



Detailed Scientific Program of RSEGP-2025

Saturday, December 20, 2025

Afternoon

14:00-15:00	Participants Registration at TMK L'Atrium Yasmine Hotel
15:00-15:15	Welcome Speeches and Opening Ceremony <i>Ceremony Chair: Prof. Sami Guiza</i>
15:15-16:00	Plenary Session 1: Prof. Hanene AKROUT <i>Hybrid treatment based on advanced electrochemistry offering a sustainable approach to water reuse and pollution prevention</i> <i>Chair: Prof Monia Guiza</i>
16:00-16:30	Coffee break
16:30-17:15	Plenary Session 2: Prof. Salah ZIDI <i>AI for energy efficiency and flexibility</i> <i>Chair: Prof Assem Thabet</i>
18:00-20:00	Diner



Sunday, December 20, 2025
Morning

8:30-9:15	Plenary Session 3: Prof. Silvia ROMÁN SUERO <i>Hydrothermal carbonization challenges and opportunities</i> <i>Chair: Prof. Ahmed Hannachi</i>		
9:15-10:30	Room A: Green Processes Session <i>Chairman: Prof. Mounira Mkaddem</i>	Room B: Green Synthesis of Materials Session <i>Chairman: Prof. Amna Znaidi</i>	Room C: Energy Session <i>Chairman: Prof. Abdallah Bouabidi</i>
9:15-9:30	(Id 004): Takwa Abdallah , Circular Economy in Practice: A Case Study of the Tunisian Tire Recycling Company's Operational Challenges	(Id 014): Khaoula Amara , Enhancing Thermal Performance Using TPMS-Based Advanced Materials	(Id 005): Achref Saadouni , CFD Study of Thermal Performance in the Regenerator of a Free-Piston Beta Stirling Engine
9:30-9:45	(Id 029): Marwa Ben Saad , Eco-sustainable removal of humic acids from wastewater using probiotic and fungal strains	(Id 016): Afef Attia , Eco-Friendly Membranes from Zeolite-Smectite for Treating Textile and Pulp Wastewater	(Id 008): Nour Rabeh , CFD analysis of the unsteady aerodynamic behavior of a hybrid Savonius–Darrieus rotor
9:45-10:00	(Id 035): Sihem Dadi , Statistical Approach Using Box-Behnken Design to Enhance Energy Conversion of Spent Coffee Grounds by Hydrothermal Carbonization	(Id 026): Marwa Ammar , An Innovative Pyramid Transparent Insulation Material Cover for High Efficiency Solar Air Collectors	(Id 009): Zaineب Touati , Enhancement of Torque and Efficiency in Crossflow Turbines via Adjoint Optimization
10:00-10:15	(Id 037): Sarra Ounis Dekhil , Photocatalytic degradation of Diclofenac sodium using olive stones activated carbon	(Id 031): Mohamed Sellami , Layout Optimization of Truss Structures Using a Multi-Stage Descent Algorithm	(Id 019): Elkafi Hassini , Optimizing Hydrogen Fueling Infrastructure for Freight Trucking Along Canada's 401 Corridor
10:15-10:30	(id 085): Ahlem Zrig , Improving phytochemical and antimicrobial potential of Rubia tinctorum through treated wastewater irrigation: A sustainable strategy for medicinal and industrial biomass valorization	(Id 032): Baha Chamam , Functionalized Ag- and Pb-Doped ZnO-PVDF Membranes for Advanced Textile Wastewater Treatment	(Id 022): Anissa Ghomrassi , Effect of new Helical Inserts on the Thermal and Hydraulic Performance of a Parabolic Trough Collector
10:30-11:00	Coffee break		



11:00-12:30	Room A: Green Processes Session <i>Chairman: Prof. Souad Najjar</i>	Room B: Green Synthesis of Materials Session <i>Chairman: Prof. Jamel Mars</i>	Room C: Energy Session <i>Chairman: Prof. Elkafi Hassini</i>
11:00-11:15	(Id 056): Ines HAMIDI , Plant-Based Coagulants for Fresh Goat Cheese: A Process Optimization Study	(Id 036): Oumayma Baccouch , Effect of Graphitization Temperature on the Sustainable Synthesis of Graphite from Tunisian Biomass	(Id 034): Meriam Belgaroui , A Machine Learning Approach for the Assessment and Prediction of Environmental Efficiency in Tunisian Thermal Power Plants
11:15-11:30	(Id 062): Ghada Ouni , Bioethanol production from date palm waste	(Id 059): Achraf Amir Assadi , Light Down-Conversion through Ce^{3+}/Yb^{3+} Quantum Cutting: A Path to More Efficient Solar Cells	(Id 038): Mohamed Salah Idrissi , Thermal Performance Optimization of a PCM Heat Exchanger: Influence of Fin Shapes
11:30-11:45	(Id 064): Naima Jery , Peroxydisulfate -assisted photocatalytic degradation of a pharmaceutical contaminant under simulated solar irradiation Hydrothermal Carbonization	(Id 102): Amna ZNAIDI , The luffa fiber inclusion in cementitious composites: mechanical, ballistic and blast resistance testing	(Id 133): Ayman Alarqan , Numerical Investigation of Thermal Performance Enhancement in RT27-Based PCM Walls Using Al_2O_3 Nanoparticles
11:45-12:00	(Id 130): Rihab Miladi , Comprehensive energy economic and environmental evaluation of a solar still HDH unit	(Id 068): Belgacem Chandoul , Modeling the drying of an unsaturated, deformable porous medium: application to kraft packaging paper	(Id013): Hiba Chmengui , Performance Enhancement of a Double-Pass Solar Air Heater Using Fins and Desert Sand as Sensible Heat Storage
12:00-12:15	(Id 072): Assala Guedri , Adsorption of phenoxyacetic Acid herbicides onto Pomegranate Peels Activated Carbon	(Id 071): Mahmoud Ben Amara , Experimental analysis of the influence of colored glazing on the spectral mis-match factor of monocrystalline PV cells for BIPV applications	(Id 050): Nabiha Mekki , Energy, Exergy, Environmental, and Economic Analysis of a Solar Still with Different Numbers of Fins
12:15-12:30	(Id 073): Aziza Hadj Ltaief , Heterogeneous Electro-Fenton degradation of Reactive Orange 16 with natural Chalcopryrite by synergistic $\bullet OH$ and $SO_4\bullet-$ oxidation produced in situ: performance, evaluation, and RSM-BBD optimization	(Id 083): Moufida Bouzidi , Parameters to optimize the residual stresses on the surface of the deposited layer UNDER BEAM	(Id 052): Mouna Belhadj Ltaief , Effect of V-Shaped Obstacles on Heat Flux Distribution and Drying Performance in Solar Dryers
12:30-14:00	Lunch		



Sunday, December 21, 2025
Afternoon

14:00-15:00	Poster Session
Poster1	(Id 001): Zidane Djelloul , Multilayer Biomimetic Water Filter Inspired by the Digestive System: Ecological and Economic Purification Process Configuration
Poster2	(Id 002): Jalila Chékir , Rock natural phosphate for degradation of toluidine blue via Advanced Oxidation Process (AOP): Modeling and Optimization via Box-Behnken Design
Poster3	(Id 003): Souad Tayari , RSM optimization of the effect of an obstacle placed in front of a Savonius wind turbine
Poster4	(Id 006): Walid Mabrouk , Dual-Functionalized SPESOD Membranes for PEM Fuel Cells: A Fluorine-Free Platform Surpassing Nafion® under Low-Humidity Operation
Poster5	(Id 007): Assem Thabet , Energy Performance Assessment in Radial Power Distribution Networks
Poster6	(Id 011): Salah Eddine Laouini , Ag/AgCl Nanoparticles: Photocatalytic Degradation of Bentazon and Adsorption of Chromium Oxide for Sustainable Water Treatment under Optimal pH Conditions
Poster7	(Id 012): Louay Zâatra , Removal of ciprofloxacin and levofloxacin from aqueous solution using zinc oxide aerogel
Poster8	(Id 017): Lotfi Baameur , Study of a practical approach based on the use of metal complexes derived from tetradentate Schiff bases for the depollution of drainage water.
Poster9	(Id 018): Abdelhakim Benarima , Experimental preparation and statistical optimization of date-pit-based adsorbents for phenol removal using RSM
Poster10	(Id 020): Mohamed Lamine Sekirifa , Bio-Based Activated Carbon (Date pits)–Alginate Membrane for Methylene Blue Removal Optimization and Process Configuration
Poster11	(Id 021): Mourad Chaouki , Évaluation de la qualité des eaux souterraines et leur vulnérabilité à la pollution minérale dans le bassin aride de Ouargla : implications pour une utilisation durable de l'eau Box-Behnken Design
Poster12	(Id 025): Nahed Soussi , Effect of Equilibrium Pressure Expression on LaNi ₅ Hydrogen Absorption Modeling
Poster13	(Id 028): Asma Ahmed , Comparative study of diclofenac and naproxen adsorption on HDTMA-modified clay: thermodynamic modeling
Poster14	(Id 030): Hanen Nouri , Optimization of droplets-based microfluidic process for calcium phosphate microparticles production
Poster15	(id 041): Dorsaf Othmani , Valorization of Tunisian Date Palm Waste into Magnetic Biochar for Efficient Heavy metal Removal from Water
Poster16	(Id 042): Asma Abdedayem , Synthesis and Application of Iron-Functionalized Biochar for Enhanced Persulfate-Mediated Dye Degradation: Optimization and Process Configuration
Poster17	(Id 043): Soumaya Ibrahimi , Modeling Soluble Microbial Product Formation in a Membrane Bioreactor Using an Advanced Hybrid Approach via Box-Behnken Design



Poster18	(Id 045): Safia Islam Abdelli , Evaluation of Landfill Methane Emissions and their Energy Recovery Potential in Three Major Algerian Cities
Poster19	(Id 046): Amira Hrichi , Novel Catalyst a composite Manganese Cobalt Oxide Natural Clay for Peroxymonosulfate Activation to Ciprofloxacin Oxidation
Poster20	(Id 049): Jamel Mars , Numerical study of the low-velocity impact behavior of Diss fiber reinforced epoxy composites
Poster21	(Id 051): Sirine Dhaoui , Experimental Performance Analysis of a Sinusoidal Absorber Solar Still
Poster22	(Id 054): Walid Zaafouri , Investigation of the Thermal Behavior of a Closed-Loop Solar Water Heater Operating under Variable Weather Conditions
Poster23	(Id 057): Ichraf Hammadi , Effect of the Buckets Number on Pelton Turbine Performance
Poster24	(Id 060): Wael Aboussaoud , Coupling adsorption and photocatalytic degradation for removal of pesticides from water
Poster25	(Id 061): Tourkia Guerzou , Étude de l'Influence de Traitement Thermique des Granulats Recyclés sur leurs Caractéristiques et les Propriétés du Béton Ordinaire
Poster26	(Id 066): Sihem Ben Ali , Circular Valorization and Biochar Based Treatment of Agro-Industrial Effluents: Insights from the VALCARB Project
Poster27	(Id 067): Ferdaous Guasmi , VALCARB: Sustainable Valorization of Plant Wastes: Production of Carbon-Based Materials for the Treatment and Agricultural Reuse of Industrial Effluents Hydrothermal Carbonization
Poster28	(Id 070): Azza Masmoudi , Comparative study on drying characteristics of sewage sludge using different solar drying methods
Poster29	(Id 074): Noureddine Rhayma , Energy consumption and CO ₂ emissions assessment of a higher-education building using a BIM-based thermal simulation
Poster30	(Id 076): Mohamed Lokmane Bendaas , Analysis and Control of an 800 kW Grid-Connected Photovoltaic Power Plant
Poster31	(Id 077): Amina Bedoui , Potential of easily available low cost pomegranate peels for Methylene Blue removal in aqueous solution
Poster32	(Id 078): Wafa Saadi , Experimental Investigation of the Drying Characteristics of Tunisian Pome-grenate Peels and Seeds
Poster33	(Id 079): Fayrouz Bechikh , Effect of Biochar and Iron Nanoparticles on H ₂ S Reduction during Anaerobic Digestion of Waste solar irradiation Hydrothermal Carbonization
Poster34	(Id 080): Safa Gharghar , Optimization and Performance Evaluation of the Biogas Purification Process
Poster35	(Id 086): Manel Wakkel , Encapsulation of essential oil by high energy method: Preliminary study and Process Configuration
Poster36	(Id 095): Hamma Tissaoui , Study of cobalt nucleation onto freshly polished and cycled cobalt electrode from aqueous chloride solutions
Poster37	(Id 098): Lyamine Briki , Petroleum cement industry using local materials and residual waste
Poster38	(Id 103): Imen Dhifallah , Kinetic modeling of organic pollutants adsorption onto activated carbon in fixed-bed column
Poster39	(Id 104): Nour Rabeh , Performance comparison of Darrieus and Hybrid Savonius-Darrieus rotors
Poster40	(Id 105): Amel Asselah , Valorization of Marine Green Algae waste Towards the Production of High-Value Product, a Biosorbent, and Application in Cadmium Adsorptive Removal from Aqueous Solution
Poster41	(Id 106): Jihen Marzougui , Transient performance of Savonius vertical-axis wind turbines: A CFD study
Poster42	(Id 107): Mariem Ellouze , Valorization of lignocellulosic wastes for energy production
Poster43	(Id 108): Jihen Mahdhi , Optimization of sinusoidal absorbers for solar Parabolic Trough Collectors
Poster44	(Id 110): Fatma Ezzahra Lakhal , Hydrogen-Fired Crucible Furnace for Aluminum Recycling: Design, Sizing, and CFD simulation
Poster45	(Id 111): Warda Ben Atia , Investigating the Role of Heating Height in Gas Stove Burner Performance
Poster46	(Id 116): Badra El Abed , Biosorption of textile dyes on raw and modified aloe vera biomaterial: experimental and modeling study



Poster47	(Id 119): Amina Bedoui , Potential of easily available low-cost pomegranate peels for Methylene Blue removal from polluted water
Poster48	(Id 121): Marwa Othmen , Comparative study of static and dynamic PCM-integrated solar collectors for enhanced thermal energy storage
Poster49	(Id 125): Zouhour Alaya , CO ₂ capture: cyclic adsorption-desorption on activated carbons derived from bio-materials
Poster50	(Id 126): Oumyima Toumi , Experimental investigation of the influence of pitch angle on the performance of a Darrieus vertical-axis wind turbine
Poster51	(Id 127): Fakher Hamdi , Experimental Thermal characterization and stability analysis of aqueous ZnO-based nanofluids: An alternative solution for heat transfer fluids
Poster52	(Id 128): Ilham Yahya , Performance and Emission Analysis of Hydrogen-Enriched Palm Biodiesel Blends in a Diesel Generator
Poster53	(Id 131): Rihab Miladi , Effect of renewable energy integration on the environmental footprint of a thermal desalination process
Poster54	(Id 134): Sonia Ben Yahia , CO ₂ capture on green activated carbon: Gravimetric and volumetric measurements
Poster55	(Id 135): Thenia Ahmed , Cr effect on structural and magnetic properties in hexagonal GdNi ₅ as compounds storage hydrogen
Poster56	(Id 136): Najoua Mekaddem , Valorization of Spent RO Membranes into Nano/Micro Filtration Media: In-sights for Environmental Sustainability and Circular Economy
Poster57	(Id 138): Marzougui Salem , Circular Reuse of End-of-Life RO Membranes: Performance Assessment of the Diclofenac Pre-Filtration - Case Study
16:00 -18:00	Free activity
18:00-20:00	Dinner



Monday, December 22, 2025 Morning

Plenary Session 4: Prof. Elkafi HASSINI

Bridging Engineering and Operations: Smart Supply Chains for a Low-Carbon Future

Chair: Prof. Ridha Ennetta

8:30-9:15			
9:15-10:30	Room A: Green Processes Session <i>Chairman: Prof. Sonia Ben Yahya</i>	Room B: Green Synthesis of Materials Session <i>Chairman: Prof. Nouredine Hamdi</i>	Room C: Energy Session <i>Chairman: Prof. Ahmed Ayadi</i>
9:15-9:30	(Id 065): Mouzaina Bouteieb , Hydrothermal Carbonization Conditions Parameters Optimization Using RSM–CCD for preparation of biofertilizer materials from olive solid wastes.	(Id 093): Ibtissem Ounifi , Advanced Antifouling piperazine/polyethyleneimine loose nanofiltration membranes: A New Approach for enhanced Dye Recovery and Antifouling performance	(Id 058): Mariem Elakrout , A 3D numerical study of flow characteristics and performance of a helical Savonius hydrokinetic turbine with deflector
9:30-9:45	(Id 089): Khaled Bouzenad , Multi-mode Process Monitoring in wastewater treatment plants using Advanced Auto-associative Neural Network and GMM	(Id 096): Meriem Abdelkader , Photocatalytic removal of mixture organic compounds by titanium supported catalyst: Effect of water Matrix	(Id 063): Guy Trudon Muya , Thermo-economic Analysis and Optimization of a Geothermal Cogeneration System for Green Hydrogen and Electricity Production
9:45-10:00	(Id 097): Houda Chaabene , Sustainable Optimization of Controlled-Release Fertilizers through Agricultural Waste Valorization and AI-Based Dissolution Modeling	(Id101): Tarek Sekrafi , Cu-Doped ZnO Nanoparticles for gas sensors obtained by green method	(Id 069): Lazhar Ayad , Direct transient analysis as a tool of hydraulic system fault detection
10:00-10:15	(Id 100): Sonia Ben Mahmoud , Experimental Study of Methylene Blue Adsorption on bitter orange and Comparison with Tri-titanate nanoplates (TiNP)	(Id 090): Mohsen Dardouri , Numerical Study of the Nonlinear Viscoelastic Creep Behavior of a Mirror Epoxy Resin	(Id 075): Hamdia Ben Hsine , Entropy production in a driven cavity subjected to variable boundary conditions in space
10:15-10:30	(Id 109): Mounira Mkaddem , Valorisation of Tunisian Essential Oils of Medicinal and aromatic Wild Plants: Chemical Diversity, Biological Activities, and Pharmaceutical Potential	(Id 114): Mohamed Aissaoui , Theoretical Reactivity Study of 1,3-Dipolar Cycloaddition Between 2-(2-Oxoindoline-3-ylidene) acetates and Nitrones	(Id 081): Zahia Saghrouni , Thermal modeling of New Bio based Fiber Insulating Material
10:30-11:00	Coffee break		
11:00-12:00	Room C: Green Processes Session <i>Chairman: Prof. Aicha Gasmri</i>	Room B: Green Synthesis of Materials Session <i>Chairman: Prof. Mahmoud Ben Amara</i>	Room C: Energy Session <i>Chairman: Prof. Lazhar Ayad</i>
11:00-11:15	(Id 112): Issaad Ibrahim , Study of the adsorption of chemical compounds in olive oil mill effluents using statistical physics	(Id 115): Ferdous Moalla , Extended Validation Study of Human Trunk Model Including Inter-Individual Variability	(Id 055): Ahmed Ayadi , Impact of rotor geometry on the performance of vertical-axis turbines
11:15-11:30	(Id 117): Imen Boubaker , Statistical Physics-Based Modeling and Interpretation of BSA Adsorption on Col –BC Surfaces	(Id122): Askri Maher , Water Adsorption on silica gel and zeolites for Desalination Applications: Statistical physics treatment	(Id 091): Wejden Yaakoubi , Transient-Based Characterization of Pipe Deterioration in a Single Pipeline System



11:30-11:45	(Id 118): Amna Chahbani , Ultrafiltration Process (UFP): Impact on the physicochemical characteristics of goat skimmed milk and cheese	(Id 124): Noureddine Hamdi , Elaboration of Clay-based ceramic membranes multilayer for industrial wastewater treatment	(Id 099) : Brahim Zitani , Analyse du potentiel thermique annuel d'un capteur solaire plan selon son orientation et sa position géographique
11:45-12:00	(Id 137): Yassine Yacoub , Valorization of End-of-Life RO Membranes for Pharmaceutical Effluent Pre-Treatment: Performance Enhancement and Environmental Benefits	(Id 132): Safa Hajjej , Enhanced toluene detection through the optimized co-doping of aluminum and titanium in ZnO nanostructures.	(Id 129): Fatma Kriâ , Improving the performance of photovoltaic panels: a numerical study of an innovative cooling structure
11:45-12:15	Closing Ceremony <i>Ceremony Chair: Prof. Ridha Ennetta & Prof. Monia Guiza</i>		
12:30-14:00	Lunch		