جامعة محمد بوضياف - المسيلة
Université Mohamed Boudiaf - M'sila

NC-REAEE'25

# CERTIFICATE of PARTICIPATION

This Certificate is Awarded to:

*Tiouiri hadda*

for presenting a paper entitled: **Calculations of the Structural, Electronic, Optical, and of CdSiX2 (X 1/4 P, As) Compounds Based on First-Principles Theory**

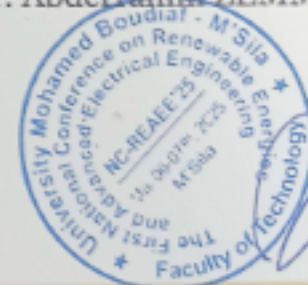Authors: *Tiouiri hadda, Bechane leila, Baaziz hakim*

at the First National Conference on Renewable Energies and Advanced Electrical Engineering (NC-REAEE'25), held at M'Sila University- Algeria, on May 6–7th 2025.

**Conference Chair**

Dr. Abderrahim ZEMMIT

Paper ID: **211**

LGE
laboratoire de génie électrique

## The First National Conference on Renewable Energies and Advanced Electrical Engineering (NC REAEE'25)

### *May 06-07th, 2025*

University of M'Sila

Faculty of Technology

Electrical Engineering Laboratory (LGE)

# Conference Program

## Tuesday, May 6th 2025

🔎 **IBN AL-HAYTHAM Lecture Hall :** **https://maps.app.goo.gl/EDNkftHauFxdEvfK8**

| | |
|---|---|
| **[08:00] - [08:30]** | **Welcome & Registration** |
| **[08:30] - [09:00]** | **Opening Ceremony**<br><br>***Dr. Abderrahim ZEMMIT***, *General Chair.*<br><br>***Dr. Abdelkader DJERAD***, *Dean of the Faculty of Technology, University of M'Sila.*<br><br>***Pr. BOUDELAA Amar***, *Rector of the University of M'Sila.* |
| **Plenary Session 1, Chairs:** Pr. MESSALTI. S, Pr. HARRAG. A, Pr. HADJ ARAB. A , Pr. CHOUDER.A |
| **[09:00] - [09:30]** | **Plenary Talk 1: Demand side management effects on PV systems sizing**<br><br>Pr. Smail SEMAOUI (CDER- Algiers, Algeria) |
| **[09:30] - [10:00]** | **Plenary Talk 2: Toward the application of advanced control and Embedded artificial intelligence to industrial systems: real cases studies**<br><br>Pr. Bilal SARI (University of Setif1) |
| **[10:00] - [10:15]** | **Plenary Talk 3: The Past, the Present and the Future Vision of IEEE Algeria Section**<br><br>Pr. Bilal ATTALLAH (Vice President of IEEE Algerian section) |
| **[10:30] - [11:00]** | **Coffee Break** |
| **[11:00] - [12:30]** | **Oral Session 1 (ROOM 01, 02, 03)** / *Faculty of Technology* |
| | **Poster Session 1** / *Faculty of Technology* |
| **[12:30] - [14:00]** | **Lunch** |
| **[14:00] - [15:30]** | **Oral Session 2 (ROOM 01, 02, 03)** |
| | **Poster Session 2** |
| **[16:00] - [18:00]** | **Online Session 1** |
| **[18:00] - [20:00]** | **Online Session 2** |

**The First National Conference on Renewable Energies and Advanced Electrical Engineering (NC REAEE'25)**

*May 06-07th, 2025*

University of M'Sila

Faculty of Technology

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## Wednesday, May 7th, 2025

*Faculty of Technology: https://maps.app.goo.gl/B8AnPfAnaZwLbzbM6*

| [08:00] - [08:30] | **Welcome & Registration, 2nd Day** |
|---|---|
| **Plenary Session 3**, **Chairs**: Pr. BARKAT.S, Pr. Ali DJERIOUI, Pr. CHEBABHI A, Dr. GUICHI.A<br>(*Hall L29- ST*) | |
| [08:30] - [09:00] | **Plenary Talk 4: Photonic Crystal Structures for Photovoltaic Applications**<br>Pr. Mounir BOURAS (University of M'Sila) |
| [09:00] - [09:30] | **Plenary Talk 5: A "How-to" on giving a Successful Conference Presentation**<br>Pr. Slimane BENMAHMOUD (University of M'Sila) |
| [09:30] - [09:45] | **Plenary Talk 6: Sustainable Energy Transition in Algeria's Construction Industry: "Challenges, Opportunities, Policy Pathways, and Barriers"**<br>Dr. Khadidja RAHMANI (University of Blida1) |
| [09:45] - [10:00] | **Coffee Break** (*Faculty of Technology*) |
| [10:00] - [11:30] | **Oral Session 3 (ROOM 01, 02, 03)** |
| | **Poster Session 3** |
| [11:30] - [12:00] | **Closing Ceremony** (*L29 - Faculty of Technology*) |
| [12:00] - [13:00] | **Lunch** |

**\* To view the full program, please scan the corresponding QR code.**

# Details of communications by session

📍 Faculty of Technology : https://maps.app.goo.gl/B8AnPfAnaZwLbzbM6

- **Oral Session 1**

## ROOM 01

**Chairs : Pr. Abderrahmen BOUGUERRA & Dr. Hilal RAHALI**

| Time | Paper ID | Author | Title | Establishment |
|------|----------|--------|-------|---------------|
| 11 :00-11 :15 | 111 | Ahmed MESAI BELGACEM | Fault diagnosis of Photovoltaic Arrays Based on Extreme Gradient Boosting Learning | University of Jijel |
| 11 :15-11 :30 | 226 | Touil Abderrahim | Fault Detection and Control for Managing Multi-Fault Conditions in Power Inverters for Renewable Energy Systems | University of Constantine 1 |
| 11 :30-11 :45 | 08 | Mourad Naidji | Optimizing Power Flow with Renewable Energy Sources: A Cost-Effective Approach | University of Annaba |
| 11 :45-12 :00 | 268 | Benzaoui Khaled | Implementation of a Combined Wind Turbine and DSIG System Using Real-Time HIL Simulation | University of M'sila |
| 12 :00-12 :15 | 170 | Hamouda Noureddine | Single Phase Active Power Filter for Selective and Global Harmonic Currents Mitigation using Modified PQ Theory | Research Center in Industrial Technologies-Cheraga |

## ROOM 02

**Chairs : Dr. Khaled BELHOUCHET & Dr. Lakhdar MADANI**

| Time | Paper ID | Author | Title | Establishment |
|------|----------|--------|-------|---------------|
| 11 :00-11 :15 | 125 | Taha Chettibi | A Hybrid Optimization Method for the Inverse Kinematics of Robotic Manipulators | University of Blida 1 |
| 11 :15-11 :30 | 158 | Aicha Aziza Ayad | Experimental optimization of MAPbI3 perovskite solar structure: control of deposition speed (comparative study of optical and structural proprieties) | University of Djelfa |
| 11 :30-11 :45 | 261 | ARABA Mabrouk | Smart street lighting: remote control and energy saving | University of M'sila |
| 11 :45-12 :00 | 54 | Mohamed Lemine Bakayoko Yaye | Improved Control of PV System using Variable Step Size IC MPPT Method | University of Msila |
| 12 :00-12 :15 | 57 | Zaina Ait-Chekdhidh | PID-Funnel Control for the Speed of Wind Energy Systems for Maximum Power Point Tracking | University of Tizi Ouzou |

| ROOM 03 | | | | |
|---------|---|---|---|---|
| **Chairs : Pr. Khatir KHETTAB  &  Dr. Abdelouaheb BOUKHALFA  &  Dr. Khadidja RAHMANI** | | | | |
| **Time** | **Paper ID** | **Author** | **Title** | **Establishment** |
| 11 :00-11 :15 | **78** | Ouali Abdelhak | Fuzzy Logic-Based Direct Power Control of Three-Level Grid-Connected Inverters with Capacitor Voltage Balancing | University of Ouargla |
| 11 :15-11 :30 | **202** | Djaraf Nourelhouda | Hierarchical Control of Islanded Microgrids with GA-Optimized Virtual Inertia and Damping | University of Setif 1 |
| 11 :30-11 :45 | **62** | Bounnah Abdelmalek | Parametric Analysis and Performance Optimization of an Adsorption Refrigeration System Using Activated Carbon-Methanol Pair | University of Constantine 1 |
| 11 :45-12 :00 | **110** | Kheira KAHILI | Online Fault Detection and Diagnosis of Multiple Short Circuits Phases PMSG in Wind System Based on Decision Tree with Bayesian Optimization | University of Jijel |
| 12 :00-12 :15 | **102** | Berini Mohamed Rafik | Viscoelastic behavior and its effect on pumping energy under the influence of petroleum extract | University of M'sila |

- **Poster Session 1**

| Paper ID | Author | Title | Establishment |
|---|---|---|---|
| **Poster Session 1** / *Faculty of Technology* | | | |
| **Chairs : Pr. Fouad BERRABAH & Pr. Loutfi BENYETTOU & Dr.Mabrouk DEFDAF & Pr. BELKHIRI Salah** | | | |
| **138** | Meftah allal | Development of Advanced Recycled Concrete: Electrically Insulative and Resistant to Ground Current Propagation | University of Biskra |
| **29** | Boudab Smail | Multi-objective Combined Economic Emission Dispatch solution using a Recurrent Neural Network | University Oum El Bouaghi |
| **137** | TOUIL Issam | Design and Control of an Industrial Exoskeleton Using Arduino-Based System and Hydraulic Actuation | Center of Research in Mechanic-Constantine |
| **259** | El Hadi Belhiteche | Influence of electrical stress on the dielectric properties of the epoxy resin used in the electrical machines insulation | University of M'sila |
| **235** | Karim Fathi Sayeh | AI-Based Direct Power Control for WT-DFIG Systems | University of Bejaia |
| **60** | BERKANE Amina | Exploring the Interplay Between Green Hydrogen Production and Microscopic Magnetization | University of M'sila |
| **248** | Imene Moumeni | A new design of a two-channel demultiplexer based on a photonic crystal ring resonator | University of Constantine 1 |
| **139** | Mokrane Hamza | Distributed Watermarking for Detect Replay Attacks for 4 DGUs in DC Microgrids with Variants Loads | University of Medea |
| **103** | Hadji Chaabane | A Hybrid Robust Backstepping Sliding Mode Controller design for double star induction Machine DSIM | University of M'sila |
| **207** | Imane CHERGUI | Ultra Small Optical Photonic Crystal XOR Logic Gate | University of Constantine 1 |
| **51** | Ladjal badreddine | Using FTC based on BSC and nonlinear adaptive observer for dual star induction machine modeling and control | University of M'sila |
| **233** | LARBA MOHAMMED | Fuzzy Sliding Mode Control of a Double-Star Asynchronous Machine Powered by Two Three-Level Voltage Inverters | University Béjaia |
| **205** | Hadji Chaabane | Extended Kalman Filter for Speed Sensorless Control of double star Induction Motors DSIM with Estimations of Rotor flux and Load Torque | University of M'sila |
| **47** | DJOURNI Youcef | Mitigating Constant Power Load-Induced Instability Using Fractional Order Buck Converter and Backstepping Control | University of M'sila |
| **90** | Bekhiti Abdellah | Enhanced UAV Fault Diagnosis and Compensation via Nonlinear Disturbance Observer and Adaptive Control | University of Ourgla |
| **260** | Lallouani HELLALI | Application of the Fourier Transform for the Fault broken Rotor Bars Detection in Induction Motors | University of M'sila |

## • Oral Session 2

### ROOM 01

**Chairs : Dr. Amar GUICHI & Dr. Bilal Djamal Eddine CHERIF**

| Time | Paper ID | Author | Title | Establishment |
|------|----------|--------|-------|---------------|
| 14 :00-14 :15 | 45 | Mohammed Messaoud Zioud | Direct Power Control of Two-Level Grid-Connected Converters Using Fuzzy Logic Controller | University of Ouargla |
| 14 :15-14:30 | 76 | Belkacem Merzouk | The contribution of photovoltaic energy in textile wastewater treatment using electrochemical processes | University of M'Sila |
| 14 :30-14 :45 | 167 | Zorig assam | Detection of Rotor excentricite Fault In Induction Machine Based On Stray Magnetic Flux. | University of M'Sila |
| 14 :45-15 :00 | 128 | BOUDAB Smail | Environmental/Economic Dispatch Problem Solution Based on Quasi-Lagrangian Dynamic Neural Network | University Oum El Bouaghi |
| 15 :00-15 :15 | 250 | Oussama Djaidja | Fault Tolerant Control based on ILC control Application to DFIG | University of M'sila |

### ROOM 02

**Chairs : Dr. Khaled BELHOUCHET & Dr. Lakhdar MADANI & Pr. Sabir MESSALTI**

| Time | Paper ID | Author | Title | Establishment |
|------|----------|--------|-------|---------------|
| 14 :00-14 :15 | 206 | Bentafer Raouf | A enhanced pll architecture for stability improvement of grid-connected converters under weak grid and fault-ride through conditions | University ferhat abbas setif 1 |
| 14 :15-14:30 | 03 | Bennia Rachid | Performance Improvement of Partially Shaded PV Systems through Optimization Algorithms: Comparative Analysis of Classical and recent Techniques | Ecole Nationale Polytechnique, Alger |
| 14 :30-14 :45 | 122 | Tarek Bouguerra | Performance Enhancement of Standalone Photovoltaic System Using Variable Step Size MPPT Techniques | University of Constantine 1 |
| 14 :45-15 :00 | 184 | Saber BOUAFIA | Improving Power Quality in Four-Wire Distribution System Using a four Legs Distributed STATCOM | University of M'sila |
| 15 :00-15 :15 | 109 | Tarek BOUDJERDA | Proposed energy management for a PV/WT-DFIG microgrid with energy storage system | University of Bejaia |

### ROOM 03

**Chairs : Dr. KHALFALLAH fares & Dr. KEBAILI Farida & Dr. Adel BALLOUTI**

| Time | Paper ID | Author | Title | Establishment |
|------|----------|--------|-------|---------------|
| 14 :00-14 :15 | 11 | Benkaihoul Said | Fault Detection in Photovoltaic Systems using WGformer: A Weibull-Gaussian Informer | University of Djelfa Djelfa |

| 14 :15-14:30 | 48 | Ladjal badreddine | Sturdy Adaptive Fuzzy Backstepping Control for Enhanced Tracking Performance in a 2-Dof Laboratory Helicopter System | University of M'sila |
|---|---|---|---|---|
| 14 :30-14 :45 | 04 | Samia Satta | Electrical Equivalence between Plan-Plane and Multi Points-Points Systems InThe Development of Parallel Discharges on Insulating | Research center of industrial technologics CRTI |
| 14 :45-15 :00 | 88 | Naima Amina | Design and Optimization of a 2D radial flux Permanent Magnet Eddy Current Coupler PMECC | University of USTHB |
| 15 :00-15 :15 | 258 | Aboubaker Essaddiq MAZOUZ | Comparative Study between Venturini and SVM Control in Matrix Converters with DFIG Based Wind Turbines | University of Tiaret |

## • Poster Session 2

| Paper ID | Author | Title | Establishment |
|----------|--------|-------|---------------|
| Poster Session 2 / Faculty of Technology | | | |
| | | | |

| Paper ID | Author | Title | Establishment |
|----------|--------|-------|---------------|
| 252 | Karim Fathi Sayeh | Intelligent energy management of micro-grid system associated with hybrid energy storage system | University of Bejaia |
| 201 | Nacer Merabet | Inter-Turn Fault Diagnosis and Fault-Tolerant Control for Induction Motors | University of constantine1 |
| 61 | BERKANE Amina | Analytical Characterization of Density, Magnetization, and Current in 2D Electron Gases | University of M'sila |
| 147 | Bouchareb Khaled | Performance Comparison of the Andasol-1 Solar Power Plant Under Algerian and Spanish Climatic Conditions | University of M'sila |
| 79 | Bakayoko Yaye Yébé | Comparative Study Between Five MPPT Techniques applied to PV System | University of M'sila |
| 247 | Khennouf salah | Boosted Photoconversion Efficiency of Silicon Solar Cells via Spectral Management Using Wavelength-Selective Optical Filters | University of M'sila |
| 46 | DJOURNI Youcef | Fractional Order Modeling for Improved Stability of DC Microgrids under Dynamic Conditions | University of M'sila |
| 176 | Ouali Abdelmoumin | Detection of Stator Winding Faults in Permanent Magnet Synchronous Motor Based on Signal Processing | University of Biskra |
| 213 | Benabbas Sabrina | Modeling and Evaluation of the Solar Resource in the M'Sila Region Using MATLAB Tools | University of Bordj Bou Arreridj |
| 267 | Charik Khalissa | Design and Simulation of a High-Speed Photonic Crystal Half Adder Applying Nonlinear Kerr Effects | University of Constantine 1 |
| 208 | Chergui Imane | A Novel Optical Diplexer Design Using Core–Shell Rod Defects in Photonic Crystals | University of Constantine 1 |
| 42 | MILOUDI Khaled | Deep Learning for Wind Energy Prediction from Meteorological Data and Its Application to Renewable Energy Systems | University of El Oued |
| 118 | Chettouh Salah | Modeling of Short Channel Effects in Scaled FinFET Structure | University of Boumerdes |
| 238 | Lahlou Abad | A Comparative Analysis of SP and TCT Configurations with Resistance Variation Impacts in PV Systems | University of Bejaia |
| 131 | Khaled Belhouchet | Electric Field Stress Mitigation in Polymeric Insulators Using ZnO-Based Nonlinear Coatings: Simulation and Analysis | University of M'sila |
| 178 | Leila BECHANE | Improving the performance of a SnO2/CuO/GaAs solar cell using numerical simulation | University of M'sila |
| 119 | Ayoub Dehikel | Advanced FPGA Implementation of the Simplified Space Vector Modulation for Multilevel Converters | University of Ouargla |

Chairs : Dr. Moufdi HADJAB & Pr. Mohamed LAADJAL & Dr. Assam OUALI & Pr. Bilal ATTALLAH

- **Oral Session 3**

| ROOM 01 | | | | |
|---|---|---|---|---|
| Chairs : Dr. Youcef Brik & Dr. Mohamed SAHED | | | | |
| Time | Paper ID | Author | Title | Establishment |
| 11 :00-11 :15 | 152 | CHABIRA Chaima | Leaks Detection in WDNs Using Pressure Signals Based on CWT and CNN | University of M'sila |
| 11 :15-11 :30 | 269 | Meryem KETFI | Deep Learning with Skip and Residual Connection for Lung Cancer CT Scan Classification | University of M'sila |
| 11 :30-11 :45 | 239 | NADIR Cheyma | One VS Multi-instance biometrics system using Palmprint | University of M'sila |
| 11 :45-12 :00 | 164 | Douiou Zoulikha | On the parameter estimation of CGLNT radar clutter | University of M'sila |
| 12 :00-12 :15 | 84 | Moustari Mohamed Abderaouf | Deep and handcrafted feature fusion system for Diabetic Retinopathy detection and classification | University of M'sila |

| ROOM 02 | | | | |
|---|---|---|---|---|
| Chairs : Pr. Djamel ALLALI & Dr. Zohra ZERDOUMI & Dr. ELBAR Mourad | | | | |
| Time | Paper ID | Author | Title | Establishment |
| 11 :00-11 :15 | 96 | MEFTAH Sabir | Wavelet Transforms and AI Integration for Enhanced signal Quality to an Efficient Leak Detection | University of M'sila |
| 11 :15-11 :30 | 246 | Ishaq Aiche | Detection of Diabetic Retinopathy in Fundus Images Using the Hybrid Inception-ResNet-v2 Model | University of M'sila |
| 11 :30-11 :45 | 270 | Imad Eddine Djerarda | A Deep Learning-Based Real-Time Driver Safety System for Drowsiness | University of M'sila |
| 11 :45-12 :00 | 38 | Fares bettahar | Experimental Optimization of Photovoltaic System Performance | University of Biskra |
| 12 :00-12 :15 | 105 | Aoufi Saliha | Control of a Photovoltaic Pumping System Using the Artificial Bee | University of M'sila |

| ROOM 03 | | | | |
|---|---|---|---|---|
| Chairs : Pr. Ismail GHADBANE & Dr. ABED Ahcene & Dr. ZORIG Assam | | | | |
| Time | Paper ID | Author | Title | Establishment |
| 11 :00-11 :15 | 212 | Hadjab meryem | Fuzzy logic applied to the direct torque control (DTC) of a doubly star induction machine (DSIM) | Universite of M'sila |
| 11 :15-11 :30 | 219 | Mezrag Fadila | Band Gap Energies of lattice matched GaxIn1-xAsyP1-y quaternary alloys to InP and GaAs substrates | University of M'sila |
| 11 :30-11 :45 | 194 | Kouici haroun | Optimization and Simulation of Photonic Crystal Coupled Cavity-Waveguide Structures for Sensing | University of Blida1 |

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|---|---|---|---|---|
| 11 :45-12 :00 | **216** | Khalissa Saada | Sustainable Performance of Sisal and Luffa Fibers in Green Hydrogen Systems | University of M'sila |
| 12 :00-12 :15 | **69** | Zegaar Imane | Band-stop plasmonic filter in the mid-infrared range based on metal-insulator-metal (MIM) waveguide. | University of M'Hamed Bougara |

## • Poster Session 3

| **Poster Session 3** / *Faculty of Technology* |
| **Chairs : Pr. Izzeddine CHALABI & Dr. Salah KHENNOUF & Dr. Haddi BAKHTI & Pr. Torkia GHELLAB** |

| ID | Author | Title | Establishment |
|----|--------|-------|---------------|
| 23 | Rahali Hilal | Analyzing and modeling an insulating surface's leakage current in high voltage | University of M'sila |
| 150 | Sabah Touahria | Experimental study of the absorption of capillary water in a compressed and stabilized mud brick | University of M'sila |
| 244 | Mezaache Hatem | Hybrid Model for short-term Solar Energy Forecasting Based on Decomposition Techniques with Sample Entropy and Bidirectional Deep Neural Networks | University of M'sila |
| 129 | Khaled Mahdi | Production of electric current using a solar concentrator | University of M'sila |
| 148 | LOUAKHCHE FATIHA | Compact SIW Band-pass Filters in [2-12 GHz] for Telecommunication Systems | University of Blida 1 |
| 189 | Nafissa Moussaoui | Assessment of the efficacy of double junction solar cells (GaAs/a-Si) in relation to temperature effects numerically | University of M'sila |
| 182 | Bakhti fatima zohra | Thermal Performance Analysis of a Flat-Plate Solar Collector | University of M'sila |
| 172 | Gouri Amel | Modeling and Simulation of a Single-Phase Inverter Based on Unipolar SPWM Technique | University of M'sila |
| 15 | Dilmi Ali | Evaluating the impact of varied capacitance values on the performance of Self-Excited Induction Generator Using Finite Element Method | University of Bouira |
| 188 | Choug Noreddine | Adaptive and Robust Control of DFIG-Based Wind Energy Conversion System Using Fuzzy Logic | University of M'sila |
| 257 | Mohammed Soufiane Chekembou | Assessment of FACTS Devices for Enhancing Stability in Solar Photovoltaic Integrated Power Systems | University of Laghouat |
| 64 | Mohammed Lakhdar Nebbar | Transfer of the charge dissipated by a hydraulic jump to electrical energy | University of M'sila |
| 153 | Bensehil Ilhem | First-principles study of lead-free double perovskite Cs2SiBr6 for solar cells and renewable energy | University of M'sila |
| 222 | Zemouri Nahed | Improved Solar Energy Prediction via Linear Fusion of Multiple Machine Learning Models. | University of M'sila |
| 05 | Ammi Hadjer | Structural and electronic properties of complex hydrides XAlSiH (X = Sr, Ca, and Ba) intended for hydrogen storage: an ab-initio study | University of Bouira |
| 211 | Hadda Tiouiri | Calculations of the Structural, Electronic, Optical, and of CdSiX2 (X ¼ P, As) Compounds Based on First-Principles Theory | University of M'sila |

# Tuesday, May 6th 2025

- **Online Session 1 (ROM 1,2,3,4,5) / Time :16 :00-18 :00**

**ROOM 01** / Google meet Link: https://meet.google.com/xpi-mgig-mbw
**Topic: Advanced control of Electric Machines**
**Chairs: Dr. Kada BOUREGUIG & Dr. GUICHI Amar**

| Time | Paper | Author | Title | Establishment |
|---|---|---|---|---|
| 16 :00-16 :15 | ID 190 | Khaled SAHRAOUI | Speed Sensorless Sliding Mode Control of DSIM using MRAS and Extended Luenberger Observer | University of Laghouat |
| 16 :15-16 :30 | ID 113 | Hamoudi Yanis | Virtual Voltage Vector Predictive Power Control for Dual-Star Induction Machine WECS | University of Bejaia |
| 16 :30-16 :45 | ID 35 | Imad Eddine Harzelli | Online detection of broken rotor bar faults in induction motors using a model-based approach integrated with input-output feedback linearization control | University of BISKRA |
| 16 :45-17 :00 | ID 49 | Imad Eddine Harzelli | Electromagnetic Torque Analysis for Diagnosing Static Air-Gap Eccentricity Fault in Squirrel Cage Induction Motors | University of BISKRA |
| 17 :00-17 :15 | ID 17 | Mabrouk Younes Abdelbadie | Contribution to the harmonic analysis of a classic DTC control and that with a reduced switching table applied to an IM | University of Laghouat |
| 17 :15-17 :30 | ID 209 | Sofiane Brahami | Improved Sliding Mode Control Using Field-Oriented Control of Three Phase Induction Motor | University of Bejaia |
| 17:30-17 :45 | ID 168 | Fayçal HASSAINI | New mathematical models of DSPMSM considering neutral points configuration | University of Bejaia |
| 17:45 - 18:00 | ID 19 | Toumi Djaafar | Implementation of PSO, P&O and INC algorithm on MPPT PV System using Arduino | University of El oued |

**ROOM 02** / Google meet Link: https://meet.google.com/ota-scus-mxr
**Topic : Advanced control of Electric Machines**
**Chairs : Dr. Abdelbasset BARKAT & Pr. Izzeddine CHALABI**

| Time | Paper | Author | Title | Establishment |
|---|---|---|---|---|
| 16 :00-16 :15 | ID 107 | Oualid Djoudi | Field-oriented control versus direct flux-vector control for stand-alone DFIG-based wind power system | University of Bejaia |
| 16 :15-16 :30 | ID 27 | KHADAR Saad | Advanced sensorless control method based on a genetic algorithm | University of Djelfa |
| 16 :30-16 :45 | ID 185 | Djamel Difi | Enhanced Dynamic Performance of Five-Phase Permanent Magnet Synchronous Machines through Space Vector Modulation-Based Vector Control | Higher National School of R E, Batna, Algeria |
| 16 :45-17 :00 | ID 85 | Hamdane Houssem | Effectiveness of Vibration analysis in detecting Mechanical faults in an Induction machine using FFT and DWT techniques | University of Annaba |
| 17 :00-17 :15 | ID 73 | Mohamed Haithem LAZREG | Optimization-Based Sliding Mode Control of Permanent Magnet Synchronous Motor Using GWO Algorithm | University of Tlemcen |

| 17 :15-17 :30 | ID 186 | Mohamed Haithem LAZREG | High-Performance MPPT of Permanent Magnet Synchronous Generators Using Sliding Mode Control | University of Tlemcen |
| 17:30-17 :45 | ID 95 | Alili Zakaria | Revolutionizing Sensorless BLDC Motor Control: A Novel Back-EMF Observation Technique for Precise Speed Management Across All Ranges | University of M'sila |
| 17:45 - 18:00 | ID 41 | ghezouani abdelkader | Finite time control design for solar water pumping system with induction motor | University of Bechar |

| ROOM 03 / Google meet Link: https://meet.google.com/bhf-viyv-zxh | | | | |
|---|---|---|---|---|
| Topic : Microelectronics, Electromagnetics and Telecommunications | | | | |
| Chairs : Pr. Slimane BENMAHMOUD & Dr. Fayssal OUAGUENI | | | | |
| Time | Paper | Author | Title | Establishment |
| 16 :00-16 :15 | ID 179 | Seghiour Rima | Design of a Frequency-Reconfigurable Antenna for 5G Applications | University of M'sila |
| 16 :15-16 :30 | ID 93 | Maoucha Abdelhak | Toward High-Efficiency, Lead-Free Perovskite Solar Cells: The Role of Gold Nanoparticles and Design Parameters | University of Batna 2 |
| 16 :30-16 :45 | ID 264 | Zineddine Sarhani KAHHOUL | Improving Speech Emotion Recognition: A Control-Based Approach with Spectrograms and Ensemble Voting | University of Biskra |
| 16 :45-17 :00 | ID 196 | Amal Sila | High Isolation GYSEL Power Divider with fixed characteristic Impedance | University of M'sila |
| 17 :00-17 :15 | ID 245 | Mecelti Amel | Propagation of self-similar optical solitons in optical medium. | University of Souk-Ahras, |
| 17 :15-17 :30 | ID 191 | Touaibia soumia | Multimodale soft biometric for predictions gender age and gender | University of M'sila |
| 17:30-17 :45 | ID 80 | GOUMIDI Mohammed Abdessamad | Multi-Attacks Intrusion Detection and Identification System for Wearable Medical Networks | Université des ST d'Oran |
| 17:45 - 18:00 | ID 124 | Zohra MEHAR | Modeling and Analysis of Faults in Robotic Machining Cells using Lambda Petri Nets | University of Oran2 |

| ROOM 04 / Google meet Link: https://meet.google.com/ege-uifg-cve | | | | |
|---|---|---|---|---|
| Topics : Electric vehicles technologies/Automatic and robotics | | | | |
| Chairs : Dr. Amar Rouag & Dr. Fares KHALFALLAH | | | | |
| Time | Paper | Author | Title | Establishment |
| 16 :00-16 :15 | ID 52 | Boughezala Hamad Haithem | Performance Analysis of the five phase permanent magnet Synchronous Motor | University of Djelfa |
| 16 :15-16 :30 | ID 71 | BECHAR Mansour | Control of Induction Motor using Nonlinear PI Controller for Electric Vehicle | University of BECHAR |
| 16 :30-16 :45 | ID 53 | AOUADJ Norediene | Development of Direct Yaw Moment Control for an Electric Vehicle based on Fuzzy Logic | Higher School (ESGEE), Oran |
| 16 :45-17 :00 | ID 133 | Nassim Sabri | Electric vehicle fault detection systems | University of USTHB |
| 17 :00-17 :15 | ID 187 | OULAD LAID Fatima Zohra | DairAI: AI-based firefighting system using drones for fire prediction, detection, and fighting | University of Ghardaia |

| 17 :15-17 :30 | ID 25 | RAHAL Mohamed Ilyas | IoT-Driven Automatic Bottle Filling and Capping System Using Arduino | University of Annaba |
| 17:30-17 :45 | ID 228 | MADDI Zakari | Performance Enhancement of Squirrel Cage Induction Motors Using a New Deep-Slot Design | University of Bejaia |
| 17:45 - 18:00 | ID 262 | Loubna KHELLAF | Performance Comparison of Conventional and PID-Enhanced MPPT Strategies for Photovoltaic Systems under Environmental Variations | National Higher School of Technology and Engineering - Annaba |

| ROOM 05 / Google meet Link: https://meet.google.com/nhn-rmmm-azb | | | | |
|---|---|---|---|---|
| Topic : Power electronics and Smart Grid | | | | |
| Chairs : Dr. Chouaib AMMARI & Dr. Salah KHENNOUF | | | | |
| Time | Paper | Author | Title | Establishment |
| 16 :00-16 :15 | ID 166 | Bousnoubra Choayb | Mitigation of Voltage Disturbances Using Series Active Power Filter | University of Souk-Ahras |
| 16 :15-16 :30 | ID 145 | Belkacem Houara | FS-MPC And Fuzzy Logic Technics Applied To A Grid-Connected Photovoltaic System | University of Oum El Bouaghi |
| 16 :30-16 :45 | ID 218 | Zakaria REGUIEG | Smart Voltage Regulation with PV-Based DVR Using Load Voltage Control | University of Chlef |
| 16 :45-17 :00 | ID 242 | Samir Kennouche | Hybrid PSO-FVSI Approach for Loadability Enhancement in Transmission Networks Under Voltage and Losses Constraints | University of Bejaia |
| 17 :00-17 :15 | ID 210 | AZAIZIA Zoubida | Geometric Method for Reducing Peak Surface Stress in 60kV XLPE Cable Terminations | Ecole Nationale Polytechnique of Algiers |
| 17 :15-17 :30 | ID 22 | Mohamed Tayeb Boussabeur | Quasi Z-Source Inverter Using a Simple Boost Control Technique | University of Biskra |
| 17:30-17 :45 | ID 72 | Si Youcef Hamza | Performance Comparison of PI and Fuzzy PI Controllers in Multilevel DC-DC Boost Converters for Enhanced Voltage Regulation in Telecom Power Systems | Univercity of Mascara |
| 17:45 - 18:00 | ID 116 | Chahrazed Boucetta | Impact of PCM Distribution on Heat Transfer Efficiency in Hydrogen Storage Reactors | University of Oum El Bouaghi |

## • Online Session 2 (ROM 1,2,3,4,5) / Time :18 :00-20 :00

### ROOM 01 / Google meet Link: https://meet.google.com/yow-afcy-vtb
**Topic : Renewable Energy and Green Hydrogen**
**Chairs : Dr. Abdeloudoud LOUKRIZ & Dr. Zine elabidine DAHMANE**

| Time | Paper | Author | Title | Establishment |
|---|---|---|---|---|
| 18 :00-18 :15 | ID 39 | Youcef Maalem | Performance Optimization and Organic Fluids Selection of Solar Thermal Electric Generation | Ecole Nationale Polytechnique de Constantine |
| 18 :15-18 :30 | ID 55 | Chafa mohamed | Implementation of PWM Control for Static Converters used in Photovoltaic Solar Systems | University of constantine 1 |
| 18 :30-18 :45 | ID 127 | Baala Seddik | Fuzzy Logic MPPT for Solar PV Systems: Intelligent Control for Maximum Energy Harvesting | University of Adrar |
| 18 :45-19 :00 | ID 204 | OUINTEN Mohammed | Design and implementation of an electronic load for characterizing photovoltaic modules | University of M'sila |
| 19 :00-19 :15 | ID 220 | Houcem achouri | Artificial Neural Network Controller For Magnetic Gear Generator For Wind Power System | University of Setif 1 |
| 19:15-19 :30 | ID 83 | YOUNES Abdelbari | Studying lightning strikes in wind turbines with square-shaped grid grounding systems | University of Tiaret |
| 19:30-19 :45 | ID 07 | Messaoud SANDALI | Harnessing Solar Energy for Efficient Drying of Clay Bricks | University of Ouargla |
| 19:45 - 20:00 | ID 34 | Guendouz Atika | From Structure to Spintronics: A Comprehensive Study of LiNpO3 Perovskite | University of Oran1 |

### ROOM 02 / Google meet Link: meet.google.com/fnu-waav-wrz
**Topic : Renewable Energy and Green Hydrogen**
**Chairs : Dr. Moufdi HADJAB & Dr. Mohamed Assam OUALI**

| Time | Paper | Author | Title | Establishment |
|---|---|---|---|---|
| 18 :00-18 :15 | ID 37 | Drici Manal | Performance Evaluation of Renewable Hybrid Distributed Generation System Using the Smell Agent Optimization Technique | University of Annaba |
| 18 :15-18 :30 | ID 75 | lasri aymen abdellah | Numerical Investigation of Phase Change Materials for Thermal Management in Lithium-Ion Battery Packs Using ANSYS | University of science and technology Oran |
| 18 :30-18 :45 | ID 160 | Ahmed Faris Amiri | A Comparative Analysis of Regression Models for Predicting PV Power | University of M'sila |
| 18 :45-19 :00 | ID 121 | Yassmine BOUCHERIT | Modeling and Simulation of DC Hybrid Renewable Energy Systems for Optimal Performance Using MATLAB/Simulink | University of Constantine 1 |
| 19 :00-19 :15 | ID 82 | Saidi youcef | Evaluating Aggregated Models of DFIGs-based on wind farm under Different Received Wind Speeds | University of Saida |
| 19:15-19 :30 | ID 236 | Haouari CHARIK | Enhancement of light absorption in thin-film organometal trihalide perovskite solar cells via photon recycling mechanisms | University of M'sila |
| 19:30-19 :45 | ID 30 | Iftissen Nabil | Maximum Power Extraction in Photovoltaic Systems: comparison of P&O and ANN based MPPT algorithms. | University of Médéa |

| 19:45 - 20:00 | ID 265 | KADI Sara | Enhanced High-Order Sliding Mode Control for Maximum Power Point Tracking in DFIG-Based Wind Energy Systems | USTHB |

### ROOM 03 / Google meet Link: https://meet.google.com/nit-dtjq-jco
#### Topic : Renewable Energy and Green Hydrogen
#### Chairs : Pr. Khatir KHETTAB & Dr. Abdelhafid BENYOUNES

| Time | Paper | Author | Title | Establishment |
|------|-------|--------|-------|---------------|
| 18 :00-18 :15 | ID 240 | Benatallah Yacine | Design and Simulation of the PV Solar System and MPPT with PI Controller Based on P&O Algorithm | University Centre of EL Bayadh |
| 18 :15-18 :30 | ID 165 | Mohammed YOUNES | Effect of dust accumulation on degraded PV panels in hot desert climate: a case study | University of Constantine 1 |
| 18 :30-18 :45 | ID 234 | Zahia DJEBLAHI | Identification of the Solar Photovoltaic Parameters Using Mountain Gazelle Optimizer Algorithm | University of Biskra |
| 18 :45-19 :00 | ID 100 | ZERGLAINE Abdelaziz | Comprehensive Analysis of Electrical Fault Diagnosis in Photovoltaic Arrays | University of CHLEF |
| 19 :00-19 :15 | ID 193 | CHABNI khadidja | Comparative study and performance evaluation of Different Converter Configurations (String and Centralized) used in Photovoltaic Systems | University of Laghouat |
| 19:15-19 :30 | ID 36 | Moussa Zohra | Structural, optical, and photocatalytic properties of $Fe_2O_3$ thin films prepared by spray pyrolysis | University of Oum El Bouaghi |
| 19:30-19 :45 | ID 237 | MEZZAI Nabil | Analyzing the Influence of Mismatch Defects and Shading on Photovoltaic Panel Output | Université de Bejaia |
| 19:45 - 20:00 | ID 81 | Abdel Djabar Bouchaala | Optimal Sizing of a Hybrid Renewable Energy System Using Different Optimization Techniques | University of Skikda |

### ROOM 04 / Google meet Link: https://meet.google.com/ypw-crww-jbm
#### Topic : Power electronics and Smart Grid
#### Chairs : Dr. Brahim Gharbi & Dr. Abdelhakim DJALAB

| Time | Paper | Author | Title | Establishment |
|------|-------|--------|-------|---------------|
| 18 :00-18 :15 | ID 156 | Alla Boukhdenna | Enhanced DC Bus Voltage Regulation Using a Grey Wolf Optimization Tuned PI Controller under Dynamic Load Conditions | National Higher School of Technology and Engineering |
| 18 :15-18 :30 | ID 154 | Alla Eddine Boukhdenna | A Comparative Study of the Effectiveness of Particle Swarm Optimization and Gray Wolf Optimization Algorithms in MPPT for PV Systems | National Higher School of Technology and Engineering |
| 18 :30-18 :45 | ID 144 | Zakaria Belboul | Optimal Sizing of an Autonomous Microgrid: A Comparative Study of Two Metaheuristic Optimization Algorithms | University of Djelfa |
| 18 :45-19 :00 | ID 140 | Meriem Boudjemaa | Load Response of Grid Following and Grid Forming Inverters. | University of Constantine |
| 19 :00-19 :15 | ID 87 | Hala Lalaymia | Comparative Study of PI and PR Controls for Single Phase Single Stage Grid Connected PV System | École Nationale (ENSTI) |
| 19:15-19 :30 | ID 01 | Badreddine Bendriss | Smart incorporation of renewable distributed generations for power loss reduction and voltage profile enhancement in radial distribution grids | University of Setif 1 |

| 19:30-19 :45 | ID 112 | Abdelouahad MAY | An innovative predictive control model applied to a grid-connected qZSI based on power compensation | University of Setif 1 |
| 19:45 - 20:00 | ID 255 | Abdelkrim. BENALI | Voice-Controlled Lifting Barrier via Bluetooth-Enabled Smartphone | University Center El Bayadh |

| **ROOM 05** / **Google meet Link:** meet.google.com/azj-cooy-yoh <br> **Topic : Power electronics and Smart Grid** <br> **Chairs : Dr. Mourad ELBAR & Dr. Abdelkader MOHAMMEDI** | | | | |
|---|---|---|---|---|
| **Time** | **Paper** | **Author** | **Title** | **Establishment** |
| 18 :00-18 :15 | ID 104 | SOUMEUR Mohammed Amine | Optimization of energy management system Using ECMS and EEMS strategies for a standalone fuel-cell hybrid power system | Higher Normal school of Bechar |
| 18 :15-18 :30 | ID 56 | Khames Walid | High-Performance Continuous Query Processing for Big Data Streams: GPU-Optimized Skyline Queries for Traffic Monitoring and Route Optimization | University of Blida1 |
| 18 :30-18 :45 | ID 163 | HAMDAD Sadjia | Forecasting Hydrological Regimes Using Markov Chains to Optimize Water Resource Management in the Context of the Eco-Energy Transition | University of Tizi-Ouzou |
| 18 :45-19 :00 | ID 200 | Khelil Mohamed Imed | Anomaly Detection Based on DBSCAN clustering approach for Water Quality Assessment. | University of M'sila |
| 19 :00-19 :15 | ID 120 | Yaakoub Diboune | Application of Lissajous curves for fault detection and analysis in Doubly-fed induction generators | University of Blida 1 |
| 19:15-19 :30 | ID 108 | Kimi Imad Eddine | Real-time Monitoring of Pariculate Triboelectric Charge Using Throughout-type Faraday Cup: Simulation and Experimental Analysis | Ecole Normale Supérieure de Bechar |
| 19:30-19 :45 | ID 40 | Bouchikhi Nasreddine | Impact of Distributed Generation Placement and Sizing on Short-Ciruit Levels in Radial Distribution Networks | University of Setif 1 |
| 19:45 - 20:00 | ID 135 | Lahrech Abdelhakim | Thermal Performance Evaluation of a Tri-Nanofluid in a Water–Ethylene Glycol Base Fluid: Analysis of Heat Transfer, MHD Flow, and Double-Diffusive Convection in a Porous Medium under Thermal Non-Equilibrium and Joule Heating effect | University of Bordj Bouarreridj |

## • **Virtual Poster (Off line)**

| ID | Author | Title | Establishment |
|---|---|---|---|
| **Chairs : Dr. Abderrahim ZEMMIT & Dr. Abdelghafour Herizi & Dr. Riyadh ROUABHI** | | | |
| **195** | Abderrahmane BENAISSA | Comparative Study of Current Ripple and Efficiency in Interleaved and Conventional Boost Converters for Photovoltaic Energy Integration | University of Djelfa |
| **159** | Abderrahmane BENAISSA | Bidirectional Energy Transfer for Electric Vehicles: A V2G/G2V Converter System | University of Djelfa |
| **21** | Chehda Rabeh | Discrimination between inter-turn short-circuit and eccentricity faults in SRM using real and imaginary components of stator current spectral analysis | University of Tiaret |
| **174** | Grine Madani | Ab-initio study of the optoelectronic properties of ZnX for use in renewable energy, such as photovoltaic cells | University of M'Sila |
| **92** | Mohamed Boudiaf Koura | Enhanced Diagnosis of Rotor Faults in Induction Motors Using Adjustable Window Function | University of Tiaret |
| **151** | ZOUGHAB Samir | An efficient control based on VSS-P&O MPPT technique for a Standalone Photovoltaic Water Pumping System Using a PMDC Motor | University of Setif 1 |
| **58** | LATRECHE Abderrezzak | Hybrid Renewable Sources Implementation for a DC Microgrid with MPPT Fuzzy Logic Control | University of Tamanghasset |
| **199** | LATRECHE Abderrezzak | Simulation of a Hybrid Fuel Cell and Battery Storage System in MATLAB | University of Tamanghasset |
| **101** | Lakhdar MADANI | Analysis of the impact of wind turbine integration on system security and protection planning | University of Setif 1 |
| **106** | Mammi Mounira | Elaboration and Characterization of Doped NiO Thin Films Prepared by Spray Pyrolysis and Their Application in Gas Sensor Devices | University of El Oued |
| **67** | Mohammed Boukhari | Field-Oriented Control of Dual Front-Wheel Motors in Electric Vehicles | University of M'sila |
| **77** | MOKHTARI Rida | Real-Time Attitude Control of a Quanser Quadrotor Using Finite-time Algorithm and Quaternion Representation | école supérieur en sciences appliquées de Tlemcen |
| **33** | Ayyoub Zeghlache | Super-Twisting Sliding Mode Observer and Extended State Observer Comparison in PMSM Sensorless Control | University of M'sila |
| **192** | Zine elabadine Dahmane | Vehicle-to-Grid (V2G) Integration for Balancing Renewable Energy Supply | University of USTHB |
| **230** | MOKHTARI Rida | Autonomous Flight Control Systems for Small Coaxial Rotor UAVs | école supérieur en sciences appliquées de Tlemcen |