Detailed Technical Program (Keynote and Oral Presentations)

Friday, June 28, 2024

Session	Title	Paper Ref.	Chair, Co-Chair / Authors	Country
Friday 08:30-10:30	Registration			
Friday 10:30-11:00	Coffee Break			
Friday 11:00-11:30	Opening			
Friday 11:30-12:30	Keynote Lecture 1		Chair: Abdessattar Abdelkefi	United States
	Surrogate Optimisation for enhancing the performance of nonlinear dynamical systems	Keynote 1	Daniil Yurchenko	United Kingdom
Friday 12:30-14:00	Lunch			
Room: 1 Friday 14:00-16:00	MATE 1: Metals and alloys, Polymers, Ceramics I		Bassem Zouari / Laurent Dubar	Tunisia - France
	Nanocrystallization induced crack blocking in metallic glasses	ID 222	Cheima Ammari, Mohamed Abdelbasset Yousfi, Khalil Hajlaoui	Tunisia
	Fe2O4 Ni0.5Cd0.5 pellet-doped iron oxyde's hydrogen storage	ID 195	Sihem Belkhiria, Abdelmajid Jemni	Tunisia
	Influence of annealing on the mechanical and metallurgical behavior of HC260Y IF steel	ID 82	Latifa Arfaoui, Amel Samet, Amna Znaidi	Tunisia
	Development of polymers properties characterisation using statistical signal analysis	ID 36	Nadia Al-Rawi, Mohammed Zaki Nuawi, Ahmed Elloumi	Iraq - Malaysia - Tunisia
	Study of copper alloy formability at high temperatures using the Environmentally Friendly Formability Test (EFForT)	ID 175	Souhir Hammami, Philippe Moreau, José Gregorio La Barbera-Sosa, Fahmi Chaari, Tarik Sadat, Bassem Zouari, Laurent Dubar, Riadh Elleuch	Tunisia - France
Room: 2 Friday 14:00-16:00	TSRE 1: Thermal Sciences I		Samah Ben Ayed / Thameur Gargouri	United States - Tunisia
	Experimental and numerical investigation on the convective heat transfer in a helically coiled tube under constant heat flux	ID 25	Sami Missaoui, Zied Driss, Mouldi Chrigui, Romdhane Ben Slama, Bechir Chaouachi	Tunisia
	Thermofluidic investigation of color on the performance of martian fixed-wing drones	ID 111	Lucija Jocipovic, Zachary Ortiz, Ben Skinner, Anthony Quintana, Samah Ben Ayed	United States
	Study of adsorption and desorption kinetics of a silica gel/air couple	ID 196	Ibtissem Hraiech, Sihem Belkhiria, Leila Zili-Ghedira	Tunisia
	Evaluating the efficiency of double finned trombe walls through transient 3D CFD simulations	ID 142	Nessrine Essid, Zouhayar Al Adel	Tunisia
	A novel wind speed prediction method based on deep learning method	ID 53	Nabiha Brahmi, Leila Haj Meftah, Maher Chaabene	Tunisia
	Study and simulation of the influence of fins and copper nanoparticle concentration on the melting phenomenon of the latent heat thermal energy storage system (LHTESS).	ID 114	Ilias Benyahia, Saddam Hocine Mellah, Manal Lakhdari	Algeria
Room: 3 Friday 14:00-16:00	FLME 1: Modeling and Simulation		Tarek Mabrouki / Daniil Yurchenko	Tunisia - United Kingdom
	Flow topology downstream of the square cylinder with slots	ID 30	Lotfi Bouazizi, Said Turki	Tunisia
	Effects of height dimensions on the microclimate of a soilless greenhouse: A numerical study	ID 108	Olfa Zghal, Hasna Abid, Ahmed Ketata, Slim Zouari, Giovanni Gugluiza, Maroua Mejri, Emilia Arrabito, Zied Driss	Tunisia - Italy
	Effect of morphing trailing edge on flapping foil energy harvesting	ID 49	Tianqi Zuo, Kamal Djidjeli, Daniil Yurchenko	United Kingdom
	Large-eddy simulations of flow and heat transfer within a rod assembly under baffle jet inflow	ID 87	Mohamed Ali, Ahmed K. Alkaabi, Imran Afgan	United Arab Emirates
	Numerical analysis of the cooling efficiency based on feedback temperature of the comfort zone in closed environments	ID 43	Fahad Rafi Butt, Imran Akhtar	Pakistan
Room: 4 14:00-16:00	AM 1: Computational Methods in Mechanics I		Salah Mezlini/ Hassen Ouakad	Tunisia
	Natural frequencies of functionally graded plate with complex cutouts	ID 57	Ayman Hadrich, Souhir Zghal, Sana Koubaa, Zoubeir Bouaziz, Radhi Abdelmoula	Tunisia - France
	Numerical analysis of the mechanical behavior to the ovality of the shell of a rotary kiln of cement	ID 79	Bouhafs Mohammed, Bouhamri Noureddine, Djellid Ikram	Algeria
	The Influence of skewed electrostatic excitation on symmetry breaking of arch micro-beams	ID 85	Hassen Ouakad, Ali Qabur, Ayman Alneamy	Tunisia - Saudi Arabia
	Predicting aerodynamic loads on horizontal axis wind turbine blades for different operating conditions using Qblade	ID 93	Caden Huish, Praveen Shakya, Abdennour Seibi, Mohammad Shekaramiz, Mohammad Masoum	United States
	Ballistic impact of composite-ceramic armors for different oblique angles: numerical study	ID 120	Amira Hassouna, Salah Mezlini	Tunisia
	Free Volume from nanoindentation test : Numerical approach	ID 203	Mohamed Abdelbasset Yousfi, Hela Zbidi, Khalil Hajlaoui	Tunisia
Room: 5 Friday 14:00-16:00	MATE 2: Tribology		Mohamed Kharrat / Abdelmaggid Kasser	Tunisia - Algeria
	On a determination of wear resistance and residual stresses of thermally sprayed stainless steel coating	ID 61	Merzak Laribi, Abdelmagjid Kasser	Algeria
	Improvements in mechanical and tribological properties of thermoplastic composites by the incorporation of metal microparticles	ID 221	abrouka Akrout, Basma Ben Difallah, Mohamed Kharrat, António Perei	Tunisia - Portugal
	Comparative study of mollusc shell and squid pen bio-based fillers on the tribological properties of HDPE bio-composites	ID 105	Besma Sidia, Walid Bensalah	Tunisia
Friday 16:00-16:30	Break and Poster Session			
Room: 1	MATE 3: Surface and Thin Films		Lamine Dieng / Mohamed Khlif	France - Tunisia
	Biaxial characterization of PLA biocomposite film using bulge test and 3D-DIC	ID 92	Fatma Kharrat, Mohamed Khlif, L. Hilliou, J. A. Covas, Mohamed Haboussi, Chedly Bradai	Tunisia - France
	Morphological characterization of Zn-Co coatings: effect of additive and baths' parameters	ID 202	Faten Nasri, Dorra Trabelsi, Mohamed Kharrat, Maher Dammak, Florence Vacandio, Marielle Eyraud	Tunisia - France

Friday 16:30-18:45	The physico-chemical, mechanical and tribological properties of ZrO2 coatings deposited via DC sputtering using the oblique angle deposition technique	ID 161	Asma Gzaiel, Khalil Aouadi, Corrine Nouveau, Aurélien Besnard, Yoann Pinot, Faker Bouchoucha	Tunisia - Morocco - France
	Microscopic investigation of PVD-RF amorphous Al2O3/Ti6Al4V deposits at different substrate polarizations	ID 136	Salim Abdelli , Djamel Amari, Youcef Khelfaoui , Sarra Zioual	Algeria
	Investigation of the influence of graphite content on scratch resistance of electrodeposited Nickel-graphite composite coatings	ID204	Dorra Trabelsi, Faten Nasri, Mohamed Kharrat, Maher Dammak, Marielle Eyraud, Florence Vacandio	Tunisia - France
	Gun nozzle geometry effects on High Velocity Oxygen-Fuel (HVOF) of nickel-alloy coatings	ID 101	Fida Harabi, Basma Ben Difallah, Mohamed Kharrat, Massimiliano Barletta, Yasin Mohamed El Sayed, Stefano Lionetti	Tunisia - Italy
Room: 2 Friday 16:30-18:45	TSRE 2: Thermal Sciences II		Ahmed Koubaa / Sid Ahmed Reffas	Canada - Algeria
	The influence of fin configuration and curvature on a thermal energy storage device	ID 147	Abdeldjalil Belazreg, Aissa Abderrahmane, Mohammed Sahnoun, Zied Driss	Algeria - Tunisia
	Willow leaf pattern plate heat exchanger performance CFD analysis	ID 165	Sirine Chtoura, Souhir Hammami, Mounir Baccar	Tunisia
	Performance investigation of trigeneration system for an industrial building: A thermodynamic study using EES and ASPEN-PLUS	ID 90	Doniaz Sioud, Raoudha Garma	Tunisia
	Influence of fiber length on the thermal and mechanical properties of maple wood-polypropylene composites	ID 103	Farshid Basiji, Fouad Erchiqui, Ahmed Koubaa	Canada
	Comparative study of 2D numerical analysis of forced convection in a square pin heat sink	ID 109	Noureddine Bouhamri, Mohammed Bouhafs, Belkacem Belkacem, Sid Ahmed Reffas	Algeria
	Mechanical characteristics of clay composites reinforced with expanded perlite during firing	ID 212	Chaima Kaib, Ibtissem Boumnijel, Daoued Mihoubi	Tunisia
	Thermal performance of structured 3D panel walls containing rubber aggregates: Experimental case study and modeling	ID 24	Ines Zarrad, Mohamed Turki, Chedly Bradai	Tunisia
Room: 3 Friday 16:30-18:45	DM 1: Modeling and Optimization of Manufacturing Systems I		Ana Tejero González / Sami Chatti	Spain - Tunisia
	Worker allocation strategies in the multi-manned assembly line balancing problem: A Review of the most recent literature	ID 62	Zainab Tkitek,Hager Triki,Hela Frikha Moalla	Tunisia
	Box-Behnken optimization on friction stir welding of an aluminum alloy	ID 63	Djamel Saidi, Mohamed Amine Djema,Hakim Siguerjijene,Khaled Hamouda	Algeria
	Effect of manufacturing parameters on the hardness of electron-beam melted maraging steel: An experimental study	ID 72	Ameni Chaabene, Ameni Chaabene, Sami Chatti, Mohamed Khelil Guerich	Tunisia - France
	Controlling displacement in butt fusion welding of HDPE pipes to ameliorate mechanical characteristics	ID 100	Walid Aouadi, Mondher Zidi	Tunisia
	Influence of the number of contours of a specimen manufactured by FFF on the propagation of acoustic waves	ID 34	Makki Ajmi, Simon Bernard, Slim Souissi, Ahmed Elloumi, Pierre Maréchal	Tunisia - France
	Analyzing the bulging factor and stress intensity factor of cracks in pressurized cylindrical panels for aircraft fuselage applications through numerical methods	ID 48	Ahmed Foued Zayati, Mohamed Soula, Tarek Lazghab	Tunisia
Room: 4 Friday 16:30-18:45	DS 1: System's Dynamics and Energy Harvesting I		Daniil Yurchenko / Fehmi Najar	United Kingdom-Saudi Arabia
	Time response and bifurcation diagram of Rott's pendulum with a rotating base for energy harvesting applications	ID 94	Emine Zaouali, Fehmi Najar	Tunisia - Saudi Arabia
	Galloping-based energy harvesting in a 2DOF system under two aerodynamic forces	ID 37	Mustapha Hamdi, Mohamed Belhaq, Mohammed Karama,	Morocco
	Dynamic behaviour of gearbox system in the presence of uncertain parameters	ID 168	Ahmed Ghorbel, Mouna Hadl Kacem, Nabih Feki, Lassaad Walha, Abdelkhalak El Hami, Mohamed Haddar	Tunisia - France
	Overshooting stick-slip waves induced by friction instability	ID 156	Abdelbacet Oueslati	France
	Restitution and viscoelastic collision effects on piezoelectric energy harvesters	ID 59	Khalid Alluhydan, Fehmi Najar, Abdessattar Abdelkefi	Saudi Arabia - United States
	Dissection of the pressure field near the onset of vortex-induced vibrations using the pressure mode decomposition	ID 26	Hamayun Farooq, Imran Akhtar, Muhammad Hajj	Pakistan - United States
Room: 5 Friday 16:30-19:00	MLDL 1: Machine Learning for Mechanical Systems		Wacef Bensalem / Mohamed Ali	Tunisia - United Arab Emirates
	Potential of convolutional neural network for prediction of the ring hoop tensile stress-strain curve for anisotropic tubes	ID 64	Zied Ktari, Ali Khalfallah	Tunisia
	Surface roughness prediction of deformed parts by SPIF based on improved deep belief network	ID 68	Sofien Akrichi, Noureddine Ben Yahia	Tunisia
	Effect of sliding speed and normal load on friction responses of brake lining materials	ID 188	Amira Sellami, Mouna Rekik, Riadh Elleuch	Tunisia
	Design of reinforcement learning agent for adaptive pull production systems	ID 198	Khouloud Elloumi, Achraf Ammar, Mounir Benaissa	Tunisia
	Implementation of digital twin in dimensional part inspection	ID 220	Bacem Zghal	Tunisia
	Neural network model to identify the dynamic characteristics of the human trunk	ID 47	Sadok Mehrez, Fehmi Najar, Ferdaous Moalla	Tunisia - Saudi Arabia
	Fault diagnosis of bearings using deep learning method	ID 169	Ahmed Ghorbel, Sarra Eddai, Bouthayna Limam, Nabih Feki, Mohamed Haddar	Tunisia
Saturday, June 29, 2024				
Saturday 08:15-09:15	Keynote Lecture 2		Chair: Daniil Yurchenko	United Kingdom
	Nonmonotonic nonlinear friction in self-sustained nanotube oscillators	Keynote 2	Stefano Lenci	Italy
Room: 1 Saturday 09:15-10:30	MATE 4: Composite Materials I		Philippe Dony / Nesrine Hentati	France - Tunisia
	Effect of enzyme treatment on the mechanical properties and durability of date palm fibers/PBS composites	ID 89	Rania Chaari, Mouna Werchefani, Mohamed Khlif, Chedly Bradai, Catherine Lacoste, Philippe Dony	Tunisia - France
	Infrared drying kinetics of a Clay-based composite reinforced with expanded Perlite	ID 41	Ibtissem Boumnijel, Chaima Kaiba, Houda Hachem, Daoued Mihoubi	Tunisia
	Flax-glass hybrid fibers thermoplastic composite: hybridization effect on diffusion and tensile mechanical properties	ID 42	Wafa Guesmi, Rodrigue Matadi Boumbimba, Abdelkibir Benelfellah, Mohsen Ejday, Noamen Guermazi	Tunisia - France
	Variation of swelling and shrinkage of concrete in response to sand variations	ID 73	Mohamed Lyes Kamel Khouadja, Sara Bensalem, Oussama Temami	Algeria
Room: 2 Saturday	TSRE 3: Renewable Energies I		Fethi Aloui / Samah Ben Ayed	France - USA

09:15-10:30	3D numerical simulation of a two-bladed Savonius wind turbine	ID 60	Ahmed Ayadi, Nour Rabeh, Zied Driss	Tunisia
	Sensitivity analysis of design parameters on the stability of mid-scale wind turbines	ID 112	Widad Yossri, Samah Ben Ayed, Abdessattar Abdelkefi	United States
	Efficient solar tower modeling : A simplified mathematical approach	ID 192	Haythem Nasraoui, Ahmed Ayadi, Zied Driss	Tunisia
	Integration of dry cell electrolyzers in renewable energy systems: Opportunities and challenges	ID 139	Zakaria Solaani, Ramla Gheith, Fethi Aloui	France - Tunisia
Room: 3 Saturday 09:15-10:30	DM 2: Additive Manufacturing and 3D Printing Technologies I		Imen Kamoun / Anas Boughacha	Tunisia
	Experimental study on the bending behavior of additively manufactured bio-based sandwiches with architectural cores	ID 150	Hanen Mallek, Marwa Allouch, Mondher Wali, Fakhreddine Dammak	Tunisia
	Correlation between microstructure and anisotropic mechanical properties of wire arc additive manufactured 5356 aluminum alloy	ID 219	Fatma Makni, Emna Ben Zina, Riadh Elleuch	Tunisia
	Impact on the mechanical properties of the geometry and 3D printing parameters of PLA tensile specimens	ID 187	Rania Ben Amor, Montassar Zrida, Hervé Laurent, Slim Souissi	France - Tunisia
	Experimental and numerical impact analysis of honeycomb-sandwich structure enabled via fused deposition modeling technique	ID 151	Hana Mellouli, Hanen Mallek, Marwa Allouch, Mondher Wali, Fakhreddine Dammak	Tunisia
	Elastic properties of an additively manufactured anti-trichiral composite structure	ID 134	Anis Hamrouni, Jean-Luc Rebiere, Abderrahim El-Mahi, Moez Beyaoui, Mohamed Haddar	Tunisia - France
Room: 4 Saturday 9:15-10:30	AM 2: Fracture and Damage Mechanics I		Mohamed Amine Ben Souf / Stefano Lenci	Tunisia - Italy
	Prediction of fatigue life cycle of aged SMC composites	ID 21	Abir Abdessalem, Sahbi Tamboura, Joseph Fitoussi, Hachmi Ben Daly, Abbas Tcharkhtchi	Tunisia
	A general approach for crack jump calculation in bonded structures under mode I fracture: Application to adhesive defects	ID 38	Mahfoudh Taleb Ali, Zaineb Jebri, Julien Jumel	France
	Fatigue behavior of 3D printed biocomposites with interleaved layers	ID 148	Firas Meddeb, Hajer Daoud, Abderrahim El Mahi, Jean-Luc Rebiere, Mohamed Amine Ben Souf, Mohammed Haddar	Tunisia - France
	Effect of thermostat faults on diesel engine vehicle vibrations	ID 199	Ali Helali, Ines Belkacem, Achraf Zegnani, Jamila Abdellaoui	Tunisia
Room: 5 Saturday 09:30-10:30	MATE 5: Metals and alloys, Polymers, Ceramics II		Abdelmajid Jemni / Fatma Makni	Tunisia
	Effect of heat treatment on microstructure and mechanical behavior of the dual phase steel	ID 40	Mohsen Ejday, Larbi Jaffel, Pascale Balland, Noamen Guermazi	Tunisia - France
	Improvements of the energy absorption capacity of 304 stainless steel tubular structures under complex conditions buckling	ID 185	Hayet Belguebli, Youcef Khelfaoui, Rachid Baleh, Abdelhakim Benslimane	Algeria - France
	Cyclic softening of anisotropic polyurethane foam	ID 58	Dorra Ben Abdeljelil, Sami Chatti	Tunisia
	Characterization and optimization of dielectric materials for MRI RF coil applications: A Focus on sample preparation and electrical evaluation	ID 35	Zaineb Jebri, Mahfoudh Taleb Ali	Tunisia
	Experimental analysis of quasi-static crack propagation in brittle materials	ID 84	Yosra Kriaa, Yassine Hersi, Fahmi Chaari, Bassem Zouari	Tunisia - France
Saturday 10:30-11:00	Coffee Break			
Room: 1 Saturday 11:00-13:00	AM 3: Fracture and Damage Mechanics II		Bassem Zouari / Radhi Abdelmoula	Tunisia - France
	Stress-strain behaviour of an IN100 cylinder under cyclic loading	ID 137	Meriem Saidane, Sana Koubaa, Zoubeir Bouaziz, Radhi Abdelmoula	Tunisia - France
	Vibration diagnosis of Diesel engines with air flow sensor failure	ID 200	Jamila Abdellaoui, Ines Belkacem, Achraf Zegnani, Ali Helali	Tunisia
	Flat and cylindrical indentation for brittle fracture using phase-field modeling	ID 152	Yosra kriaa, Yassine Hersi, Bassem Zouari	Tunisia
	Numerical simulation of fatigue behaviour of a Hip prosthesis	ID 52	Malak Ben Romdhane, Mounir Frija, Raouf Fathallah	Tunisia
Room: 2 Saturday 11:00-13:00	FLME 2: Computational Fluid Dynamics I		Abdessattar Abdelkefi / Brahim Ben Beya	United States - Tunisia
	Numerical study of natural convection of ferrofluid in an enclosure containing an obstacle in the presence of internal heat generation or absorption	ID 164	Hamdi Ghemougui Dridi, Brahim Ben Beya	Tunisia
	Investigating seasonal variations and their influence on the microclimate of soilless glass greenhouse	ID 121	Hasna Abid, Olfa Zghal, Mariem Lajnef, Ahmed Ketata, Zied Driss	Tunisia
	Analysis of 3D MHD fluid flow over a heated rotating disk with Joule heating	ID 146	Samir Mamache, Fatsah Mendil, Faiçal Nait Bouda	Algeria
	Energy harvesting effectiveness of flag-based systems in the wake of modified cylindrical structures	ID 119	Wajid Khan, Emad Uddin, Abdessattar Abdelkefi	Pakistan - United States
Room: 3 Saturday 11:00-13:00	IATT 1: Industrial Applications and Technologies		Faouzi Masmoudi / Sana Koubaa	Tunisia
	Adsorption of pharmaceutical molecules on activated carbon: Interpretation of the adsorption isotherms via advanced model	ID 28	Lotfi Sellaoui	Tunisia
	Integration of path finding algorithm in CAD environment	ID 69	Ahmed Nhouchi, Salma Ben Said, Mohamed Amine Ben Abdallah, Nizar Aifaoui	Tunisia
	Mechanical properties characterization of laminated composite when varying architectures	ID 123	Manel Haddar, Sana Koubaa	Tunisia
	Theoretical study of stirling engine thermal and mechanical performance with various working fluid	ID 144	Ines Marzougui, Houda hachem, Ramla gheith, Fethi Aloui	Tunisia
	Lean and Industry 4.0: Impacts on performances production systems	ID 178	Tijani Jeridi, Omar Ayadi, Faouzi Masmoudi	Tunisia
Room: 4 Saturday 11:00-13:00	DS 2: System's Dynamics and Damage Identification		Stefano Lenci / Sourour Baroudi	Italy - Tunisia
	Study of the geometric and kinematic similarities between the GBCM and the Standard crankshaft mechanism engines	ID 141	Amir Sakhraoui, Maroua Saggar, Fayza Ayari, Rachid Nasri	Tunisia
	NanocylTwin: Enhancing uncertainty assessment for Nanocyl machines through a digital twin system	ID 51	Rim Bennoune, Mohamed Damak, Nabil Anwer, Lamjed Bouazizi, Hichem Nouira	France - Tunisia
	Surface texture algorithm for complex 2D profiles	ID 50	Ahmed Bachir, Romain Brault, Nabil Anwer, Hichem Nouira	France
	Vibration analysis of a wheelset with coaxiality defect	ID 46	Emna Khechine, Mortadha Graa, Anis Korbi, Farhat Zemzemi	Tunisia

	Analyzing the influence of an innovative stringer grid on bulging factor and stress intensity factor in pressurized aircraft fuselage skin cracks	ID 32	Maher Bouazizi, Mohamed Soula, Tarek Lazgheb	Tunisia
	Numerical simulation of a hybrid sandwich panel subjected to landmines explosion	ID 217	Saoussen Mansouri, Rachid Nasri, Beya Tahenti	Tunisia
Room: 5 Saturday 11:00-13:00	MATE 6: Composite Materials II		Johan Petit / Mohamed Khlif	France - Tunisia
	Investigations on the Influence of the microcrystalline cellulose content on the structure-property relationship of cellulose acetate/polybutylene adipate–co–terephthalate hybrid composites	ID 102	Thomas Sango, Martin Ngueho Yemele, Mohamed Ragoubi, Nathalie Leblanc, Ahmed Koubaa	Canada
	Compressive properties of esparto fibre rein-forced mortar	ID 86	Asma El Oudiani, Yosra Glouia, Aymen Brinsi, Rabi Ben Sghaier	Tunisia
	Improvement of constitutive model for thermomechanical behavior of PC/ABS blend" "Materials	ID 76	Fatma Hentati, Ridha Mnif, Naila Hfaiedh, Johan Petit	Tunisia - France
	Photocatalytic degradation of methylene blue using copper-doped carbon dots prepared from CCA-treated wood	ID 110	Dan Xing, Jingfa Zhang, Sara Magdouli, Yubo Tao, P.eng Li, Hassine Bouafif, Ahmed Koubaa	Canada - China
	Influence of wood fiber fraction on the mechanical behavior of low-density polyethylene matrix composite	ID 184	Moez Frikha, Ismail Hadriche, Mohamed Khlif	Tunisia
Saturday 13:00-14:00	Lunch			
Saturday 14:00-14:30	**Honoring Ceremony**		**Mohamed Regayeg; SOPAL President**	
Room: 1 Saturday 14:30-16:15	AM 4: Computational Methods in Mechanics II		Sana Koubaa / Mohamed Kharrat	Tunisia
	Vibrational study on plate with functional gradient material and various boundary conditions	ID 113	Ahlem Karmi, Aymen Hadrich, Souhir Zghal, Zoubeir Bouaziz	Tunisia
	Time dependent study of corroded underground pipeline X100	ID 83	Mohamed Said Feki, Souhir Zghal, Sana Koubaa	Tunisia
	Applying numerical simulation to vacuum-assisted resin infusion procedures	ID 97	Houssem Cherif, Khawla Essassi, Anas Bouguecha	Tunisia
	Numerical analysis of the dynamic properties of a 3D printed biocomposite sandwich beam with a periodic core	ID 140	Mohamed Amine Ajmi, Hajer Daoud, Zouhaier Jendli, Abderrahim El Mahi, Mohamed Amine Ben Souf, Mohamed Haddar	Tunisia - France
	Assessment of fixation stability in tibial fractures osteosynthesized with plates and screws during the resumption of walking	ID 218	Souha Khmiri, Hajer Ketata, Naila Hfaiedh, Michèle Kanhonou, Mohamed Kharrat, Maher Dammak	Tunisia - France
Room: 2 Saturday 14:30-16:15	TSRE 4: Renewable Energies II		Taher Maatallah/ Abdallah Bouabidi	Saudi Arabia - Tunisia
	Analyzing the unsteady behavior of a 2D Savonius rotor	ID 122	Ahmed Ayadi, Nour Rabeh, Zied Driss	Tunisia
	Effect of the rotating domain diameter on the characteristics of a 2D Savonius rotor	ID 177	Nour Rabeh, Ahmed Ayadi, Zied Driss	Tunisia
	Development of a hybrid Sun/LED lighting system-based multimode fiber optics	ID 173	Taher Maatallah, Ahmed Matar	Saudi Arabia
	Steady state tests of Pelton turbine performance: Mathematical modeling and numerical simulation	ID 167	Ichraf Hammadi, Lazher Ayed, Abdallah Bouabidi	Tunisia
	Experimental investigation of the photovoltaic thermal cells performance using cooling system air jet	ID 106	Sirine Chtourou, Shaeli Mays, Jalil Jalal	Tunisia - Iraq
Room: 3 Saturday 14:30-16:15	FLME 3: Computational Fluid Dynamics II		Abdelhak Ayadi / Nejla Mahjoub Said	Tunisia
	Double-diffusive magnetoconvection of a fluid in a quarter-circle cavity with a baffle	ID 157	Souhed Jallouli, Brahim Ben-Beya	Tunisia
	Analytical solution for leak location of frictionless flow in pipes	ID 166	Wejden Yaakoubi, Lazhar Ayed, Sami Elaoud	Tunisia
	Investigating the overlap distance for helical Savonius wind rotor	ID 126	Mariem Lajnef, Mabrouk Mosbahi, Hasna Abid, Zied Driss, Tullio Tucciarelli	Tunisia - Italy
	Dynamic shear measurements of bitumen using a rotative rheometer between two circular plates without a slip condition	ID 172	Amal Kraiem, Nadia Elkissi, Abdelhak Ayadi	Tunisia - France
Room: 4 Saturday 14:30-16:15	DM 3: Modeling and Optimization of Manufacturing Systems II		Aref Maalej / Charfeddine Mrad	Tunisia
	Robotic grippers design optimization	ID 127	Bilel Najlaoui, Zouhaier Affi, Lotfi Romdhane	Tunisia - United Arab Emirates
	Manufacturing process challenges of an aircraft landing gear component	ID 45	Walid Jomaa, Kadiata Ba, Julie Lévesque, Augustin Gakwaya	Canada
	Towards green manufacturing: Advanced thermal spray processes for engineering coatings	ID 174	Basma Ben Difallah, Mohamed Kharrat, Yamina Mebdoua	Tunisia - Algeria
	Effects of mechanical loading type on the relaxation of residual stresses induced by shot peening	ID 23	Sondes Manchoul, Raoudha Seddik	Tunisia
	Experimental and numerical investigation on crack growth failure in aluminium extrusion die	ID 88	Mohamed Chadi Yakoubi, Mariem Ben Hassen, Mohamed Abdelaziz, Slim Ben Elechi , Hatem Mrad	Canada - Egypt - Tunisia
Room: 5 Saturday 14:30-16:15	MATE 7: Biomaterials		Ahmed Koubaa / Lamine Dieng	Canada - France
	Mechanical performance of hybrid antibacterial dental composite with micro-particles of S. persica and Hydroxyapatite as fillers	ID 65	Rihem Chaaben, Aymen Ayedi, Khaled Elleuch	Tunisia
	The impact of pistachio shell powder on the thermal and mechanical properties of a bio composite	ID 158	Yosr Chelbi, Fatma Kallel, Nader Haddar	Tunisia
	Optimizing extraction methods for enhanced mechanical and chemical properties of date palm fibers	ID 181	Ismaim Dhaou, Ridha Mnif, Saousen Zannen, Ali Gargouri	Tunisia
	Mechanical properties of short alfa fibre reinforced polypropylene biocomposites using Taguchi method: Anhydride Maleic effect	ID 155	Iskander Jellid, Rawdha Kessentini, Olga Klinkova, Anas Bouguecha, Imad Tawfiq, Mohamed Haddar	Tunisia - France
	Optimizing mechanical properties: Experimental study of fired kaolin/eggshell powder bio-ceramic materials	ID 149	Yossra Hfaiedh, Houda Hachem, Daoued Mihoubi	Tunisia
	Rheological properties of cellulose biocomposites	ID193	Asma Khouaja, Ahmed Koubaa, Hachmi Ben Daly	Tunisia - Canada

	Characterization of mechanical strength of clay/seashell powder bio-composite material during drying and firing processes	ID95	Houda Hachem, Fadwa Slouli, Ibtissem Boumnijel, Daoued Mihoubi	Tunisia
Saturday 16:15-17:00	Break and ESP Poster Session			
Saturday 17:00-19:00	Social Program			
Sunday, June 30, 2024				
Sunday 08:15-09:00	Keynote Lecture 3		Chair: Ahmed Koubaa	Canada
		Keynote 3	Lamine Dieng	France
Room: 1 Sunday 9:00-10:30	MATE 8: Composite Materials III		Joseph Fitoussi / Nesrine Hentati	France - Tunisia
	Anisotropic thermal conductivity of FRP composites: Experimental investigation and insights	ID 183	Wiem Nasri, Sondes Ifa, Sobhi Frikha, Paulo Reis, Abderazak Bezazi, Zied Driss	Tunisia - Portugal
	The examination of hydrothermal effect on aged smc composite	ID 211	Abir Abdessalem, Sahbi Tamboura, Hachmi Ben Daly, Joseph Fitoussi	Tunisia - France
	Destructive and non-destructive testing for concrete, and their effectiveness for fiber concrete	ID 74	Oussama Temami, Cherif Belebchouch, Mohamed lyes kamel Khouadjia	Algeria
Room: 2 Sunday 09:00-10:30	TSRE 5: Renewable Energies III		Oussama Amaieur/ Maher Chaabene	Algeria - Tunisia
	A dynamic blade angular offset based on coaxial modified shape gear system of Savonius turbines for an optimal renewable energy harnessing	ID 124	Ahmed Ketata, Lina Chelbi, Hasna Abid, Zied Driss	Tunisia
	Experimental investigation of thermal energy storage on the performance of Solar Air Heater	ID 128	Yassmin Touhami, Ridha Boudhiaf, Noureddine Latrache, Mohammed El Hadi Attia, Abederrahmane Aissa, Zied Driss	France - Tunisia
	MPPT control strategy for wind energy conversion system allows for field-oriented control (FOC) of permanent magnet synchronous generator (PMSG).	ID 143	Abdallah Belabbes, Amina Yachir, Oussama Amaieur	Algeria
	Hybrid piezoelectric and triboelectric energy harvesting using the same source of vibration	ID 31	Amine Ben Alaya, Charfeddine Mrad, Ferid Kourda	Tunisia
Room: 3 Sunday 9:00-10:30	AM 5: Processes in Materials and Structure		Mohamed Soula / Luís Correia	Tunisia - Portugal
	The magnetisation effects on the production of astrophysical cold jets	ID 96	Hamed Marzougui	Tunisia
	Effect of pressure on elastic properties of gallium nitride via characterization non-destructive	ID 107	Fatiha Hadjoub, Abderaouf Meriki, Abdelaziz Doghmane	Algeria
	Performance optimization of sub-stiffened composite panels under uniaxial compression loading	ID 129	Hamda Chagraoui, Mohamed Soula	Tunisia
	Assessing fatigue strength in material with hole defect based on affected depth approach	ID 70	Marwa Youssef, Anouar Nasr	Tunisia
	Hygrothermal effects on adhesively bonded CFRP-to-concrete systems	ID 176	Zahir Namourah, Ahmed Koubaa, José Sena-Cruz, Luís Correia	Canada - Portugal
Room: 4 Sunday 09:00-10:30	DM 4: Additive Manufacturing and 3D Printing Technologies II		Massimiliano Barletta / Tarek Bouraoui	Italy - Tunisia
	Analytical comparison between RBDO's methods for finding lifetime of a composite cantilever beam under fatigue stress	ID 130	Riyadh mutar, Ali Akrout, Qusay Salih, Mohamed Haddar	Tunisia - Iraq
	Optimization parameter effects on the Thermal conductivity of 3D-printing process using Taguchi method	ID 191	Maroua Jabeur, Rania Ben Amor, Ons Hamdaoui, Slim Souissi, Ahmed Elloumi	Tunisia - France
	Sensitivity of Rotary Bending Fatigue Behavior of Additive-Manufactured PLA Polymers to 3D Printing Orientation	ID 186	Slah Mzali, Fatma Elwasli, Ezzeddine Ftoutou, Salah Mezlini	Tunisia
	3D-printing continuous natural fiber/polylactic acid composites: effects of fiber types and content on mechanical, rheology and thermal properties	ID 99	Dan Xing, Haigang Wang, Yubo Tao, Jingfa Zhang, Peng Li, Ahmed Koubaa	Canada - China
	Effect of weld bead shape on temperature profile in wire-arc additive manufacturing simulation	ID 67	Kamar Bouzgarrou, Foued Mzali	Tunisia
Room: 5 Sunday 9:00-10:30	MATE 9: Fatigue and Damage		Lamine Dieng / Fatma Makni	France - Tunisia
	Tensile properties and fracture toughness evaluation of cold rolled AA1050 aluminium alloy	ID 132	Wafa Taktak, Riadh Elleuch	Tunisia
	Fatigue behavior investigations of 3D-printed specimens under rotary bending through analysis of variance and fractography inspections	ID 153	Lamis Allegue, Ezzeddine Ftoutou, Haykel Marouani	Tunisia
	Fatigue estimation of notched A357-T6 cast aluminium under tension loading based on affected depth	ID 214	Nesrine Majed, Anouar Nasr	Tunisia
	Fatigue crack propagation in crankshaft steel: comparative analysis in air and oil environments	ID 81	Fatma Hentati, Lotfi Chalbi	Tunisia
Sunday 10:30-11:00	Coffee Break			
Room: 1 Sunday 11:00-12:45	MATE 10: Metals and alloys, Polymers, Ceramics III		Abdelhak Ayadi / Yves- Marie Corre	Tunisia - France
	Mechanical behavior of Ti-6Al-4V alloy with equiaxed microstructure under cyclic loading	ID 71	Mohamed Abdelbasset Ghazel, Naila Hfaiedh, Johann Petit, Amna Znaidi	Tunisia - France
	Effect of compression process parameters on the flexural behavior of recycled PA6 derived from fishing nets	ID 66	Nahed Hermassi, Yves Grohens, Yves- Marie Corre, Noamen Guermazi	Tunisia - France
	Effect of the dimension of the imposed radial flow on the PDMS behavior	ID 55	Manel Ketata, Abdelhak Ayadi, Mohamed Khlif	Tunisia
Room: 2 Sunday 11:00-12:45	FLME 4: Experimental and Fluid Rheology		Zied Driss / Taher Khir	Tunisia
	Optimizing greenhouse design for better plant growth in arid zone: Investigating the impact of roof height	ID 133	Hamza Chiboub, Hasna Abid, Ahmed Ketata, Mariem Lajnef, Zied Driss	Tunisia
	MHD hybrid nanofluid natural convection in a square enclosure with a hot circular fin: analysis of heat transfer and entropy generation	ID 163	Oussema Barkouti, Brahim Ben-Beya	Tunisia
	Numerical investigation of fluid-structure interaction in flexible rotor systems: Insights into performance and design optimization	ID 182	Marwa Fakhfekh, Wael Ben Amira, Malek Abid, Aref Maalej	Tunisia
	Natural convection towards rotation	ID 160	Hamza Gabsi, Brahim Ben Beya	Tunisia

Room: 3 Sunday 11:00-12:45	DM 5: Modeling and Optimization of Manufacturing Systems III		Perre Marechal / Hanen Jrad	France - Tunisia
	Assessment of disassembly sequences for end-of-life and recycling of mechatronic products for green design	ID 170	Imen Belhadj, Mohamed Amine Ben Abdallah, Mehdi Tlija, Nizar Aifaou	Tunisia - United Kingdom - Saudi Arabia
	Methodology enhancement of resonant ultrasound spectroscopy (RUS) to identify effective elastic properties of an aluminum sample	ID 190	Mayssa Bouzid, Simon Bernard, Slim Souissi, Pierre Marechal	Tunisia - France
	Evaluation of dielectric and mechanical properties of 3D printed polylactic acid / cellulose acetate blends for electrical insulation application	ID 225	Morgan Lecoublet, Mohamed Ragoubi, Nathalie Leblanc, Ahmed Koubaa	Canada - France
	Leveraging data analytics and machine learning for enhanced gear transmission efficiency	ID 213	Naser Sanoussi, Maroua Hammami, Mohamed Slim Abbes	Libya - Tunisia
	An experimental work of punch-die clearance effect on punching force in the event of punching S500 MC sheet metal	ID 145	Abdelwaheb Zeidi, Fatma Ben Saada, Khaled Elleuch, Hakan Atapek	Tunisia - Turkey
Room: 4 Sunday 11:00-12:45	DS 3: System's Dynamics and Energy Harvesting II		Fehmi Najar / Mustapha Hamdi	Saudi Arabia - Morocco
	Electromechanical modeling and performance analysis of L-shaped-based piezoelectric energy harvesting system	ID 125	Amel Meghdich, Sourour Baroudi, Fehmi Najar, Abdessattar Abdelkefi	Tunisia - Saudi Arabia - United States
	Energy harvesting in a 2DOF galloping and vortex-induced vibrations-based system	ID 39	Mustapha Hamdi, Youssef El Moussati, Mohamed Belhaq,	Morocco
	Optimizing piezoelectric patch placement for vibration control in Jeffcott rotor system	ID 215	Maryam Brahem, Mnaouar Chouchane	Tunisia
	Discrete element model to simulate a cylindrical roller bearing NJ 328 ECNML	ID 226	Jihen Jabeur, Wissal Yangui, Mohammed Guessasma, Khaled Elleuch	Tunisia
	VINES dynamics and energy transfer characteristics	ID 77	Rahul Kumar, Rachel Kuske, Daniil Yurchenko,	United States - United Kingdom
Room: 5 Sunday 11:00-12:45	AM 6: Computational Methods in Mechanics III		Ahmed Elloumi / Youcef Khelfaoui	Tunisia - Algeria
	Numerical homogenization of the effective mechanical properties of coir fiber reinforced high-density polyethylene	ID 131	Hadjila Balit, Mohamed Said Boutaani, Youcef Khelfaoui	Algeria
	New approximation formula for the deflection of inflated circular thin plate using Galerkin's method	ID 138	Fateh Mammari, Kamel Yaya	Algeria
	Wind turbine aerodynamic enhancement with vortex generators integration on blade leading edge	ID 201	Mohamed Montassar Doggui, Faten Attig-Bahar, Anis Hafoudhi, Moez Chafra, Mondher Yahiaoui	Tunisia
	Fatigue strength of AlSi10Mg alloy made by laser fusion of powder bed	ID 91	Ibrahim Kalil Cisse, Nasr Anouar	Tunisia
Sunday 12:45-13:00	Closing			
Sunday 13:00-14:30	Lunch			