapted to the environment and thermal insulation in Building. Kawther Zarrouk, Habib Sammouda, Fadhel Aloulou
ICME2025-093: The influence of the Brillouin oscillation frequency on the elastics modulus of $Sc_xAl_{1-x}N$ Kahina Ammialia, Abderrazek Brichnia, Assia Khoualdiaa, Ibtissem Touatia, Abdellaziz Doghmanea
ICME2025-094: Effect of the initial microstructure on the thickness and quality of the borided layers formed on C35 steel Sami Zidelmel, Omar Allaoui , Abdelkader Djilali Hammou
ICME2025-096: Machine Learning-Based Wind Speed Forecasting Using XGBoost: Toward Intelligent Renewable Energy Systems Amel Chebbi, Wissem Zghal, Mounir Ben Aissa
ICME2025-098: AI-Driven Solar Forecasting and Photovoltaic Performance: Evaluating Machine Learning Models for Weather-Dependent Prediction in Tunisia Sana Dardouri
ICME2025-102: Characterization of Tunisian olive fruit blends by PhotoThermal Lens Spectrometry combined with UV-Vis Spectroscopy methods Rania Benhmida, Salma Mezghani, Riadh Hannachi
ICME2025-103: A Numerical Study of Combined Diffusion Coefficients in An Argon Plasma Containing Copper Vapor At Atmospheric Pressure Ikhlas Chakhari, Donia Salem, Riadh Hannach
ICME2025-104: Development of smart edible films rich in bioactive compounds from Cystoseira for food packaging and real-time quality monitoring Bilel Ben Slim, Ameni Boudabbous, Slim Abdelkafi, Adem Gharsallaoui, Hajer Ben Hlima

ICME2025-112: Effect of Ni-Mo Nanocoating Deposited on Mild and Stainless Steel on the Structural, Mechanical, and Corrosion Behaviour Aicha Ziouche, M. Mokhari, A. Haddad, A. Hammouda
ICME2025-115: New composite materials for thermal comfort in smart buildings include hydraulic binders (resin) improved with polymers and adjuvants. Emna Sayehi, Habib Sammouda, Fadhel Aloulou
ICME2025-116: Novel Functional Polysaccharides from the Brown Algae <i>Dictyota spiralis</i> : Promising Biomaterials for Advanced Biofuel Production Houssem Khammassi, Guillaume Pierre, Mohamed Barkallah, Philippe Michaud, Slim Abdelkafi
ICME2025-117: An investigation into vibration diagnostics for industrial rotating equipment Rabah Magraoui, Adel Zemirline, Mohammed Ouali
ICME2025-118: Alkaline treatment of natural fibers: impact on the mechanical performance of PLA matrix composites Wafa Khmira, Sameh Attia-Essaies, Mehdi Ismail, Najoua Barhoumi, Kaouther Khlifi
ICME2025-120: Effects of Fe, Cu, and Mn addition on microstructure and corrosion properties of biodegradable Zn-0.8Mg alloy Chems Eddine Ramoul, Amel Gharbi, Oualid Ghelloudj, Abdelkader Bachiri, Djamel Berdjane, Fatma Zohra Gasmi
ICME2025-123: Numerical Investigation of Two-Phase Flow Patterns in a Microchannel. Lynda Boubendir, Salah Chikh, Lounès Tadrist
ICME2025-126: Fuzzy C-Regression Modeling for State-of-Charge Estimation of Lithium-Ion Batteries. Nahed Ghanay, Moussa Boukhnifer, AbdelMoudjib Benterki, Achraf Jabeur Telmoudi
ICME2025-129: Predicting model of natural concrete carbonation depth from the accelerated carbonation test. Ahmed Merah, Yasmine Merah
ICME2025-130: Fatigue crack growth in cold-rolled carbon steel sheets Djamel Zelmatti, Tahar Guettaf-temam, Riad Harouz, Oualid Ghelloudj, Mohamed Hassani, Hamza Hazorli, Hamza Aouaichia, Wissem Richi
ICME2025-134: Preparation, characterization and application of an innovative porous material derived from forest waste for real textile effluent treatment Renad Rabie, Belgacem Ahmed, Hadoun Hocine
ICME2025-135: Effect of successive braking on disc brake temperature Mohamed Kaffela, Mounir Baccar
ICME2025-137: Application of a metaheuristic for the generation of subassemblies from a CAD model Imen Belhadj, Mohamed Ali Zeddini, Mohamed Amine Ben Abdallah, Nizar Aifaoui
ICME2025-142: Effects of additives on the hydrodynamic behavior of porous journal bearings Sid Ali Boubendir, Maamar Malki, Salah Larbi, Lynda Boubendir
ICME2025-145: Effect of Filler Metal Selection on GTAW-Welded AISI 430 Ferritic Stainless Steel: Microstructural and Mechanical Evaluation Nabil Bensaid, Hind Mansour, Mohamed Amine Soualili, Mohamed Farid Benlamnouar, Rachid Amraoui
ICME2025-147: Optimization and Structural Analysis of Photovoltaic Supports: Design of a Biomimetic System for Enhanced Stability Mariem Ammar, Bilel Ben Amira, Mohamed Ali Jemni
ICME2025-149: Bearing Fault Diagnosis in Rotating Machinery Using an Optimized Hybrid EMD–Neural Network Model Lamia Kessai, Youcef Atmani, Maamar Malki

ICME2025-158: Experimental Design and Thermal Performance Analysis of a High-Temperature Solar Furnace Integrated with a Scheffler Concentrator
Amal Johari, Mohammed Khalij, Yassir Bellaziz, Fatima Ait Nouh, Abdelhamid Kheiri, Mohammed Boukendil, Aziz Faissal

ICME2025-160: Green synthesis of silver nanoparticles from *Carpobrotus edulis* for the photothermal assay of the tumor biomarker CA 19-9
Chaima Jbira, Rochdi Baat

ICME2025-165: Characterization By Raman spectroscopy of amorphous silicon thin films induced by aluminum deposited on glass
Hammouda Amirouche, Hayet Boudjellal, Nacer Boucherou, Aicha Ziouche, Smain Mebrek

ICME2025-174: Easy ways to make artificial intelligence-based approaches to optimize the recovery of bioactive molecules from natural resources faster
Houcine Bendaoud, Aida Zaier, Mehrz Romdhane

Plenary Session 3

Chair: Pr. Wissem Zghal

Room 1

Keynote 5

The Rise of Bio-composites: From Agricultural and Marine Waste Valorization to Competitive Materials for a Circular Economy

Speaker : Pr. Samir GHANMI

Carthage University, **Tunisia**

Keynote 6

Validation of Phase-Field Approaches for Brittle Failure in Thermoplastic Polymers

Speaker : Pr. Lotfi BEN SAID

Ha'il University, **Kingdom of Saudi Arabia**

Keynote 7

Enhancing Latent Heat Activation in PCM-Integrated Building Envelopes: An Optimization Study

Speaker : Pr. Müslüm ARICI

Kocaeli University, İzmit, **Turkey**

Saturday - December 27, 2025

08:45	Keynote 8 : Pr. Mounir TRABELSI				NVIDIA DLI Certification Exam Room 3
09:00	Keynote 5 : Pr. Fakher BOUCHOUCHA				
09:30	Oral session 3 Advanced Mechanics Room 1	ICME2025-038	Oral session 3 Technologies, Product and Management Room 2	ICME2025-018	
		ICME2025-084		ICME2025-121	
		ICME2025-105		ICME2025-132	
		ICME2025-107		ICME2025-151	
10:30		ICME2025-109		ICME2025-157	
		ICME2025-162		ICME2025-166	
11:00	Closing Ceremony / Attestation Distribution				
11:30	Coffee break				

Plenary Session 4	
Chair: Pr. Mondher WALI	Room 1
Keynote 8 Evaluation of H₂ Cutting as a Sustainable Alternative to Conventional Machining Processes Speaker : Pr. Mounir TRABELSI Sfax University, Tunisia	
Keynote 9 Development, Multidisciplinary Characterization, and Modeling of Innovative Composite Materials for Various Medical and Industrial Applications Speaker : Pr. Fakher BOUCHOUCHA Carthage University, Tunisia	

Oral session 3 : Advanced Mechanics	
Chair: Pr. Fakher BOUCHOUCHA & Pr. Amir KESSENTINI	Room 1
ICME2025-038: Intermetallic precipitation phases in NiTi SMA: An XRD-based study Boutheina Ben Fraj, Nouha Loukil, Slim Zghal, Zoubair Tourki	
ICME2025-084: Vibration Control of Composite Material Plates FGM Integrated with Piezoelectric Layers Using Q9 Approach Rachid Tiberkak, Melha Nougat, Madjid Ezzraimi, Mohamed Essedik Lazar	
ICME2025-105: Composite based Bio-PCM, cement, renewable resources, treated wood fibers and organic clay for building insulation Yosr Laatiri, Habib Sammouda, Fadhel Aloulou	
ICME2025-107: Smoothed Particle Galerkin (SPG) Modeling and Experimental Validation of the Perforation of 5754 Aluminum Alloy Plate Seddik Shiri, Khaled Boulahem, Hakim Naceur	
ICME2025-109: Manufacturing and Tensile Characterization of PLA Biocomposites Reinforced with Untreated Jute and Raffia Fibers Amer Tounsi, Faouzi Slimani, Neji Rabhi, Samir Ghanmi, Mohamed Guedri	
ICME2025-162: SPH Finite Element Model of Waterjet Peening Process for Prediction of residual stresses Rihem Amri, Adnen Laamouri, Raouf Fathallah	

Oral session 3 : Technologies, Product and Management

Chair: Pr. Samir GHANMI & Pr. Mondher WALI

Room 2

ICME2025-018: Modification of the surface of carbon steel and low alloy steel by plasma nitriding treatment

Abdejlil Chihaoui Hedhibi

ICME2025-121: Valorization of Tunisian agricultural waste in the production of biobricks: a sustainable solution for buildings

Nour Lajimi

ICME2025-132: Detection of defects in steels using eddy currents

Mebrek Smain, Hammouda Amirouche, Boucherou Nacer

ICME2025-151: From Smart Technologies to Smart Profits: the impact of Industry 4.0 on Financial outcomes in MENA Manufacturing

Rana Ahmed, Khadija Abousattar, Naima Lassoued

ICME2025-157: Effect of Sodium Dodecyl Sulfate on the structural and morphological properties of electrodeposited Ni–Carbon composite coatings

Dorra Trabelsi, Faten Nasri, Mohamed Kharrat, Maher Dammak, Marielle Eyraud, Florence Vacandio

ICME2025-166: Preparation and Characterization of Waste Tire Rubber Powder for Use in Industrial Applications

Marwa Allouch, Mondher Wali