



# 13<sup>th</sup> International Conference on Integrated Design and Production

December, 14 - 15 and 16, 2024  
Monastir, Tunisia

## SCIENTIFIC PROGRAM

### Organized by:

**LA2MP** - Laboratory of Mechanics, Modeling and Manufacturing – ENIS, TUNISIA

**LISA** - Engineering, Systems and Applications Laboratory - - ENSA Fes, MAROCCO

**QUARTZ** Laboratory - ISAE Supméca , FRANCE

**LMFAGPE** - Applied Fluid Mechanics, Process Engineering and Environment Laboratory - ENIS, TUNISIA

**LSPM** - Process and Materials Sciences Laboratory - Sorbonne Paris Nord University, FRANCE

**LAUM** - Acoustics Laboratory - Le Mans University, FRANCE



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## General Program

<b>Saturday</b>  December, 14, 2024	08h15 – 09h45	Registration							
	09h45 – 10h15	Opening Ceremony							
	10h15 – 12h30	Plenary Sessions - Room 1							
	12h30 – 14h	Lunch							
	14h00 – 15h30 Oral Presentations	Room 1	16	68	74	31	46	24	
		Room 2	2	29	19	1	14	109	
		Room 3	20	12	11	23	9	65	
	15h30 – 16h00	Poster Session 80 - 35 - 79 - 87 - 76 - 40 - 17 - 41 - 8 - 49 - 82 - 25 - 15 - 99 - 100 - 108-18							
16h00 – 16h30	Coffee Break								
16h30 – 18h00 Oral Presentations	Room 1	28	38	63	43				
	Room 2	33	27	73	3	34			
	Room 3	70	85	13	86	4			
<b>Sunday</b>  December, 15, 2024	09h00 – 11h15	Plenary Sessions - Room 1							
	11h30 – 12h30 Oral Presentations	Room 1	77	44	84	105			
		Room 2	50	55	64	26			
		Room 3	48	45	69	75			
	12h30 – 14h	Lunch							
	14h00 – 16h00 Oral Presentations	Room 1	7	59	104	57	58	83	56
		Room 2 <b>ONLINE</b>	81	88	96	32	39	95	61
		Room 3 <b>ONLINE</b>	21	22	51	66	36	60	10
16h00 – 16h30	Coffee Break								
16h30 – 18h00 Oral Presentations	Room 1	89	93	98	91				
	Room 2 <b>ONLINE</b>	5	30	37	97	67			
	Room 3 <b>ONLINE</b>	42	53	101	72	06	78		
<b>Monday</b> December, 16, 2024	08h30 – 10 h00 Oral Presentations	Room 1	94	71	103	102	54	62	
	10h00 – 10h30	Closing Ceremony							

## Detailed Program

### Saturday - December, 14, 2024 – Morning

9h15 – 10h00

#### Opening Ceremony

##### *Interventions of the CPI'2024 Conference Chair*

*Pr. Mohamed HADDAR, LA2MP, ENIS, TUNISIA*




##### *Interventions of CPI'2024 Organizing Committee Chairs*

*Pr. Mohamed Amine BEN SOUF, LA2MP, ENIS, TUNISIA*

*Pr. Taissir HENTATI, LA2MP, ENIS, TUNISIA*

10h00 – 12h15

#### Plenary Sessions

	<p style="background-color: #fff2cc; display: inline-block; padding: 2px 5px;"><b>10h00 – 10h45. Plenary Session 1</b></p> <p><b>Professor Marc ZOLGHADRI</b> ISAE-SUPMECA, Higher Institute of Mechanics of Paris</p>	<i>Chair : Professor Tahar FAKHFAKH</i>
	<p style="background-color: #fff2cc; display: inline-block; padding: 2px 5px;"><b>10h45 – 11h30. Plenary Session 2</b></p> <p><b>Professor Walid LARBI</b> National Conservatory of Arts and Crafts – CNAM – Paris</p>	<i>Chair : Professor Mohamed Slim ABBES</i>
	<p style="background-color: #fff2cc; display: inline-block; padding: 2px 5px;"><b>11h30 – 12h15. ONLINE Plenary Session 3</b></p> <p><b>Professor Jean Yves CHOLEY</b> ISAE-SUPMECA, Higher Institute of Mechanics of Paris</p> <p style="text-align: right;"><b>Link:</b> <a href="https://meet.google.com/icc-wywm-ohi">https://meet.google.com/icc-wywm-ohi</a></p>	<i>Chair : Professor Jamel LOUATI</i>

12h15 – 14h

Lunch

## Saturday - December, 14, 2024 –Afternoon

14h00 – 15h30

Oral Presentations

Room 1.		Chair : Nassim BOUDAUD
14h00 – 14h15	<b>ID 16. Trajectory tracking simulation of a Three Wheeled robot under different road conditions</b> <i>Khadr Aymen, Safa Othman, Ajmi Houidi</i>	
14h15 – 14h30	<b>ID 68. Study on wind turbine performance with the presence of interval parameters</b> <i>Wassim Lafī, Anoire Ben Jdidia, Lassaad Walha</i>	
14h30 – 14h45	<b>ID 74. Obsolescence and Availability: the hidden challenges of complex systems</b> <i>Sahar Karaani, Mariem Besbes, Marc Zolghadri, Claude Baron, Maher Barkallah</i>	
14h45 – 15h00	<b>ID 31. A New Tool for Obsolescence management: Preliminary Study of Stakeholder Needs</b> <i>Mariem Besbes, Patrice Leclair, Amel Souifi, Aya Mrabah, Marc Zolghadri</i>	
15h00 – 15h15	<b>ID 46. Reverse engineering method for Roundness Assessment of a Water Storage Tank using point-cloud processing</b> <i>Rami Ghorbel, Saker Messaoui, Ahmed Ktari, Nader Haddar</i>	
15h15 – 15h30	<b>ID 24. Quantitative Analysis of Aged Composite Mi-crostructure via X-Ray Tomography</b> <i>Abir Abdessalem, Sahbi Tamboura, Hachmi Ben Daly, Joseph Fitoussi</i>	

Room 2.		Chair : Ali AKROUT
14h00 – 14h15	<b>ID 2. Recurrent Neural Networks approach for prediction of the Ring Hoop Tensile stress-strain curve for anisotropic tubes</b> <i>Zied Ktari, Ali Khalfallah</i>	
14h15 – 14h30	<b>ID 29. Investigating EDM Process Effects on Sur-face Roughness: DOE and ML Insights</b> <i>Ikram Messaoudi, Boutheina Ben Fraj</i>	
14h30 – 14h45	<b>ID 19. Sustainable warehouse management and AI: an alliance for a sustainable future</b> <i>Eya Ben Amor, Hager Triki, Mounir Benaissa</i>	
14h45 – 15h00	<b>ID 1. Flat and cylindrical indentation for brittle fracture using phase-field modeling</b> <i>Yosra Kriaa, Yassine Hersi, Bassem Zouari</i>	
15h00 – 15h15	<b>ID 14. Finite Element Analysis of Crack Bulging and Stress Intensity in Pressurized Panels for Aircraft Fuselage</b> <i>Maher Bouazizi, Soula Mohamed, Lazgheb Tarek</i>	
15h15 – 15h30	<b>ID 109. LightGBM for Optimized Wind Power Potential Assessment: A Standalone Site Sizing Approach</b> <i>Nabiha Brahmi, Leila HAJ Meftah, Maher Chaabene</i>	

Room 3.		Chair : Omar AYADI
14h00 – 14h15	<b>ID 20. Optimization of Sound Transmission in Double-wall Structures with a Porous Layer Using Genetic Algorithm</b> <i>Soraya Bakhouch, Walid Larbi, Philippe Macquart, Jean-François Deü</i>	
14h15 – 14h30	<b>ID 12. Decision Framework for Predictive Maintenance Method</b> <i>Boudour Barkia, Omar Ayadi, Faouzi Masmoudi</i>	
14h30 – 14h45	<b>ID 11. How “Turbulent mixing” behaves ammonia-heptane diffusion lean-combustion in RCCI engines</b> <i>Fathi Hamdi, Mouldi Chrigui</i>	
14h45 – 15h00	<b>ID 23. Stochastic wave finite element method in uncertain function gradient material structure</b> <i>Faker Bouchoucha, Henia Arfa, Raslen Nemer, Mohamed Ichchou</i>	
15h00 – 15h15	<b>ID 9. Vibration analysis of imperfect graded perforated cloud plate</b> <i>Ayman Hadrich, Souhir Zghal, Sana Koubaa, Zoubeir Bouaziz, Radhi Abdelmoula</i>	
15h15 – 15h30	<b>ID 65. Dynamic Behavior of Non-Linear Vibration Absorber</b> <i>Amal Hammouda, Ahmed Ghorbel, Fathi Djemal, Nabih Feki</i>	

15h30 – 16h00

Poster Session

<b>ID 41. Development of a Predictive Model for Thermal Fatigue of CBGA Solder Joints Using Artificial Neural Networks</b> <i>Jihen Rebai, Ahmed Ghorbel, Nabih Feki, Abdelkhalak El Hami</i>	<b>ID 80. Robotic Grippers Design Optimization</b> <i>Bilel Najlaoui</i>
<b>ID 99. Effect of an air flow meter fault on the acoustic emissions of a diesel engine</b> <i>Ali Helali, Ines Belkacem, Raslen Nemer, Ayoub Missaoui</i>	<b>ID 87. A comparative study in term of comfort for full rail vehicle active suspensions</b> <i>Mortadha Graa</i>
<b>ID 8. Bearings Fault Diagnosis using Deep Learning Method</b> <i>Ahmed Ghorbel, Sarra Eddai, Bouthayna Limam, Nabih Feki</i>	<b>ID 49. Evaluating the impact of vehicle speed on thermal behaviour of brake disc with DTDP configurations</b> <i>Mohamed Ben Jamel Haddar, Ahmed Ghorbel, Fathi Djemal, Mounir Baccar</i>
<b>ID 76. Investigation of Weld Joint Microstructure and Microhardness in the Substrate of Austenitic Stainless Steel-Clad Plate: A New Methodology</b> <i>Rami Ghorbel, Saker Messaoui, Ahmed Ktari, Nader Haddar</i>	<b>ID 40. Characterization of thermo-mechanical and morphological properties of alfa fiber Reinforced Polypropylene under different chemical modifications of fiber surface</b> <i>Saker Messaoui, Rami Ghorbel, Mabrouk Mosbahi, Lassaad Ghali, Noamen Guermazi, Ahmed Ktari, Nader Haddar</i>
<b>ID 17. Passive Absorber Effect on The Machining Surface Quality</b> <i>Riadh Chaari, Sami Soufi</i>	<b>ID 35. Numerical and Simulation Approaches for Active Vibration Control in Piezoelectric Structures</b> <i>Nizar Ouni, Riadh Chaari, Mokhless Boukhriss, Mohamed Haddar</i>
<b>ID 15. Prediction of the mechanical properties of anisotropic tubes using convolutional neural networks</b> <i>Zied Ktari, Ali Khalfallah</i>	<b>ID 25. Innovative Approach for Predicting SMC Fatigue Behavior Under Moisture Aging</b> <i>Abir Abdessalem, Sahbi Tamboura, Hachmi Ben Daly, Joseph Fitoussi</i>
<b>ID 82. Influence of channel configuration on the hydro-thermal performance of liquid-cooled mini-channel heat sink</b> <i>Ahmed Samet</i>	<b>ID 108. Numerical Study of the Behavior of Natural Rubber Constrained by Aluminum Plates Under Low-Velocity</b> <i>Hajer Daoud, Firas Meddeb, Mohamed Amine Ben Souf</i>
<b>ID 18. Fault detection in Rotating Machinery based on Machine Learning</b> <i>Maroua Haddar, Rasheed M. Jorani, Ahmed Hammami</i>	

16h00 – 16h30

Coffee Break

## Saturday - December, 14, 2024 –Afternoon

16h30 – 18h00

Oral Presentations

Room 1.		Chair: Faouzi MASMOUDI
16h30 – 16h45	<b>ID 28. Towards a physical characterization of ABS Lattice Structures—A Comparative Study</b> <i>Mouad Garziad, Soukaina Krafes, Abdelmjid Saka, Radouane Boujmal, Hassane Moustabchir</i>	
16h45 – 17h00	<b>ID 38. Dynamic Modeling and Active Vibration Control for a Piezoelectric-Based Solar Panel Suppression System</b> <i>Nizar Ouni, Riadh Chaari, Mokhless Boukhriss, Mohamed Haddar</i>	
17h00 – 17h15	<b>ID 63. Effect of the wind excitation on the dynamic behavior of a Wind Turbine coupled to TMD: A parametric study</b> <i>Wiem Boulaabi, Ahmed Ghorbel, Nabih Feki</i>	
17h15 – 17h30	<b>ID 43. Hydrothermal Aging on the Mechanical Properties of Alfa Fiber Reinforced Polypropylene Composites</b> <i>Saker Messaoui, Rami Ghorbel, Mabrouk Mosbahi, Lassaad Ghali, Noamen Guermazi, Ahmed Ktari, Nader Haddar</i>	


Room 2.		Chair: Mohamed TAKTAK
16h30 – 16h45	<b>ID 33. Numerical investigation of single point incremental forming process of bimetallic CP Titanium-Steel composite sheet: impact of process parameters on force evolution and on thickness distribution</b> <i>Wifak Ben Abdelkader, Riadh Bahloul, Ramzi Ben Hmida</i>	
16h45 – 17h00	<b>ID 27. A reinforcement learning implementation for a scheduling problem</b> <i>Jaber EL Menchoul, Hatem Hadda</i>	
17h00 – 17h15	<b>ID 73. Analytical modeling of tensile properties of glass fibers reinforced polyamide composites</b> <i>Mohsen Ejday, Nahed Hermassi, Noamen Guermazi, Yves Grohens, Yves-Marie Corre</i>	
17h15 – 17h30	<b>ID 3. Prediction stress distribution in dental implant using regression machine learning algorithms</b> <i>Lachhel Belhassen, Mondher Wali, Fakhreddine Dammak</i>	
17h30 – 17h45	<b>ID 34. Efficient surface topography simulation for ball end milling process using enhanced Z-MAP algorithms</b> <i>Maaloul Makram, Belguith Rami, Regaieg Amine, Amrouche Abdelwaheb, Sai Lotfi</i>	


Room 3.		Chair : Bassem ZOUARI
16h30 – 16h45	<b>ID 70. Evaluation of Power Loss in Angular Contact Ball Bearings due to Temperature and Gyroscopic Effects</b> <i>Anoire Ben Jdidia, Rabiha Rabbah, Taissir Hentati, Mohamed Haadar</i>	
16h45 – 17h00	<b>ID 85. Digital Twin for scheduling management in flow shop and job shop manufacturing systems: review and perspectives</b> <i>Thierno M. L. Diallo, Zineb El Haouat, Olivia Penas, Driss Amegouz, Regis Plateaux</i>	
17h00 – 17h15	<b>ID 13. Impact of Initial Droplet Sauter Mean Diameter on Reacting liquid Spray in Ammonia/Heptane Combustion</b> <i>Fathi Hamdi, Mouldi Chrigui</i>	
17h15 – 17h30	<b>ID 86. An enhanced evolutionary algorithm for engineering design</b> <i>Bilel Najlaoui, Mortadha Graa, Zouhaier Affi, Lotfi Romdhane</i>	
17h30 – 17h45	<b>ID 4. A Brief systematic literature review on Laser Wire Additive Manufacturing</b> <i>Larbi Yousfi, Amir Guizani, Moncef Hammadi, Slim Bouaziz</i>	

## Sunday - December, 15, 2024 – Morning

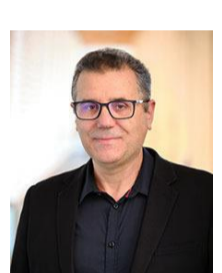
09h00 – 11h15

### Plenary Sessions

	<p><b>09h00 – 09h45. Plenary Session 4</b></p> <p><b>Professor Abdelmjid SAKA</b></p> <p>National School of Applied Sciences, University in Fes, Morocco</p>	Chair : Professor Zoubeir BOUAZIZ
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	<p><b>09h45 – 10h30. ONLINE Plenary Session 5</b></p> <p><b>Professor Mohamed BETTAIEB</b></p> <p>Metz National School of Arts and Crafts</p>	Chair : Professor Slim BOUAZIZ
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**Link:** <https://meet.google.com/icc-wywm-ohi>

	<p><b>10h30 – 11h15. ONLINE Plenary Session 6</b></p> <p><b>Professor Ahmed KOUBAA</b></p> <p>University of Quebec in Abitibi-Témiscamingue - UQAT</p>	Chair : Professor Lassâad WALHA
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**Link:** <https://meet.google.com/icc-wywm-ohi>

11h30 – 12h30

### Oral Presentations

<b>Room 1.</b>		Chair : Anas BOUGUECHA
11h30 – 11h45	<b>ID 77. Parameter Identification of a Viscoelastic Constitutive Model for 3D printed Polylactic Acid (PLA)</b> <i>Zarrad Ines, Allouch Marwa, Mondher Wali, Fakhreddine Dammak</i>	
11h45 – 12h00	<b>ID 44. Dynamic Mechanical Analysis of Thermoplastic Composites Reinforced with Flax Fiber</b> <i>Haggi Mondher, Jendli Zouhaier, El Mahi Abderrahim, Akrouf Ali</i>	
12h00 – 12h15	<b>ID 84. Investigation of semi-active and active suspensions of rail vehicle in term of comfort</b> <i>Mortadha Graa, Bilel Najlaoui, Zouhaier Affi, Lotfi Romdhane</i>	
12h15 – 12h30	<b>ID 105. CFD Simulation of a Sedan Car Using Tail-plate for Aerodynamic Drag and Lift Optimization</b> <i>Hiba Bouzaabia, Ali Helali</i>	

<b>Room 2.</b>		Chair : Sana KOUBAA
11h30 – 11h45	<b>ID 50. Investigation of stress state by numerical simulation of 3D manufacturing processes</b> <i>Chaima Hammami, Nouha Kammoun, Hamdi Hentati, Maher Barkallah</i>	
11h45 – 12h00	<b>ID 55. Nonlinear response of wind turbine blades using beam element method</b> <i>Rania Maktouf, Majdi Yangui, Fathi djemal, Rachid Nasri</i>	
12h00 – 12h15	<b>ID 64. Optimizing Control Strategy for a Piezoelectric Beam System Using fmincon Optimization</b> <i>Mayssa Touil, Riadh Chaari</i>	
12h15 – 12h30	<b>ID 26. New particle size measurement device by the light scattering method</b> <i>Fatma Ben Baha Spiridigliozzi, Philippe Desmarest, Oriana Haddad, Mounir Ben Amar, Jean-Philippe Passarello</i>	

<b>Room 3.</b>		Chair : Moez BEYAOUI
11h30 – 11h45	<b>ID 48. Absorbing Layers for Wave Propagation in Unbounded Medium Using the Subdomain Coupling Method and Hybrid Time Integration</b> <i>Fatima Osman, Sijia Li, Walid Larbi</i>	
11h45 – 12h00	<b>ID 45. A Preliminary Study examines the Experimental and Numerical Evaluation of a Membrane Distillation System Employing AGMD.</b> <i>Mokhless Boukhriss, Riadh Chaari, Nizar Ouni</i>	
12h00 – 12h15	<b>ID 69. Dynamic performance of the electric vehicle powertrain</b> <i>Wassim Lafi, Anoire Ben Jdidia, Lassaad Walha</i>	
12h15 – 12h30	<b>ID 75. DITER: Digital twin system for energy consumption profiling and management in mobile robots</b> <i>Chunyu Zhang, Omar Hammami</i>	

12h30 – 14h

### Lunch

## Sunday - December, 15, 2024 – Afternoon

14h00 – 16h00

### Oral Presentations

Room 1.		Chair: Riadh CHAARI
14h00 – 14h15	<b>ID 7. Numerical analysis of eccentricity defect of vibration system under uncertainties</b> <i>Ahmed Guerine, Ali El Hafidi, Philippe Leclair</i>	
14h15 – 14h30	<b>ID 59. FEM calculation of the mesh stiffness of a helical gear</b> <i>Amira Hattay, Ahmed Hammami, Atef Hmida, Mohamed Haddar</i>	
14h30 – 14h45	<b>ID 104. CFD Simulation of a Passenger Car Using Various Aerodynamic Appendices</b> <i>Hiba Bouzaabia, Ali Halali</i>	
14h45 – 15h00	<b>ID 57. Designing a closed-loop supply chain under carbon taxation policy</b> <i>Sarra Atti, Hichem Hassine, Fathi Djemal, Saïd Amari</i>	
15h00 – 15h15	<b>ID 58. Modelling and Simulation of Patient Flow within the Emergency Department</b> <i>Haiifa Nsiri, Hichem Hassine, Saïd Amari</i>	
15h15 – 15h30	<b>ID 83. Flexible dielectric hybrid composites based polybutylene adipate-co-terephthalate: influence of the content of microcrystalline cellulose enrobed with cellulose acetate</b> <i>Thomas Sango, Martin Claude Ngueho Yemele, Mohamed Ragoubi, Nathalie Leblanc, Ahmed Koubaa</i>	
15h30 – 15h45	<b>ID 56. Pre-designing method to evaluate the dynamic behavior of a printed circuit board with Modelica</b> <i>Ghazoi Hamza</i>	

### First ONLINE Session

ONLINE Session – Room 2		Chair : Nabih FEKI
		<b>Link:</b> <a href="https://meet.google.com/xjq-dbkc-zjm">https://meet.google.com/xjq-dbkc-zjm</a>
14h00 – 14h15	<b>ID 81. Elastic properties of an additively manufactured anti-trichiral composite structure</b> <i>Anis Hamrouni, Jean-Luc Rebière, Abderrahim El_Mahi, Moez Beyaoui</i>	
14h15 – 14h30	<b>ID 88. Conversion of phosphate and cement wastes for building applications</b> <i>Zahra Meryam, Essahbi Soufien, Taktak Mohamed</i>	
14h30 – 14h45	<b>ID 96. A Multi-Objective Optimization Approach for Identifying 3D Elastic Behavior in Elium®/Flax fiber Biocomposites</b> <i>Ameny Ketata, Zouhaier Jendli, Mondher Haggui, Abderrahim El Mahi, Anas Bouguecha</i>	
14h45 – 15h00	<b>ID 32. Machine Learning Approaches for Bearing Fault Diagnosis: SVM and KNN Algorithms</b> <i>Sarra Eddai, Nabih Feki, Ahmed Ghorbel, Mohamed Haddar</i>	
15h00 – 15h15	<b>ID 39. Numerical Investigation of PCM-Enhanced Finned Heat Sinks for Thermal Management of Electronics: A Parametric Study</b> <i>Abir Msalmi, Fathi Djemal, Abdelkhalak El Hami, Mohamed Haddar</i>	
15h15 – 15h30	<b>ID 95. 3D-Printed Bio-Based composite auxetic Metamaterials: tensile properties</b> <i>Jihen Boukadida, Abderrahim El Mahi, Jean-Luc Rebiere</i>	
15h30 – 15h45	<b>ID 61. Applying Numerical Simulation to Vacuum-Assisted Resin Infusion Procedures</b> <i>Houssef Cherif, Saouab Abdelghanib, Khawla Essasi, Abdelkhalak El Hami, Anas Bouguecha</i>	
15h45 - 16h00	<b>ID 92. Effect of Filling Velocity Uncertainty on Additive Manufacturing Output Metrics</b> <i>Houssef Cheniour, Majdi Yangui, Lamiae Vernieres-Hassimi, Abdelkhalak EL Hami, Slim Bouaziz</i>	

ONLINE Session – Room 3		Chair : Hassen TRABELSI
		<b>Link:</b> <a href="https://meet.google.com/vkr-mgku-wya">https://meet.google.com/vkr-mgku-wya</a>
14h00 – 14h15	<b>ID 21. Analysis of the petroleum products distribution network using AnyLogistix computational tool: a case study</b> <i>Moqbel S. Jaffal, Omar Ayadi, Faouzi Masmoudi</i>	
14h15 – 14h30	<b>ID 22. A genetic algorithm to solve multi-objective, multi-mode resource-constrained project scheduling with fuzzy activity durations</b> <i>Firas Takleef, Omar Ayadi, Faouzi Masmoudi</i>	
14h30 – 14h45	<b>ID 51. Numerical study of various stress tests for characterizing sheared Aluminum bulk</b> <i>Nouha Kammoun, Chaima Hammami, Hamdi Hentati</i>	
14h45 – 15h00	<b>ID 66. Dynamic behaviour of composites with pre-induced damage</b> <i>Hana Driss, Moez Beyaoui</i>	
15h00 – 15h15	<b>ID 36. Comparative Analysis of PID and FOPID Controllers for Vibration Suppression in Cantilever Beam Systems</b> <i>Sami Soufi, Riadh Chaari, Amina Mseddi</i>	
15h15 – 15h30	<b>ID 60. Analytical and numerical resolution of a nonlinear metallic vibration isolator using the optimization method</b> <i>Abderrahmen Bouagila, Pablo Garcia, Ahmed Hammami, Ana De-Juan, Alfonso Fernandez, Fernando Viadero</i>	
15h30 – 15h45	<b>ID 10. Revealing the microstructure influence in scratch tests of additively manufactured 316L stainless steel under light-loading conditions</b> <i>Mohanad Bahshwan</i>	
15h45 - 16h00	<b>ID 52. Characterization of alfa-based epoxy composites: numerical modeling and experimental validation</b> <i>Ichrak Hammoudi, Montassar Zrida, Hassen Trabelsi</i>	

16h00 – 16h30

### Coffee Break

## Sunday - December, 15, 2024 – Afternoon

16h30 – 18h00

### Oral Presentations

<b>Room 1.</b>		<i>Chair : Taissir HENTATI</i>
16h30 – 16h45	<b>ID 89. FaDeep: Fatigue life prediction of an aluminum alloy 2024 T351 using Machine Learning</b> <i>Taoufik Nasri, Mohamed Anouar Borgi, Adel Hamdi</i>	
16h45 – 17h00	<b>ID 93. Design and optimization of curved grid sub-stiffened composite panels</b> <i>Hamda Chagraoui, Mohamed Soula</i>	
17h00 – 17h15	<b>ID 98. Analysis of the Squeezing test of Power-law Fluid Flow Between Two Circular plates</b> <i>Amal Kraiem, Abdelhak Ayadi</i>	
17h15 – 17h30	<b>ID 91. Additive manufacturing: Process and im-provements</b> <i>Soukaina Krafes, Mouad Garziad, Abdelmjid Saka</i>	

### Second ONLINE Session

<b>ONLINE Session – Room 2</b>		<i>Chair : Moez ABDENNADHER</i>
		<b>Link:</b> <a href="https://meet.google.com/xjq-dbkc-zjm">https://meet.google.com/xjq-dbkc-zjm</a>
16h30 – 16h45	<b>ID 5. Experimental study of heat and vibration effect on an IR optical sensor for gas detection</b> <i>Mohamed Abdessamia Chakchouk, Abdelkhalak Elhami, Wajih Gafsi, Mohamed Haddar</i>	
16h45 – 17h00	<b>ID 30. Vibrational analysis of fiber and nanoparticle-reinforced composites using Power Spectral Density</b> <i>Sirine Ben Ameer, Mohamed Mtibaa, Ahmed Yaich, Moez Beyaoui, Abdelkhalak El Hami, Abdelghani Saouab</i>	
17h00 – 17h15	<b>ID 37. Effects of solder joint geometry and alloy selection on the fatigue life of BGA packages</b> <i>Jihen Rebai, Ahmed Ghorbel, Nabih Feki, Sinda Ghenam, Abdelkhalak El Hami</i>	
17h15 – 17h30	<b>ID 97. Optimal Coefficient of Friction in Spur Gear Transmissions Using Machine Learning</b> <i>Maroua Hammami, Naser S. Sanoussi, Olfa Ksentini, Nabih Feki, Tarek Belgasam, Mohamed Slim Abbes</i>	
17h30 – 17h45	<b>ID 67. Development of Numerical Models for Simulating Power Losses in A10 Gear Transmissions</b> <i>Olfa Ksentini, Khouloud Jebahi, Maroua Hammami, Nabih Feki, Mohamed Slim Abbes</i>	

<b>ONLINE Session – Room 3</b>		<i>Chair : Ahmed HAMMAMI</i>
		<b>Link:</b> <a href="https://meet.google.com/vkr-mgku-wya">https://meet.google.com/vkr-mgku-wya</a>
16h30 – 16h45	<b>ID 42. Computational analysis of the dynamic characteristics of a 3D printed biocomposite sandwich beam with a periodic core</b> <i>Mohamed Amine Ajmi, Hajer Daoud, Zouhaier Jendli, Abderrahim El Mahi, Mohamed Amine Ben Souf</i>	
16h45 – 17h00	<b>ID 53. Artificial Intelligence and Parametric Study of Active Suspension Systems: A New Paradigm for Optimization</b> <i>Fatma Hmida, Hassen Trabelsi, Fathi Djemal, Rawnak Omar</i>	
17h00 – 17h15	<b>ID 101. Structural Modal Analysis of Cycloidal Gerotor Pump</b> <i>Zied Abdelmoula, Ahmed Hammami, Emiliano Mucchi, Mattia Battarra</i>	
17h15 – 17h30	<b>ID 72. Dynamic Analysis of a Two-Stage Wind Turbine Gearbox: Addressing Uncertainty Interactions</b> <i>Mouna Hadj Kacem, Hassen Trabelsi, Abdelkhalak El Hami, Lassaad Walha</i>	
17h30 – 17h45	<b>ID 6. Longitudinal vibration of uncertain beam through the second strain gradient theory</b> <i>Raslen Nemer, Faker Bouchoucha, Henia Arfa, Mohamed Ichchou</i>	
17h45 - 18h00	<b>ID 78. Mesh stiffness comparison of different models in polymer spur gear analysis.</b> <i>Abderrahim Baccar, Ahmed Hammami, Nuno Dourado, Ali Akrouf, Fakher Chaari</i>	

## Monday - December, 16, 2024 – Morning

8h30 – 10h30

### Oral Presentations

<b>Room 1.</b>		<i>Chair: Fathi DJEMAL</i>
8h30 – 8h45	<b>ID 94. Oblique cutting configuration for modeling thermal behavior when drilling GFRP/Al stack composites</b> <i>B. Salem, A. Mkaddem, S. Ghazali, A. Jarraya</i>	
8h45 – 9h00	<b>ID 71. Experimental investigation of adhesively bonded single lap joint in nautical applications</b> <i>Imen Debbabi, Eya Miled, Ated Benkhalifa</i>	
9h00 – 9h15	<b>ID 103. Solving the problem of aircraft maintenance using Particle Swarm Optimization</b> <i>Amama Ichrak, Hichem Hassine, Saïd Amari, Riadh Chaari</i>	
9h15 – 9h30	<b>ID 102. Effect of non-linear damping on Vibration characteristics of spur gear system</b> <i>Nourhaine Yousfi, Lassaad Walha, Ali Akrouf</i>	
9h30 – 9h45	<b>ID 54. MATLAB/SIMULINK modeling of a wind turbine</b> <i>Rawnak Omar, Fatma Hmida, Fathi Djemal, Hassen Trabelsi</i>	
9h45 – 10h00	<b>ID 62. A Brief Literature Review on Performance Analysis of Supply Chains Using DES Formalisms</b> <i>Abdallah Jallouli, Hassen Trabelsi, Hager Triki, Saïd Amari</i>	

10h00 – 10h30

### Closing Ceremony