



جامعة محمد خيضر بسكرة
كلية العلوم والتكنولوجيا



الملتقى العربي الثاني للمهندسة والميكانيكا ARCME'23

The Second Arab Conference on Mechanics and Engineering (ARCME'23)

December 10-11-12, 2023






Auditorium Pr. Kamal Boulanouar, University of Biskra, CAMPUS CHETMA.

ARCME'23 PROGRAM





General program

| Date | Time | Processes | |
|--------------------------------|--------------|------------------------------|--|
| 10 th December 2023 | 8:30-10:00 | Opening Ceremony | |
| | 10:00-10:45 | 1st Plenary |  Pr. AHMED DJEBBAR |
| | 10:45-11:15 | Poster session/ Break coffee | |
| | 11:15-12:00 | 2 nd Plenary |  Pr. ABDERRZAK BEAZI |
| | 12:00-14:00 | Lunch | |
| | 14:00-15:30 | Oral sessions | |
| | 15:30-16:00 | Poster session/ Break coffee | |
| | 16:00-17:30 | Oral sessions | |
| 11 th December 2023 | 8:30 - 09:15 | 3 rd Plenary |  Pr. Ali J. CHAMKHA |
| | 9:15- 10:30 | Symposium (Part 1) | |
| | 10:30-11:00 | Poster session/ Break coffee | |
| | 11:00-12:30 | Symposium (Part 2) | |
| | 12:30-14:00 | Lunch | |
| | 14:00-15:30 | Oral sessions | |
| | 15:30-16:00 | Poster session/ Break coffee | |
| | 16:00-17:30 | Oral sessions | |
| 12 th December 2023 | 8:30-09:00 | 4 th Plenary |  Pr. ZIED DRISS |
| | 9:00-9:30 | 5 th Plenary |  Pr. MOSBAH ZIDANI |
| | 9:30-10:00 | Poster session/ Break coffee | |
| | 10:00-12:00 | Closing Ceremony | |
| | 12:00 | Lunch | |

ARCME'23 hosts esteemed academic figures in the field of mechanics who discuss with the mini-symposia host and the audience on the front stage of the great conference Auditorium Pr. Kamal Boulanouar, University of Biskra, CAMPUS CHETMA.

Symposium Host



Pr. Miloud Zellouf

Symposium Guests



Pr. Abdelhafid Brima



Pr. Abdelhafid Moummi



Pr. Abderrzak Bezazi



Pr. Ahmed Djebbar



Pr. Ali J. Chamkha



Pr. Ali Merdji



Pr. Boubaker Benhaoua



Pr. Hocine Benmoussa



Pr. Kamel Talbi



Pr. Mabrouk Hecini



Pr. Mahfoud Kadja



Pr. Mohamed Benbraika



Pr. Mohamed Nadir
Amrane



Pr. Mosbah Zidani



Pr. Nouredine Moummi



Pr. Zied Driss



Pr. Zoubir Nemouchi

1st Day

10th December 2023

Process of participation

Oral presentation

| Room 1 | Topic A: Energy Engineering | | |
|------------------|-----------------------------|--------|---|
| Time | Name/ Surname | ID | Title |
| 14 :00 14 :15 | Sahel Sahel | EE_001 | CFD study on baffled-tubular heat exchanger performance enhancement |
| 14 :15 14 :30 | Aicha Touafek | EE_037 | Reynolds number effects on mixed convection nanofluid heat transfer in a plane channel application to solar thermal panel |
| 14 :30 14 :45 | Redha Rebhi | EE_015 | Linear Stability Analysis of Soret-Dufour Convection in a Vertical Brinkman Porous Enclosure |
| 14 :45 15 :00 | Ibrahim Boukhalifa | EE_041 | Comparison of Inner/Outer Cylinder Heating of a Water Flow in an Elliptic Annulus |

| Jury Members | Pr. Ali Chamkha U. Koweit | Pr. Abdelhafid Brima U. Batna 2 | Pr. Nouredine moummi U. Biskra | Pr. Ali Merdji U. Mascara |
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| 16 :00 16 :15 | Redha Rebhi | EE_012 | Multiple Steady State Solutions for Rayleigh-Bénard Convection in a Square Enclosure Filled with non-Newtonian Carreau-Yasuda Fluids |
| 16 :15 16 :30 | Aicha Degla | EE_048 | Aging effect simulation for Lithium-ion battery under operating conditions |
| 16 :30 16 :45 | Mohammed Debbache | EE_021 | Design wind turbine for irrigation date palm field |
| 16 :45 17 :00 | Hafida Daaou Nedjari | EE_067 | Generalized Actuator Disc for Mexico Wind Turbine Wake |

| Jury Members | Pr. Zied Driss ENIS. Tunisia | Pr. Hocine Benmoussa U. Batna 2 | Pr. Kamel Talbi U. constantine 1 | Pr. Nouredine Belghar U. Biskra |
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| Room 2 | | Topic B: Materials Engineering | | |
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| Time | Name/ Surname | ID | Title | |
| 14 :00 14 :15 | Fayçal Bouzid | ME_004 | Modelling of High Power InGaP/GaAs Heterojunction Alphavoltaic Cells Irradiated by Americium-241 | |
| 14 :15 14 :30 | Ahmed Benmoussa | ME_012 | Automated classification of cracks in concrete structures using Acoustic Emission & Deep Learning | |
| 14 :30 14 :45 | Filipe Fernandes | ME_018 | Tribological Characterization Of Novel Multilayered TMD Coatings For Low Friction Applications | |
| 14 :45 15 :00 | Ismail Benabderrahmane | ME_060 | Material Gradient Effects on Free Vibration Behavior of Bi-Directional Functionally Graded Beams | |
| 15 :00 15 :15 | Brahim Necib | ME_078 | Failure analysis of laminated composites materials carbon/epoxy using piezoelectric PZT smart pastilles and finite element models | |

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| Jury Members | Pr. Bezazi Abderrezak U. Guelma | Pr. Boubaker Benhaoua U. El-Oued | Pr. Hamza Bentrah U. Biskra | Pr. Fatima Zohra Lemmadi U. Biskra |
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| 16 :00 16 :15 | Ridha Boumagouda | ME_035 | Elaboration and Characterization of Fe-Co based Nanocomposite for Microwave Absorption | |
| 16 :15 16 :30 | Mohamed Benamira | ME_042 | A simplified approach for elastic modulus approximation of knitted fabric composite | |
| 16 :30 16 :45 | Laid Saouli | ME_015 | Electrochemical characterization of a material submitted to corrosion | |
| 16 :45 17 :00 | Mohamed Cherif Ben Ameer | ME_075 | Aloe Vera Gel as an Eco-Friendly Inhibitor for API 5L X70 Carbon Steel Pipelines in 0.5M Sulfuric Acid (H2SO4) | |
| 17 :00 17 :15 | Abdelkader Boudjemline | ME_080 | Physical and electrical characterization of Date Palm Fibers: A Study on Absorption Properties, Biostructure and electrical resistivity | |

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| Jury Members | Pr. Mosbah Zidani U. Batna 2 | Pr. Lakhdar Sedira U. Biskra | Pr. Mounir Djelab U. Biskra | Pr. Salim Messaoudi U. Biskra |
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| Room 3 | | | | Topic C: Mathematics & Mechanics / Mechanical and Structural Analysis | | | |
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| Time | Name | ID | Title | | | | |
| 14 :00 14 :15 | Mohamed Issaad | MP_003 | Minimisation d'énergie d'un système plasma fortement couplé par la méthode de Monte-Carlo: "Etude des configurations les plus stables" | | | | |
| 14 :15 14 :30 | Fatma Zohra Khaled | MP_005 | الدراسة الكمية غير النسبية لاحتواء نظام ذري في وسط مشحون | | | | |
| 14 :30 14 :45 | Atmane Thelib | EE_58 | Steady states solutions for high Reynolds number in lid-driven semicircular cavity flow | | | | |
| 14 :45 15 :00 | Chams Sebai | MP_006 | النسق الذروي لجريان التجويف ذو الحافة القائدة | | | | |
| 15 :00 15 :15 | Mohammed Meddour | MS_008 | Numerical Modeling of Double-Layer Metal Foam Sandwich Beams Behavior Under Three-Point Bending | | | | |

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| Jury Members | Pr. Ahmed Djebbar | Pr. Zoubir Nemouchi | Pr. Mahfoud Kadja | Pr. Abdelmalek Hasseine | Pr. Lamine Baci |
| | U. Lille France | U. Constantine | U. Constantine | U. Biskra | U. Biskra |

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| 16 :00 16 :15 | Mostefa Kouider | MS_003 | Effet de la Position de Poche sur les Caractéristiques Hydrodynamiques d'une Butée | | | |
| 16 :15 16 :30 | Linda Aissani | MS_030 | Microstructure and mechanical properties of magnetron sputtered Ti-N films deposited at different nitrogen flow rates | | | |
| 16 :30 16 :45 | Lamine Rebhi | MS_032 | Design Optimization Method Based on Artificial Intelligence For Structures Under Random Fatigue | | | |

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| Jury Members | Pr. Abdelouhab Tati | Pr. Mabrouk Hecini | Pr. Mohamed Benbraika | Pr. Mohamed Nadir Amrane |
| | U. Biskra | U. Biskra | ENP. Alger | U. Biskra |

Process of participation

Poster presentation

| Time | ID | Title | Jury Members |
|------------------|---|---|---|
| 10 :45 11 :15 | EE_006 | Effect of Nozzle Pressure Ratio (NPR) On The Shock Waves Formation Through A Supersonic Nozzle Using CFD | Pr. Abdelghani Lakroune Pr. Hadeef hefaidh |
| | EE_008 | CFD Simulation of Thermal Performance of an Air Humidification System Used in a Poultry House | |
| | EE_011 | Performances Comparison Of Ejector Refrigeration Cycle For Two Different Position Of The Ejector Using Eco-Friendly Mixtures. | |
| | EE_016 | New intelligent temperature measuring device | |
| | EE_017 | Forced Convection Cooling Of Electronic Components In A Horizontal Channel By Numerical Simulation | |
| | EE_020 | Numerical Analysis of a Heat Exchanger Designed to Cool Electronic Components | |
| | EE_032 | Satellite propulsion subsystem, sizing and CFD analysis of a 10 N nozzle thruster | |
| | EE_018 | Contribution to the Study of the Effect of the Dimensions of the Heat Sink on the Cooling of Electronic Chips | |
| | ME_005 | Enhanced properties of diatomite-based (Silica) composite | Pr. Moussa Athmani Pr. Fateh Chouia |
| | ME_007 | Analytical and numerical analysis of tube made of Functionally graded materials under extension | |
| | ME_009 | Enrichissement et agglomération du minerai de fer pauvre de L'Ouenza | |
| | ME_010 | Determination the elastic properties of Carbon-Epoxy composites laminates by micro-mechanical model | |
| | ME_011 | Investigation of residual stresses in isotacticpolypropylene Quenching from the melt state | |
| | ME_013 | Synergistic effects of chemical modifications in the lubricant and substrate coating boost friction reduction | |
| ME_014 | Effect of the free Quenching Residual Stresses on the Thermophysical, the Thermomechanical and Morphological properties of Acrylonitrile-Butadiene-Styrene (ABS). | | |

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| | ME_016 | The Effect of Water Absorption on Brinell and Charpy Tests for Bio-composite Materials of Date Palm Fibers / Epoxy | | |
| | ME_017 | Physical and Mechanical Properties of Ti-Al-N Ternary System | | |
| | ME_021 | Model development of Water uptake of polymer/clay nanocomposites | | |
| | ME_022 | Élaboration Et Caractérisation Physico-Mécanique D'un Mortier Composite Destiné Au Renforcement Des Structures En Béton | | |
| | MP_001 | Numerical Solution of Bratu's Equation For The Effective Potential Energy in Dense Plasma | Pr. Hocine Djemai Pr. Tarek Djoudi | |
| | MP_002 | Condensed Matter in Intense Laser Fields | | |
| | E_001 | Study and Investigation of Seawater Reverse Osmosis Spiral Wound Fouled Membrane from Desalination Station in Algeria | | |
| | E_002 | Caractérisation de déchets Barytique de la mine de Ain Mimoun (Khenchela) et son impact environnemental | | |
| | E_003 | Electric field calculation in a point-wet barrier-plane system | | |
| | E_004 | The Benefits of Model Predictive Control on AC Motors (Review) | | |
| | MS_001 | Effect of Cold Deformation on the Microstructure, Electrochemical and Mechanical Behavior of 316Ti Austenitic Stainless Steel | | |
| 15 :30 16 :00 | EE_028 | Conceptual Design Proposal for Developing Solar Drones Tailored to Algerian Needs | | Pr. Foued Chabane Pr. Chawki Mahboub |
| | EE_029 | Analysis Of Thermohydraulic Performance Of Plate Heat Exchanger | | |
| | EE_022 | Absorption solar cooling system | | |
| | EE_033 | 10N thruster nozzle design using Characteristics method for satellite application. | | |
| | EE_036 | Reynolds number effects on mixed convection nanofluid heat transfer in a plane channel application to solar thermal panel | | |
| | EE_040 | Faisability study of a Diesel-Wind Hybrid System in a remote site on Southern of Algeria | | |
| | EE_042 | Effect of the addition of nanoparticles (Cu) to the base fluid in a parabolic trough solar concentrator equipped with a secondary reflector. | | |
| | EE_019 | Numerical study of the effect of the presence of an obstacleinside the channel on the cooling of a heat sink using ahybrid nanofluid | | |
| | EE_026 | Numerical study of the effect of the presence of an obstacleinside the channel on the cooling of a heat sink using ahybrid nanofluid | | |
| | EE_060 | Performance Of Air-Ground Heat Exchanger in Cooling, Heating And Reducing Carbon Emissions In An Industrial Poultry Farm | | |

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| ME_023 | Elaboration et caractérisations d'un matériau hiérarchisé par différentes méthodes en presence de tension actif CTA+ | Pr. Hocine Djemai Pr. Tarek Djoudi |
| ME_025 | Effect of Aspect Ratio and Volume Fraction of Steel Fibres on the Shear Behaviour of Reinforced Concrete Beams. | |
| ME_027 | Effect of Treatment Temperature and Time on Wear Damage of Borided AISI H13 Tool Steel in Aluminium Hot Extrusion Process | |
| ME_028 | Evolution of Microstructure and Mechanical Properties of Aluminum TIG-weld Joint Using Different Filler Metal | |
| ME_030 | The equivalence electrical performance between the plane-plane and multiple rods-rods configurations of a uniform polluted glass insulator | |
| ME_033 | Dynamic Recrystallization in Dissimilar Al6061-T6 / steel Friction Stir Welds | |
| ME_037 | Study by numerical simulation of the solar cell based on CIGS by SILVAC | |
| ME_041 | Magnetic and Structural Properties of Fe/SiO ₂ /Al ₂ O ₃ nanocomposite | |
| ME_047 | The study of the ability to use the Algerian slag for the development of glass-ceramic materials | |
| ME_049 | The effect of the lubricating filme transformation characteristics with the Ostwald indices variations | |
| ME_065 | Contribution to the modeling of the mechanical behavior of sandwich structures subjected to bending | |
| MS_007 | Étude expérimentale des propriétés mécanique de traction du Bois de Régime de Dattes de la Variété de Deglet Nour | Pr. Abd Elfouhli Boudjar Pr. Zineb Almi |
| MS_013 | An Investigation on Nonlinear Postbuckling of FGM Sandwich Composite Plates with Tangential Edge Constraints | |
| MS_017 | Evaluation of the fracture parameters for different geometric models: aluminum alloy, study and analysis | |
| MS_021 | Buckling Analysis of Separation System Structures | |
| MS_024 | Numerical modeling of a fiber-reinforced polymer composite using an RVE | |
| MS_029 | Numerical and experimental study of fracture behavior of welded and unwelded cts specimens under mixed-mode loading of aluminum alloy aa3003. | |
| MS_031 | Three-dimensional analytical study of dental implants under the influence of different forces | |

2nd Day

11th December 2023

Process of participation

Oral presentation

| Room 1 | Topic A: Energy Engineering | | |
|------------------|-----------------------------|--------|---|
| Time | Name/ Surname | ID | Title |
| 14 :00 14 :15 | Antar Tahiri | EE_002 | Effect of Joule Heating and Viscous Dissipation in MHD Flow Under Constant Heat Flux Between Parallel Plates. |
| 14 :15 14 :30 | Amal Boulemtafes | EE_039 | Prefeasibility assessment of Industrial Solar Drying in Algeria : Energy performance and environmental impact |
| 14 :30 14 :45 | Khaled Athmani | EE_051 | Chebyshev Orthogonal Collocation Technique to Solve a Model of Energy Storage by Adsorption on Zeolithes |
| 14 :45 15 :00 | Mohammed Nadjib Hamlaoui | EE_014 | Numerical simulation of an isolated HAWT operating under different thermal stratification conditions |

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| Jury Members | Pr. Abdelouahed Aliouali U. Biskra | Pr. Abdelhafid Moummi U. Biskra | Pr. Salah Guerbai U. Biskra | Pr. Adnane Labeled U. Biskra |
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| 16 :00 16 :15 | Romaissa Hachana | EE_005 | Enhancing Indoor Air Quality through Numerical Analysis of Carbon Monoxide Dispersion in a Residential Area |
| 16 :15 16 :30 | Ezzine Bennour | EE_046 | Enhancing Heat Transfer in Laminar Flow Using a Sinusoidal Tube with Vortex Generators |
| 16 :30 16 :45 | Okba Boucherit | EE_064 | Experimental Study Of A Peripherally Integrated Heat Exchanger Around An Underground Water In Arid And Semi-Arid Regions |

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| Jury Members | Pr. Rachid Athmani U. Biskra | Pr. Adel Benchabane U. Biskra | Pr. Nacer Chouchane U. Biskra | Pr. Arfaoui Benarfaoui U. Biskra |
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| Room 2 | | Topic B: Materials Engineering | | |
|------------------|--------------------|--------------------------------|--|--|
| Time | Name/ Surname | ID | Title | |
| 14 :00 14 :15 | Nadjle Debabeche | ME_003 | Effect of fiber surface treatments on the fiber–matrix interaction reinforcement polypropylene composites | |
| 14 :15 14 :30 | Ouarda Tebermacine | ME_006 | Electrochemical and Optical Characterization of Ni _{1-x} Fe _x Al ₂ O ₄ Spinel Oxides | |
| 14 :30 14 :45 | Youcef Djebbloun | ME_024 | Creation, Evaluation and Characterization of a Laminated Bio-composite Material Reinforced by Luffa Mats | |
| 14 :45 15 :00 | Rahil Azizi | ME_008 | The Effect of The Substrates Nature on Properties of Indium Oxide Thin Films by Ultrasonic Spray | |
| 15 :00 15 :15 | Hamida BOUSSEHEL | ME_077 | Exploring the Potential of Date Palm Fibers as a Sustainable Filler for PVC Composites | |

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| Jury Members | Pr. Abdelhakim Begar U. Biskra | Pr. Messaoud Benmachiche U. Biskra | Pr. Djemoui Mohamdi U. Biskra | Pr. Abdelmalek Boulagroune U. Biskra |
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| 16 :00 16 :15 | Mohamed-Saïd Chebbah | ME_035 | Optimization of Heat-treatment Parameters with Taguchi Method for API X52 Pipe steel | |
| 16 :15 16 :30 | Nadjle Debabeche | ME_048 | Effect of successive fiber treatment on the mechanical and dynamic mechanical properties of palm petiole fiber reinforced LLDPE composites | |
| 16 :30 16 :45 | Hoda Hella | ME_068 | Evaluation of the Photocatalytic Activity in Thin Films of Bismuth Oxide Synthesized via the Sol-Gel Method | |
| 16 :45 17 :00 | Abdelhafid Boukellouda | ME_058 | Modélisation du comportement de béton à la compression | |
| 17 :00 17 :15 | Dalila Smail | ME_026 | Influence of reprocessing on the mechanical and structural properties of low density polyethylene (LDPE) containing talc | |

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| Jury Members | Pr. Hamida Boussehel U. Biskra | Pr. Fateh Chouia U. Biskra | Pr. Karima Ouannes U. Biskra | Pr. Faïçal Djani U. Biskra |
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| Room 3 | | | |
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| Topic C: Mathematics & Mechanics / Mechanical and Structural Analysis | | | |
| Time | Name | ID | Title |
| 14 :00 14 :15 | Ali Zine | MS_011 | Seismic Analysis of Concrete Gravity Dams under Simultaneous Horizontal and Vertical Components |
| 14 :15 14 :30 | Taqiyeddine Assas | MS_034 | Strain-based finite element formulation for the analysis and modelling of structures |
| 14 :30 14 :45 | Rania Kherachi | MS_038 | Characterizing the binding interaction of new spirooxindole-pyrrolidine derivatives for acetylcholinesterase inhibition Using Molecular Docking Studies |

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| Jury Members | Pr. Kamel Meftah U. Batna 2 | Pr. Lakhdar Sedira U. Biskra | Pr. Nouredine Drias U. Biskra | Pr. Belhi Guerira U. Biskra |
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Process of participation

Poster presentation

| Time | ID | Title | Jury Members |
|------------------|--|---|--|
| 10 :45 11 :15 | EE_004 | Thermal Evaluation of a Tray Food Dehydrator During Beetroot Cube Drying | Pr. Adel Sakri Pr. Cherifa Bouremel |
| | EE_013 | Effect of HTL and ETL material on the J-V characteristic of perovskite solar cell. | |
| | EE_044 | Comparison of Hydrothermal Characteristics of Various Annular Fins Patterns | |
| | EE_045 | Investigation of a Magneto-Hydrodynamic micromixer for two miscible fluids. | |
| | EE_047 | Non-equilibrium conjugate local thermal heat transfer in a cavity filled with porous media with a rotating cylinder: analysis and information | |
| | EE_052 | Simulation numerique du transfert de chaleur convectif dans un moteurs stirling fdt | |
| | EE_053 | The Autonomous Photovoltaic-Wind Microgrid With Battery Storage for Rural Electrification: A Case Study in Algeria | |
| | EE_054 | Energy Efficiency and Air Quality Monitoring in Algeria: Challenges and Solutions | |
| | EE_055 | A Novel Heat Sink Design Utilizing a Convex-Parabolic Microchannel and Hybrid Nanofluid for Enhanced Cooling of Core I7 CPU | |
| | ME_029 | Impact of Recycled Aggregate on the Properties of Concrete. | |
| ME_031 | The Characterization of the Date Palm Tree Leaflet for Using That as Green Materials for Building House. | | |
| ME_036 | Impact of Sr Doping on the Microstructure, Morphology and Optical Properties of ZnO Thin Films Prepared by SILAR Method | | |
| ME_039 | Investigation with Local Technical SVET in Study of Electrochemical Behaviour of 316Ti Austenitic Stainless Steel 316Ti in Acid Solution H2SO4 | | |
| ME_040 | الشكل دراسة تنبؤية للخصائص البنيوية والإلكترونية والمرونية للبوريدات الثلاثية ذات ScBNi | | |
| ME_045 | Synthesize and characterization of technical ceramics of perovskite structure ABO3 type. | | |

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| | ME_046 | Microstructural and Corrosion Behavior of Plasma Nitrocarburized Steel | | |
| | ME_050 | Effect of incorporating waste plastic powder on physical and mechanical properties of composite sand concrete | | |
| | ME_051 | Joining of Dissimilar Stainless Steels by Friction Welding | | |
| | ME_052 | Evaluation of Limestone Filler Impact on the Physical and Mechanical Performance of Sand Concrete | | |
| | ME_053 | Optoelectronic Properties Of DL-Aspartic Acid Crystal And Its Applications | | |
| | MS_004 | Structural Analysis of the Mechanical Behavior in Bending of Sandwich Composite Beams | | Pr. Mahdi Abdeddaim Pr. Aoun Yacine |
| | MS_005 | Experimental study on the Tensile Mechanical Properties of Epoxy Composite Materials Reinforced by Hybrid TWARMAT, Woven Glass and Carbon Fibers | | |
| | MS_006 | Vibration analysis of biologically inspired helical laminated composite plates in thermal conditions. | | |
| | MS_015 | The effect of chemical composition in (%) of the steel on the hardness of weld metal formed during SAW of gas (LPG) cylinders | | |
| | MS_016 | On improved rectangular finite element for plane linear elasticity analysis | | |
| | MS_022 | Valorisation et traitement chimique des fibres végétales pour préparer des matériaux composites. | | |
| MS_023 | استغلال الموارد النباتية (نبات القرع) في تحضير المواد المركبة | | | |
| 15 :30 16 :00 | EE_056 | Faculté de Technologie, Université Hassiba Ben Bouali de Chlef; Laboratoire de Physique Théorique et de Physique des Matériaux LPTPM | Pr. AdaiKa Kalthoum Pr. Laiadi Djemoui | |
| | EE_057 | Numerical study of the effect of baffle shape on mixing efficiency in a tank agitated by a Rushton Turbine. | | |
| | EE_059 | Numerical study of the effect of baffle shape on mixing efficiency in a tank agitated by a Rushton Turbine | | |
| | EE_062 | Thermocouples in Energy Harvesting: From Heat to Power | | |
| | EE_063 | The Graphical interface of the behavior of Autonomous PV system backed up by the Grid | | |
| | EE_065 | Evaluation of Heat Transfer in Tube Bundles Using Al ₂ O ₃ Nanofluids | | |
| | EE_066 | A Deep Learning Model for Short Term Solar Irradiance Forecasting | | |
| | MS_035 | Evaluation of a plane finite element based on the SFR concept for linear analysis of thermoelasticity problems | | |
| EE_068 | Utilisation de la dynamique computationnelle pour l'étude du mélange et de la dispersion des rejets marins | | | |

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| EE_071 | Natural Ventilation in a Horticultural Greenhouse: Computational Fluid Dynamics Simulation | Pr. Mounir Djelab Pr. Hamza Bentrach |
| EE_061 | Experimental Study of Heat Transfer Enhancement in Double Pipe Heat Exchanger Equipped With Coiled Circular Wires | |
| ME_032 | Thermo-mechanical and physic-chemical study of a bio-composite based on waste paper | |
| ME_054 | Mathematical Modeling To Explore The Mechanical Properties Of A Metal By Indentation | |
| ME_055 | Modelisation Des Contraintes D'interfaces D'une Poutre Metallique Penforcee Par Une Plaque Composite. | |
| ME_057 | التراخي اللين تأثير مخلفات الطوب المحروق على متانة الطوب | |
| ME_059 | Hydrogen embrittlement in tensile of duplex stainless steel X15CrNiSi25.21 loaded in aqueous solution H ₂ SO ₄ at + ₂₀ 'C. | |
| ME_062 | Influence of Rotational Speed on the Thermal Performance and Tensile Strength of Friction-Welded Joints between AISI 316L and Copper | |
| ME_063 | Vibration Of Functionally Graded Beams Using An Original High Order Shear Deformation Theory (HSDBT) | |
| ME_066 | Experimental Study of Cathode Tip Behavior in TIG Welding Process | |
| ME_071 | Production of lightweight clay bricks natural | |
| ME_074 | Flexional and thermal characterization of a lightweight clay and sawdust based compressed bricks | |
| ME_079 | Fatigue-Induced Effects of Prolonged Holding Time on Corrosion in AISI 4130 Steels Welded with a Nickel-based Electrode via the Pulsed TIG Process | |
| MS_036 | Optimizing Gear Pump Body Design for Enhanced Performance and Efficiency using ANSYS and Response Surface Methodology | Pr. Taher Masri Pr. Youcef Djeloun |
| MS_037 | Geometric Study for FGM Spinning Shaft Using P-Version of The Finite Element Method | |
| MS_040 | Topology Optimization and Fatigue Life Prediction of a Double-Edged Blade for a Single-Shaft Shredder. | |
| MS_041 | Bending Analysis of Functionally Graded Cylindrical Shell Under An Uniform Load | |
| MS_042 | The Buckling Analysis OF Functionally Graded Plate Using An Improved First Shear Deformation Theory | |

3rd Day

12th December 2023

Process of participation

Poster presentation

| Time | ID | Title | Jury Members |
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| 09 :30 10 :30 | EE_009 | Drying of beetroots (<i>Beta vulgaris</i> L.) using oven dryer | Pr. Salah Guerbai Pr. Nacer Chouchane |
| | EE_010 | Validation of the developed model for forecasting global solar radiation with measurements in Biskra | |
| | EE_023 | Hydrogen Potential in North Africa: Algeria Overview. | |
| | EE_024 | A brief review of fuel cells and their application areas | |
| | EE_025 | An experimental study on the effect of salt pre-treatment of the potato slices dried in a forced indirect solar dryer. | |
| | EE_027 | A Comparative Study of Green and Blue Hydrogen and 3E (Energy, Environmental sustainability, Economicsprospects) Analysis. | |
| | EE_034 | Modeling Air Velocity and Temperature Distribution in An Industrial Building Equipped with An Air-Earth Heat Exchanger Using Computational Fluid Dynamics: Case of Mechanical Hall | |
| | EE_038 | Evaluation of air-ground heat exchanger performance with different tube cross-section shapes using computational fluid dynamics | |
| | EE_043 | Experimental study of a geothermal water-air heat exchanger for heating homes | |
| | EE_049 | Experimental Analysis of Thermo-hydraulic Performance of Solar Air Heater Equipped with V-Shaped Porous Baffles | |
| | EE_035 | Evaluation of air-ground heat exchanger performance with different tube cross-section shapes using computational fluid dynamics | |

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| | ME_056 | Synthesis, Structural, Characterization of Perovskite $\text{LaCo}_{1-x}\text{Al}_x\text{O}_3$ ($0 = x = 0, 3$) | Pr. Karima Ouannes | Pr. Fatima Zohra Lemmadi |
| | ME_064 | Degradation by carbonation of precast concrete at the Keddara dam | | |
| | ME_067 | Effect Of heat Treatments On Microstructure And Mechanical Properties Of a Shielded Metal Arc Welded Pipeline Steel | | |
| | ME_070 | A Novel Finite element model For Static bending Analysis Of Functionally Graded Beams | | |
| | ME_072 | Microstructure and tribological | | |
| | ME_073 | Effect of ratio of natural fibers on the physical, mechanical and thermal properties of a bio-composite insulating material (date palm fibers/gypsum) | | |
| | ME_076 | Non-isothermal kinetic analysis of the dehydroxylation of kaolinite in Kaolin-Natural phosphate mixtures | | |
| | ME_081 | Study the feasibility of using date palm waste as a construction material: mechanical properties. | | |
| | MS_009 | Analysis of eco-friendly inhibitor's ability to prevent corrosion on carbon steel in acid media | Pr. Mohamed-Ouejdi Belarbi | Pr. Issam Abdesselam |
| | MS_012 | Corrosion inhibition properties of eco-friendly inhibitor on carbon steel in acid media: electrochemical characterization | | |
| | MS_014 | Numerical Analysis of Stiffened Plates Under Bending by Two Finite Elements Based on Two Different Approaches | | |
| | MS_019 | Numerical study of the bending analysis of curved functionally graded sandwich beams | | |
| | MS_025 | Digmat simulation of honeycomb sandwiches with varying weight fractions and orientations reinforced unidirectional date palm fibres in Gypsum layers | | |
| | MS_027 | Evaluation of structural deformation of marine structure during an accidental event | | |