

10:20 - 12:00

MoA1

Robotics and Applications

Auditorium

*Session Chair(s): Mohamed Bouri (EPFL) , Amal Choukchou-Braham (University of Tlemcen Algeria)*

- 2601**      **Trajectory generation for a fixed-wing UAV by the potential field method**  
Authors: Amar BENGHEZAL (EMP) , Rabah LOUALI, abdelouahab bazoula, Taha CHETTIBI,
- 2626**      **Image-based path following for nonholonomic mobile robot**  
Authors: Abdellah Khelloufi (CDTA) , noureddine ouadah (CDTA) , oualid Djekoune (CDTA) , Noura Achour (USTHB)
- 2799**      **Predator-Prey Coevolution in a Physically Simulated Environment**  
Authors: Nesrine Ouannes (Biskra University) , noureddine Djedi (Biskra University) , yves Duthen (Toulouse University) , Hervé Luga (Toulouse University)
- 2831**      **A Rule-Based Harmony Search Simulation-Optimization Approach for Intelligent Control of a Robotic Assembly cell**  
Authors: Mihoubi bachir (CDTA) , Gaham Mehdi (CDTA) , Brahim Bouzouia (CDTA, Algeria) , Abdelghani BEKRAR (University of Valenciennes, France)
- 2835**      **Bottomhole pressure stabilizing observer-based controller in tunnel drilling system**  
Authors: Naim Zoghlami (IBISC) , Khouloud Latrach (IBISC) , lotfi beji (IBISC)

10:20 - 12:00

MoA2

**Manufacturing and Supply Chain Automation: Situation and Frontiers (SS), Special Session**

Amphi 1

*Session Chair(s): Abdelghani BEKRAR (University of Valenciennes, France), Brahim Bouzouia (CDTA, Algeria) & Fayssal Arichi (University of Tlemcen)*

2750

**Multiple Priority Dispatching Rules for the Job Shop Scheduling Problem**

Authors: Mohamed HABIB ZAHMANI (University of Mostaganem) , Baghdad Atmani (LIO) , Abdelghani BEKRAR (University of Valenciennes, France) , Nassima AISSANI (University of Oran 1)

43

**Monitoring System for Manufacturing Process Application to a Cardboard Factory**

Authors: Sekhri Larbi (University of Oran) , Tari Noria (University of Oran) , haffaf Hafid (University of Oran) , Ould Bouamama Belkacem (University of Lille 1)

2570

**A Novel Robust Automatic Generation Control in Interconnected Multi-Area Power System Based on Bat Inspired Algorithm**

Authors: Nour EL Yakine Kouba (Laboratory of Electrical and Industrial Systems (LSEI), USTHB, Algiers, Algeria) , Mohamed Menaâ (USTHB) , Mourad Hasni (USTHB) , Mohamed BOUDOOR (USTHB)

2790

**An evolutionary Cellular Automaton for Minimizing Energy Consumption in NoC-based Soft real-time embedded systems**

Authors: Djalila Djalila (Om el bouaghi) , Fateh boutekouk ( )

2269

**Decoupled Sliding Mode with Type 2 Fuzzy-Neural Network Controller for Multi-machine Power Systems**

Authors: Amel Abbadi (Univ medea)

10:20 - 12:00

MoA3

Renewable Energy 1

Amphi 2

*Session Chair(s): Abdellah KOUZOU (University of Djelfa, Algeria), Boumediène BENYAHIA (UABB-Tlemcen)*

1156

**Sliding Mode Control Of A Multi Source Renewable Power System**

Authors: Tareq ALNEJAILI (University of batna) , Said DRID (university of batna) , Driss Mehdi (University of Poitier ) , Larbi CHRIFI-ALAOUI (University of Picardie Jules Verne) , Hamza Sahraoui (Batna university)

2417

**Direct Powers Control of DFIG Through Direct Converter and Sliding Mode Control For WECS**

Authors: Abderraouf BOUMASSATA (Constantine1 University) , Djallel Kerdoun (Constantine 1 University)

2463

**Fuzzy approximation-based Adaptive Sliding-Mode Control scheme for Underactuated Systems**

Authors: Soumia Moussaoui (LAJ) , Abdesselem Boukroune (Jijel University)

2482

**Flatness and sliding mode based controller of Fuel Cell and Supercapacitors Hybrid Source**

Authors: Okba KRAA (LMSE) , Abdennacer Aboubou (Laboratory of Energy Systems Modelling) , Ramzi SAADI (Laboratory of Energy Systems Modelling) , Mbarek Bahri (Laboratory of Energy Systems Modelling) , Mohamed Becherif (UTBM france) , Yacine Mohamed Ayad ( Industrial Hybrid Vehicle Applications France.)

2696

**A Doubly Fed Induction Generator Wind Turbine and Fuel Cell Hybrid Power Sources System for Micro-grid Applications**

Authors: Salah Tamalouzt (Abderahman Mira university of Bejaia) , Nabil Benyahia (University of Tizi-Ouzou) , Toufik Rekioua (Abderahman Mira university of Bejaia) , Rachid ABDESSEMED (Batna university)

10:20 - 12:00

MoA4

Information Technology 1

Room 1

*Session Chair(s): Nidhal Bouaynaya (Rowan University) & Dr. Bdelmadjid Meghebar (Tlemcen University) & Fayssal Arichi (UABB-Tlemcen)*

2185

**Information Retrieval: A New Multilingual Stemmer Based on a Statistical Approach**

Authors: Said Gadri (University of Msila) , Abdelouahab Moussaoui (University Farhat Abbes of setif)

2444

**Comparative Survey of Association Rule Mining Algorithms based on Multiple-criteria Decision Analysis approach**

Authors: Ait-Mlouk Addi (Cadi Ayyad University, Marrake) , Gharnati Fatima (Cadi Ayyad University, Marrakech) , Agouti Tarik (Cadi Ayyad University, Marrakech)

2539

**Measuring inconsistencies on ontology change estimate based on cooperative game and Shannon entropy**

Authors: Mamadou Bousso (Université de Thies) , Mouhamadou Gaye (Saint-Louis University) , Ousmane Sall (Thies University) , Mouhamadou Thiam (Thies University) , Moussa Lo (Saint-Louis University)

2645

**Recommender System For Sports Articles Based On Arabic Opinions Polarity Detection With A Hybrid Approach RSS-SVM**

Authors: Amel Ziani (University of Annaba, algeira) , Yamina Tlili Guiyassa (University of Annaba, Algeria) , Nabiha Azizi (University of annaba)

2757

**Development of Road Traffic Flow Model for Nighttime Conditions**

Authors: Asmaa Ouessai (USTO) , Mokhtar Keche ()

2784

**Content-Based Image Retrieval in the Topic Space using SOM and LDA**

Authors: Marouane Ben Haj Ayeche (ENIT) , Hamid AMIRI ()

10:20 - 12:00

MoA5

Signal Processing 1

Room 2

*Session Chair(s): Fethi Bereksi (Tlemcen university) , Abdelmadjid Boumediene (Tlemcen university)*

- 1157**      **Intrusion Detection and Classification Using Optical Fiber Vibration Sensor**  
Authors: TARIK HADJ ALI (ECOLE MILITAIRE POLYTECHNIQUE) , RIAD CHEMALI (Polytechnic military school) , hocine Medjadba (Ecole militaire polytechnique)
- 2213**      **Ultrasonic non-destructive characterization of trabecular bone: Experimental and theoretical prediction of the ultrasonic attenuation**  
Authors: BENNAMANE Abderrazek (USTHB, Faculté de Physique) , BOUTKEDJIRT Tarek (University)
- 2281**      **2D-FDTD- UPML Simulation of Wave Propagation on Dispersive Media**  
Authors: Mehennoui Naziha (Univ setif)
- 2646**      **Speech enhancement using backward adaptive filtering algorithm : Variable step-sizes approaches**  
Authors: Redha BENDOUMIA (University of Blida 1) , Mohamed DJENDI ( )
- 2715**      **Sign Language Recognition using PCA, Wavelet and Neural Network**  
Authors: Khadidja SADEDDINE (USTHB) , Chelali Fatma zohra (University of Science and Technology Houari Boumediene (USTHB)) , Rachida Djeradi (USTHB)

14:50 - 16:30

MoB1

Algorithms and Stability

Auditorium

*Session Chair(s): Krishna Busawon (Northumbria University), Amal Choukchou-Braham (University of Tlemcen Algeria)*

2370

**Impulsive differential inclusions on unbounded domain**

Authors: Abdelghani OUAHAB (Université Djillali Liabes de Sidi Bel Abbès) , YUCEFI Samia (Université Djillali Liabès)

2449

**Asymptotic relationship between trajectories of nominal and uncertain nonlinear systems on time scales**

Authors: fatima Taousser (University of Sidi Bel Abbes) , Michael Defoort (UVHC) , Boudekhil Chafi (University of Sidi Bel Abbes) , Mohamed DJEMAI (UVHC)

2763

**Simple control scheme for a class of underactuated mechanical system with tree structure**

Authors: Amal Choukchou-Braham (University of Tlemcen Algeria) , Brahim Cherki (University of Abou Bekr Belkaid, Tlemcen )

2816

**Communication Satellite Link Budget Optimization Using Gravitational Search Algorithm**

Authors: Salima Berrezzoug (Telecommunication Laboratory)

2826

**Robust Stability Analysis and Topological Dynamics of a Nonminimum Phase Supersonic Tactical Missile**

Authors: Belkacem Kada (KAU University)

2837

**New approach of stability switched nonlinear system**

Authors: Fayçal Hamidi (ENI Gabès) , Aggoune Woihida (ENSEA) , Mohamed Naceur ABDELKRIM (ENI Gabès)

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14:50 - 16:30

MoB2

Power Converters

Amphi 1

*Session Chair(s): Abdellah KOUZOU (University of Djelfa, Algeria) & Dr. Arichi Fayssal (University of Tlemcen)*

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- 5      **PI and Sliding Mode Controllers In Fault Tolerant PMSM Drive**  
Authors: Bendjedia Bachir (UAT Laghouat Algeria) , Kamel ALIOUANE (EMP) , Farid Bouchafaa (LINS, USTHB)
- 2422      **Matrix converter prototype for motor drive**  
Authors: Brahim METIDJI (Institute of Electrical & Electronics Engineering) , Lotfi BAGHLI (Université de Tlemcen)
- 2495      **FPGA based Control of a PWM Inverter by the Third Harmonic Injection Technique for Maximizing DC Bus Utilization**  
Authors: Ahmed BELKHEIRI (Université Hadj Lakhdar Batna) , Said Aoughellanet (Université Hadj Lakhdar de Batna) , Mohammed BELKHEIRI (Université Amar Telidji de Laghouat) , Abdelhamid Rabhi (, Université de Picardie Jules Verne)
- 2569      **Observer-Based Practical Control Technique for Multicell Converters**  
Authors: Kamri Djekidel (University of Laghouat)
- 2770      **Series Resonant Inverter Power Prediction and Coil Design for Metal Surface Hardening**  
Authors: Abdelkader ATTAB (Université des Sciences et de ) , Houcine ZEROUG (Université des Sciences et de la Technologie Houari Boumediene) , bilel MEZIANE (Université des Sciences et de la Technologie Houari Boumediene)

14:50 - 16:30

MoB3

Renewable Energy 2

Amphi 2

*Session Chair(s): BENTOUBA SAID (LABORATORY LDDI) &, Boumediène BENYAHIA (UABB-Tlemcen)*

- 2262**      **Experimental and theoretical study of a new synthesized Quinoline derivative as Greene inhibitor of corrosion for the cooling circuits in desalinated water**  
Authors: Djamel Daoud (Unité de Recherche Appliquée en Energies Renouvelables, URAER) , TAhar douadi (Laboratoire d'électrochimie des matériaux moléculaires et complexes, Département) , hanane Hamani (Laboratoire d'électrochimie des matériaux moléculaires et complexes, Département) , Djillali Ghobrini URAER) , Kamal Aiboud (URAER,)
- 2428**      **Modeling and Experimentation of a 12kW Direct Driven PM Synchronous Generator of Wind Power**  
Authors: SENTHILKUMAR AJITHAN (VSB – Technical University of )
- 2452**      **Control of three-level NPC inverter based grid connected PV system**  
Authors: Abdelmalik Zorig ( University of Laghoout) , Mohammed BELKHEIRI (Université Amar Telidji de Laghouat) , Said Barkat (Universtiy of Mohamed Boudiaf - M'sila) , Abdelhamid Rabhi (, Université de Picardie Jules Verne)
- 2549**      **Numerical Study of Microdrops sorting by Microfluidic Device**  
Authors: Tawfiq Chekifi (University Tahri Mohammed Bech) , Brahim Dennai ( ) , Rachid Khelfaoui (University Tahri Mohammed Bechar)
- 2721**      **Modeling and control of a five level inverter used with renewable enery sources**  
Authors: BENTOUBA SAID (LABORATORY LDDI) , OUED ALI OMAR (UNIVESRITY AHMED DRAIA ADRAR) , i Cabarrocas PERE ROCA (ECOLE POLYTHENIQUE FRANCE) , BOUROUIS MAHMOUD (UNIVERSITY ROVIRA I VIRGILLI)
- 2793**      **Adaptive Control for the Methane Flow Rate in Biogas Plants**  
Authors: Khadidja Chaib Draa (University of Luxembourg) , holger Voos (University of Luxembourg) , Marouane Alma (Université de Lorraine) , Mohamed Darouach (Université de Lorraine)



14:50 - 16:30

MoB4

Estimation and Detection

Room 1

*Session Chair(s): Fethi Bereksi (University of Tlemcen) & Abdelmadjid Meghebar (University of Tlemcen) & Fayssal Arichi (UABB-Tlemcen)*

2221

**An Autonomous Hybrid Navigation Filter Using Earth Magnetic Field Measurements for Low Earth Orbit Satellite**

Authors: Abdellatif BELLAR (CDS oran) , mohammed arezki Si mohammed (Centre de Développement des Satellites (CDS))

2302

**Perceptual blur detection and assessment in the DCT domain**

Authors: Fatma Kerouh (INELEC,USTHB) , Amina Serir (USTHB)

2525

**Gaussian Mixture Modeling for Indoor Positioning WIFI Systems**

Authors: Marwan Alfakih (USTO) , Mokhtar Keche () , Hadjira Benoudnine ()

2536

**Ultrasonic Signals Parameters Estimation Based on Differential Evolution**

Authors: Yacef Nabil (Jijel University) , Toufik Bouden () , Grimes Morad ()

2687

**Multi Phases Stator Short-Circuits Faults Diagnosis & Classification In DFIG Using Wavelet & Fuzzy Based Technique**

Authors: SAMIA BOURDIM (BATNA UNIV) , Kamel-Eddine HEMSAS (Sétif-1 university) , Youcef HARBOUCHE (Batna university) , Toufik Azib (Estaca' lab France paris)

14:50 - 16:30

MoB5

**Genetic Algorithm and Optimization**

Room 2

*Session Chair(s): Rachid ILLOUL (Ecole Nationale Polytechnique) & Dr. Abdelmadjid Boumediene (University of Tlemcen)*

2321

**Iterative Learning Control for Nonlinear Systems subject to both Structured and Unstructured Uncertainties**

Authors: Hocine Benslimane (ENP) , Abdesselem Boulkroune (Jijel University) , Hachemi CHEKIREB (Ecole Nationale Polytechnique)

2462

**A new artificial bee colony algorithm for numerical optimization**

Authors: Oussama Ait Sahed (Blida 1 University) , Kamel Kara (Blida 1 University) , Abousoufyane Benyoucef (SET Laboratory, Electronics D) , Mohamed Laid Hadjili (High School of Computer Sciences (HEB-ESI))

2638

**A New Decomposition Strategy Approach Applied for Web Winding System Control Optimization**

Authors: Mohamed Doghmane (University Mhamed Bougra de Boumerdes, Algeria) , lamraoui walid (university of boumerdes) , madjide kidouche (UMBB) , hacéne habbi (UMBB)

2781

**Fuzzy Controller Parameters Optimization by Using Genetic Algorithm for the control of inverted pendulum**

Authors: SAIDI KHAYREDDINE (MOULOUD MAMMERI UNIVERSITY) , Mourad ALLAD (Département Automatique )

2789

**Parameters Extraction of Photovoltaic Module for Long-Term Prediction Using Artificial Bee Colony Optimization**

Authors: Elyes Garoudja (Blida 1 university) , Kamel Kara (Blida 1 University) , aissa chouder (University of m'sila) , Santiago Silvestre (Universitat Politècnica de Catalunya)

17:00 - 18:40

MoC1

Chaos

Auditorium

*Session Chair(s): Krishna Busawon () , Amal Choukchou-Braham (University of Tlemcen Algeria)*

2314

**Bifurcation Analysis and Chaos in Simplest Fractional-order Electrical Circuit**

Authors: Mohammed Salah Abdelouahab (University) , René Lozi ()

2510

**Function Vector Synchronization Based On Fuzzy Control For Uncertain Chaotic Systems With Dead-Zone Nonlinearities**

Authors: Sarah Hamel () , Abdesselem Boukroune (Jijel University)

2530

**On the Use of the Unified Chaotic System in the Field of Secure Communication**

Authors: Sonia HAMMAMI (University of Tunis El Manar L) , Mohamed DJEMAÏ (UVHC) , Krishna Busawon (Northumbria University)

2717

**On Secure Image Transmission Combining Chaotic Encryption and Watermarking Using Dead Beat Synchronization of 4D Henon Maps**

Authors: Narjes Khalifa (ENIT) , Rania Linda Filali (ENIT) , Mohamed Benrejeb ()

2839

**Output observer for chaos synchronisation applications**

Authors: Josep Canyelles-Pericas (Northumbria University) , Krishna Busawon ()

17:00 - 18:40

MoC2

Signal Processing 2

Amphi 1

*Session Chair(s): Pr. F. Bereksi Reguig & Dr. F. Derraz (University of Tlemcen)*

- 2192**      **Robust Multimodal Biometric Identification System Using Finger-Knuckle-Print features**  
Authors: Abdallah Meraoumia (University of ouargla) , Salim Chitroub (USTHB university)
- 2427**      **Fast Algorithm to Minimize model Combining Dynamically Local and Global Fitting Energy for Image Segmentation**  
Authors: Yamina Boutiche (Welding and NDT Research Cente)
- 2490**      **Contribution to the Implementation of Image Mosaicing Algorithm on FPGA using NIOS II Softcore**  
Authors: Abdelhai LATI (LSN/EMP) , Zohir IRKI (LSN/EMP) , samir SAKHI (EMP) , Abdelkrim NEMRA (EMP) , Mustapha HAMERLAIN ()
- 2605**      **Facial age estimation and gender classification using Multi Level Local Phase Quantization**  
Authors: Salah Eddine Bekhouche (University of Biskra, Algeria) , Abdelkrim Ouafi (University of Biskra, Algeria) , Azeddine Benlamoudi (University of Ouargla, Algeria) , Ahmed Abdelmalik () , Abdenour Hadid (University of Oulu, Finland)
- 2609**      **Face spoofing detection using Local binary patterns and Fisher Score**  
Authors: Azeddine Benlamoudi (University of Ouargla, Algeria) , Djamel Samai (University of Ouargla, Algeria) , Abdelkrim Ouafi (University of Biskra, Algeria) , Salah Eddine Bekhouche (University of Biskra, Algeria) , Ahmed Abdelmalik () , Abdenour Hadid (University of Oulu, Finland)
- 2692**      **Mass Segmentation in Mammograms For Computer- Aided Diagnosis Of Breast Cancer**  
Authors: HADJIDJ Ismahan (UABB) , feroui Amel (UABB) , Bessaid Abdelhafid (UAAB)

17:00 - 18:40

MoC3

Identification and Estimation

Amphi 2

*Session Chair(s): Meriem Taouss (), Boumediène BENYAHIA (UABB-Tlemcen)*

- 1126**      **Fuzzy identification and control of a piezoelectric actuator**  
Authors: Aissa Rebai (ENP d'Alger) , Kamel Guesmi (CReSTIC, Reims University , France) , Boualem Hemici (National Polytechnic School of Algiers-Algeria)
- 1129**      **Fuzzy Direct Torque Control of Induction Motor with Sensorless Speed Control Using Parameters Machine Estimation**  
Authors: Bendaha Yesma (USTO) , mazari benyounes (USTO)
- 2387**      **An optimal iterative algorithm to solve Cauchy problem for Laplace equation**  
Authors: Muhammad Majeed (KAUST) , Meriem Taouss ()
- 2424**      **Wiener System Identification using Polynomial Non Linear State Space Model**  
Authors: Lamia SERSOUR (Univerity M. MAMMERI) , Tounsia DJAMAH (M. Mammeri University of Tizi ) , Karima HAMMAR (Univerity M. MAMMERI) , Maamar Bettayeb ()
- 2691**      **Simultaneous Estimation of the State and the Unknown Inputs for a Class of Switched Linear Systems**  
Authors: Khaled Laboudi (CReSTIC) , Nadhir Messai (CReSTIC, URCA) , Nouredine Manamanni (CReSTIC, URCA)

17:00 - 18:40

MoC4

PSO & Optimization

Room 1

*Session Chair(s): Samir Otmane (IBISC) , Lotfi Beji (University of EVRY)*

- 2198**      **A Maximum Power Point Tracker based on Particle Swarm Optimization for PV-Battery Energy System under Partial Shading Conditions.**  
Authors: KERMADI Mostefa (National Polytechnique School) , BERKOUK El Madjid (National Polytechnique School)
- 2610**      **Neural network monitoring system used for the frequency vibration prediction in gas turbine**  
Authors: Ben Rahmoune Mohamed () , Hafaifa Ahmed (LAADI, University DJELFA) , Guemana Mouloud ()
- 2695**      **Particle Swarm Optimization Based Reactive Power Planning for Line Stability Improvement**  
Authors: Youcef AMRANE (University of Science and Tech) , Mohamed BOUDOUR () , Ahmed Amine LADJICI (University of Science and Technology Houari Boumediene)
- 2714**      **Parameter identification of photovoltaic cell/module using genetic algorithm (GA) and particle swarm optimization (PSO)**  
Authors: Ali DALI (CDER) , Abderrazak bouharchouche (CDER) , Said DIAF (CDER)
- 2418**      **Time-Dependant Trajectory Generation for Tele-operated Mobile Manipulator**  
Authors: Isma Akli (CDTA) , Brahim Bouzouia (CDTA, Algeria)

17:00 - 18:40

MoC5

Fault Detection

Room 2

*Session Chair(s): Nadhir Messai (CRESTIC, University of Reims Champagne-Ardenne)*

- 2403**      **Design of a Robust Observer-Based FDI Scheme For a Class of Switched Systems Subject to Sensor Faults**  
Authors: DjamelEddine Chouaib Belkhiat (Ferhat Abbas University) , Seif eddine Chouaba (Intelligent Systems Laboratory) , Hassen Fourati (Univ. Grenoble Alpes, GIPSA-Lab, NeCS team, INRIA, F-38000, Grenoble, France) , Dalel Jabri (MACS, University of Gabes Gabes, Tunisia)
- 2421**      **AR Model of The Torque Signal For Mechanical Induction Motor Faults Detection and Diagnosis**  
Authors: Smail HAROUN (LSEI (USTHB)) , Amirouche Nait Seghir (USTHB) , Said Touati (CRNB) , Samir Hamdani (USTHB)
- 2782**      **Sliding Mode Controller for Breathing Subsystem on a PEM Fuel Cell System**  
Authors: Zakaria BAROUD (LacCOSERE) , Mohammed BENMILOUD (Amar telidji university) , Atallah BENALIA (Amar telidji university)
- 2840**      **PI observer gain optimization for fault detection with disturbance attenuation**  
Authors: Lamine Mohamadi (Northunmbria University)
- 23**         **Toward Safety Navigation in Cluttered Dynamic Environment: A Robot Neural-Based Hybrid Autonomous Navigation and Obstacle Avoidance with Moving Target Tracking**  
Authors: Nacer Hacene (University of Bejaia) , boubekour mendil (university of Bejaia)

09:20 - 11:00

TuA1

**Control Application 1**

Auditorium

*Session Chair(s): Nahla Khraief (), Amal Choukchou-Braham (University of Tlemcen Algeria)*

1128

**Fuzzy Quasi LPV Model for a cross flow heat exchanger**

Authors: Seif eddine Chouaba (Intelligent Systems Laboratory) , DjamelEddine Chouaib Belkhiat (Ferhat Abbas University) , bilal Sari (He was with IREENA-CRTT École polytechnique de Nantes, St Nazaire, France) , Luis Carlos Felix-Herran (ITESM, Monterrey, Mexico)

2231

**Stabilization of Inertia Wheel Inverted Pendulum by Model Reference Adaptive IDA-PBC : From simulation to real-time experiments**

Authors: Nahla Khraief () , Safya Belghith (ENIT) , Ahmed Chemori (LIRMM) , Juan José (Spain)

2658

**Calibration and Validation of a Switched Linear Macroscopic Traffic Model**

Authors: ZEROUAL Abdelhafid (LAIG) , Nadhir Messai (CReSTIC, University of Reims Champagne-Ardenne) , KECHIDA Sihem (LAIG) , HAMDJ Fatiha (CReSTIC & LAAAS)

2772

**Stabilizing control based observer for a remotely operated vehicle (ROV-Observer)**

Authors: Adel Khadhraoui (IBISC) , lotfi beji (IBISC) , Samir Otmane (IBISC Lab, University of Evry, France) , Azgal Abichou ()

2842

**Stochastic stability and observer design for the lac operon model**

Authors: ASMA BEN HALIM (NORTHUMBRIA UNIVERSITY) , Krishna Busawon () , maia angelova ()



09:20 - 11:00

TuA2

TuA2 : Industrial Electronics

Amphi 1

*Session Chair(s): Ahmed Amine LADJICI (University of Science and Technology Houari Boumediene)*

- 1151**      **Benefits of HVDC for Reducing the Risk of Cascading Outages and Large Blackouts in AC/DC Hybrid Grid**  
Authors: Benasla Mokhtar (University) , Allaoui Tayeb (Tiaret University) , Brahami Mostefa ( ) , Aek Boudali ( )
- 2291**      **FPGA implementation of high gain observer for induction machine using Simulink HDL Coder**  
Authors: Moez Besbes (ENIM) , Salim Hadj Said (National Engineering School of Monastir) , Fouzi M'sahli ( )
- 2563**      **Observability Analysis of Multicellular Converters: Hybrid Approach**  
Authors: Nouredine GAZZAM (Amar telidji university) , Mohammed BENMILOUD (Amar telidji university) , Atallah BENALIA (Amar telidji university)
- 2627**      **Voltage Stability Analysis and Optimal Distributed Generators Placement Study on Algerian Power Network**  
Authors: Houssam NAHILIA (LSEI,USTHB) , Mohamed BOUDOUR ( )
- 2729**      **The influence the angles of delay and overlap in the rate of harmonic in HVDC**  
Authors: Mohammed Abderrezak AMINALLAH (Université sidi bel abbes)

09:20 - 11:00

TuA3

Information Technology 2

Amphi 2

*Session Chair(s): Nidhal Bouaynaya (Rowan University)*

- 8**      **Face Recognition using 1DLBP, DWT and SVM**  
Authors: Amir Benzaoui (University of May 08th 1945 ) , BOUKROUCHE A/ Hani (Laboratory of PIMIS, university of Guelma ) , DOGHMANE Hakim (Laboratory of PIMIS, university of Guelma) , Bourouba Houcine (University of Guelma algeria)
- 2537**      **On Evaluating the Scalability Aspect of Gait-Based Biometric Systems for Larger Population**  
Authors: Imed Bouchrika (University of Souk Ahras)
- 2643**      **Ear recognition based on Multi- bags-of-features histogram**  
Authors: Bourouba Houcine (University of Guelma algeria) , DOGHMANE Hakim (Laboratory of PIMIS, university of Guelma) , Amir Benzaoui (University of May 08th 1945 ) , BOUKROUCHE A/ Hani (Laboratory of PIMIS, university of Guelma )
- 2776**      **Nose Tip Localization on a Three Dimensional Face across Pose, Expressions and Occlusions Variations in a Riemannian Context**  
Authors: Samia Bentaieb (USTO MB) , Abdelaziz Ouamri (Signals and Images Laboratory University of USTOMB Oran, Algeria) , Mokhtar Keche ( )
- 2791**      **Filtered-based Expectation–Maximization Algorithm for Emission Computed Tomography (ECT) Image Reconstruction**  
Authors: BOUDJELAL Abdelwahhab (University of M'sila) , Messali Zoubeida (University of Bordj Bou-Arréridj) , Attallah Bilal (University of M'sila)

09:20 - 11:00

TuA4 **Fractional Order Signals, Systems and Control (SS): Special Session**

Room 2

*Session Chair(s): Samir Ladaci (National Polytechnic School) , Abdelfatah Charef (University Frères Mentouri, Constantine, Algeria)*

- 2261**      **Secure data transmission scheme based on fractional-order discrete chaotic system**  
Authors: Hamid Hamiche (Université Mouloud MAMMERI, TO) , Sarah Kassim (Department of Control Engineering L2CSP, UMMTO Tizi-Ouzou , Algeria) , Saïd Djennoune (Department of Control Engineering L2CSP, UMMTO Tizi-Ouzou , Algeria) , Saïd Guermah (Department of Control Engineering L2CSP, UMMTO Tizi-Ouzou , Algeria) , Mourad Lahdir (Department of Control Engineering L2CSP, UMMTO Tizi-Ouzou , Algeria) , Maâmar Bettayeb (University of Sharjah Sharjah, UAE)
- 2399**      **Fractional Hammerstein system identification using polynomial non-linear state space model**  
Authors: Karima HAMMAR (Univerity M. MAMMERI) , Tounsia DJAMAH (M. Mammeri University of Tizi ) , Maamar Bettayeb ()
- 2464**      **Fuzzy adaptive synchronization of a class of fractional-order chaotic systems**  
Authors: Amel Bouzeriba () , Abdesselem Boulkroune (Jijel University) , Toufik Bouden ()
- 2545**      **Indirect Fractional Adaptive Pole Placement Control**  
Authors: Samir Ladaci (National Polytechnic School of) , Sara Cheniki (Skikda University) , Hadjer Bendjama (Skikda University) , Abdelfatah Charef (University Frères Mentouri, Constantine, Algeria)
- 2576**      **Chaotic Convective Behavior and Stability Analysis of a Fractional Viscoelastic Fluids Model in Porous Media**  
Authors: Ibrahima NDoye (KAUST) , Meriem Taouss ()

14:50 - 16:30

TuB1

Solar Energy

Auditorium

*Session Chair(s): BENTOUBA SAID (LABORATORY LDDI) , Amal Choukchou-Braham (University of Tlemcen Algeria)*

- 2228**      **Comparative study of parabolic trough power plant with integrated TES and BS using synthetic oil and molten salt**  
Authors: Taqiy Eddine Boukelia (University of Constantine 1) , Mohamed Salah Mecibah (University of Constantine 1) , Imad Eddine Meriche (Université Constantine 1) , zoubir Belgroun (Unité de développement des Equipements Solaires-UDES/ EPST)
- 2233**      **Semi-analytical Modeling and Optimization of a: SiGe Thin-film Solar Cell Including Multi-trench Region**  
Authors: HICHEM FERHATI (UNIVESITY OF BATNA) , faycal djeflal (university of batna) , MOHAMED MEGUELLATI (UNIVERSITY OF BATNA) , hichem bencherif (university of Batna)
- 2377**      **Modeling and Analysis of the Photovoltaic array Faults**  
Authors: amor Fezzani (Unité de Recherche Appliquée en Energie Renouvelables, Ghardaïa ) , Idriss Hadj Mahammed (Unité de Recherche Appliquée en Energie Renouvelables, Ghardaïa) , Said DRID (university of batna) , Larbi CHRIFI-ALAOUI (University of Picardie Jules Verne)
- 2535**      **An Overview Of Solar Cells Parameters Extraction Methods**  
Authors: TCHOKETCH KEBIR Selma (Ecole Nationale Polytechnique) , HADDADI Mourad ( ) , AIT CHEIKH Mohamed Salah ( )
- 2753**      **An experimental study of low concentration on monocrystalline solar cells**  
Authors: Abderrahmane HABIRECHE (USTHB) , Nacer SAIDI ( ) , Akkila BOUKHELIFA (USTHB) , Abdelaziz TALHA (USTHB) , Houria BOUMAARAF (USTHB)

**14:50 - 16:30**  
**TuB2 Coding, Cryptography and Transmission**

Amphi 1

*Session Chair(s): Krishna Busawon (Northumbria University)*

- 2**      **Block-Based Distributed Video Coding Without Channel Codes**  
Authors: Manel Benaissa (University of Constantine 1)
- 2211**    **Lossless Image Medical Compression Based on Mojette Transform Using DWT**  
Authors: Djamel Eddine Boukhari (University of Biskra )
- 2445**    **On the Optimization of the Average Number of Additions in the RADIX-2r Recoding Heuristic**  
Authors: Belkacem KHITER (Centre de Développement des Te) , Abdelkrim OUDJIDA (CDTA) , Mahmoud Belhocine (CDTA)
- 2498**    **Elliptic Curve Cryptographic Processor Design using FPGAs**  
Authors: Selma Haichour (UMBB) , Mhamed Hamadouche (UMBB)
- 2620**    **QoS evaluation in VoIP software with and without Blowfish encryption module**  
Authors: Khelf MOHAMED (USTO Oran) , Mohamed Ouslim (LMSE Lab. Electronics Dept. University USTO MB, Oran, Algeria 31000 ) , hamoudi mohammed (USTO MB) , Masmoudi Mostefa (University of science and tech)

14:50 - 16:30

TuB3

Sliding Mode

Amphi 2

*Session Chair(s): Abdulrahman Bajodah (King Abdulaziz University)*

- 2348**      **High Order Sliding Mode Observer Based Extremum Seeking Controller for a Continuous Stirred Tank Bioreactor**  
Authors: Bachir DAAOU (USTO-MB) , Denis DOCHAIN (Université Catholique de Louvain)
- 2383**      **Sliding mode Control for a Small Coaxial rotorcraft UAV**  
Authors: Mokhtari Rida (Abou Bekr Belkaid) , Brahim Cherki (University of Abou Bekr Belkaid, Tlemcen )
- 2423**      **Super Twisting Sliding Mode Control Of an Electric Vehicle**  
Authors: HASSAN BENARIBA (TLKEMCEN UNIVERSITY) , Abdelmadjid Boumediene (Tlemcen university)
- 2514**      **Experimental Evaluation of Induction Motor Robust Control Using Sliding Mode Linearization Technique**  
Authors: Benderradji Hadda (Univ. Msila) , Larbi CHRIFI-ALAOUI (University of Picardie Jules Verne) , Said DRID (University of Batna) , Makouf Abdessalam (Univ. Batna)
- 2823**      **Quadrotor Control using Generalized Dynamic Inversion and Terminal Sliding Mode**  
Authors: Uzair Ansari (King Abdulaziz University) , Abdulrahman Bajodah (King Abdulaziz University)

14:50 - 16:30

**TuB4 Discrete Event Systems & Software (SS): Special Session**

Room 1

*Session Chair(s): Redouane, KARA (Mouloud Mammeri University, Algeria) , Said AMARI (ENS Cachan, France) , Latéfa GHOMRI (Abou Bakr Belkaid University, Algeria)*

- 2451 Radial Basis Function Neural Network-based Adaptive Control of Uncertain Nonlinear Systems**  
Authors: Hamou AIT ABBAS (Université Amar Telidji - Lagh) , Mohammed BELKHEIRI (Université Amar Telidji de Laghouat) , Boubakeur ZEGNINI (Laboratoire d'Etude et de Développement des Matériaux semi-conducteurs et Diélec) , Abdelhamid Rabhi (, Université de Picardie Jules Verne)
- 2516 Kernel Methods to detect Intruders**  
Authors: Rachid Beghdad (Bejaia University) , Youcef Ziraoui , Nassim Kouache
- 2599 Fire safety DSL based algebra**  
Authors: Houda CHANTI (Haute Alsace University-France) , Laurent THIRY (Haute Alsace University-Mulhouse (France)) , Michel HASSENFORDER (Haute Alsace University-Mulhouse (France)) , Elizabeth BLANCHARD (CSTB) , Philippe FROMY (CSTB - Champs sur marne (France))
- 2623 Performance evaluation of a Flexible Manufacturing System using two formal methods**  
Authors: Liza Mameri (L2CSP UMMTO ) , Redouane, KARA (Mouloud Mammeri University, Algeria) , Said AMARI (ENS Cachan, France)
- 2815 Hybrid Control of DFIG Using Multicellular Converters**  
Authors: Fateh Taibi (Ecole Nationale Polytechnique) , Mohamed Seghir Boucherit (Enp) , Mohamed Tadjine ( ) , Omar Benzineb (University of Blida, Algeria)

14:50 - 16:30

TuB5

**Advanced Human Machine Interface (SS): Special Session**

Room 2

*Session Chair(s): Rachid GHERBI (University Paris-Sud XI, France) , Nadia ZENATI (CDTA, Algeria)*

2226

**Neural Network Balance Control of Hopping Robots in Flight Phase under Unknown Dynamics**

Authors: Hicham Chaoui (Tennessee Tech. University) , Suruz Miah (University of Ottawa) , Mohamed Redouane Kafi (Université Ouargla) , Bekhada HAMANE (University of Quebec (UQTR))

2686

**A Linguistic Perspective to Develop Graphical User Interfaces**

Authors: Iyad Khaddam (UCL) , Nesrine Nezhoudi (Université catholique de Louvain) , Jean Vanderdonckt (Université catholique de Louvain)

2688

**Towards a Linguistic Modeling of Graphical User Interfaces: Eliciting Modeling Requirements**

Authors: Iyad Khaddam (UCL) , Nesrine Nezhoudi (Université catholique de Louvain) , Jean Vanderdonckt (Université catholique de Louvain)

2820

**Extended Web Services for Remote Collaborative Manipulation in Distributed Augmented Reality**

Authors: Samir Benbelkacem (CDTA) , Nadia ZENATI (CDTA, Algeria) , Hayet Belghit (CDTA) , Abdelkader Bellarbi (CDTA) , Samir Otmane (IBISC)

2821

**An Improved MOBIL Descriptor for Markerless Augmented Reality**

Authors: Abdelkader Bellarbi (CDTA) , Nadia ZENATI (CDTA, Algeria) , Hayet Belghit (CDTA) , Mahfoud Hamidia (CDTA) , Samir Benbelkacem (CDTA) , Samir Otmane (IBISC Lab, University of Evry, France)



17:00 - 18:40

TuC1

Diagnosis

Auditorium

*Session Chair(s): Meriem Taouss (KAUST), Amal Choukchou-Braham (University of Tlemcen)*

45

**An Effective Method for Bearing Faults diagnosis**

Authors: ADEL BOUDIAF (1Welding and NDT Research, Cen) , Salah BOUHOUCHE () , ABDELKRIM MOUSSAOUI (Laboratory of Electrical Engineering of Guelma (LGEG) University of Guelma BP401) , Samira taleb (Welding and NDT Research Centre (CSC), BP 64 Cheraga, Algiers 16000, Algeria)

2341

**Smart Diagnosis Algorithm of the Open-Circuit Fault in a Photovoltaic Generator**

Authors: Wail REZGUI (Batna university)

2487

**Vibration-Based Bearing Fault Diagnosis by an Integrated DWT-FFT Approach and an Adaptive Neuro-Fuzzy Inference System**

Authors: Issam ATTOUI (URTI / CSC) , Nadir Boutasseta (URTI / CSC) , Nadir Fergani (URTI / CSC) , Brahim Oudjani (URTI / CSC) , adel Deliou (URTI / CSC)

2647

**Diagnostic of the Simultaneous of Dynamic Eccentricity and Broken Rotor Bars Using the Magnetic Field Spectrum of the air-gap for an Induction Machine**

Authors: SEGHIOUR Abdellatif (University Amar Telidji) , SEGHIER Tahar (Labo d'Étude et Développement des Matériaux Semi-Conducteurs et Diélectriques) , ZEGNINI Boubakeur (Labo d'Étude et Développement des Matériaux Semi-Conducteurs et Diélectriques)

2802

**Simulation and Experimental Study of Induction Motor Broken Rotor Bars Fault Diagnosis using Stator Current Spectrogram**

Authors: Ameer Fethi AIMER (USTO-Oran) , BOUDINAR Ahmed Hamida (USTO-MB) , BENOZZA Noureddine (USTO-MB) , BENDIABDELLAH Azeddine (USTO-MB)

17:00 - 18:40

TuC2

**Control Application 2**

Amphi 1

*Session Chair(s): Abdulrahman Bajodah (King Abdulaziz University)*

- 2215**      **Multivariable control of a drum-type boiler system through LQG fuzzy emulation**  
Authors: Oualid LAMRAOUI (UMBB) , Hacene HABBI (UMBB)
- 2319**      **Effects of geometric parameters and limits of application of microelectronic capacitive pressure sensors**  
Authors: Souhila Bouguima (University Abou Bekr Belkaid T)
- 2513**      **Design and Investigation of Fuzzy-PI and RST Controllers for a High Performance Matrix Converter Using Venturini Modulation Strategy Under Distorted Grid Voltage**  
Authors: Bekhada HAMANE (University of Quebec (UQTR)) , Mamadou Lamine Doumbia (Dept. of Electrical and Computer Engineering, Université du Québec à Trois-Rivi) , Hicham Chaoui (Tennessee Tech. University)
- 2515**      **An adaptive fuzzy PI control for a class of unknown nonaffine systems**  
Authors: Cherrat Nidhal (University jijel) , Hamid BOUBERTAKH (University of Jijel)
- 2650**      **Dynamic Model Prediction Control for an Activated Sludge Model based on a T-S Multi-Model**  
Authors: MATOUG LAMIA (Badji Mokhtar university) , M.Tarek Khadir M.Tarek (Badji Mokhtar University)

17:00 - 18:40

TuC3

Fuzzy Control & Sliding mode

Amphi 2

*Session Chair(s): Belkacem Kada (KAU University) , Boumediène BENYAHIA (UABB-Tlemcen)*

2246

**Fuzzy Adaptive Backstepping Sliding Mode Control of the Cart-Pendulum System**

Authors: KHALISSA BEHIH (UNIVERSITY OF BBA) , djamila Zehar (University of Bordj Bou Arreridj) , Ahmed Abdelmalik () , Khier Benmahammed (University of Setif)

2465

**Sliding Mode Observers for T-S Fuzzy Systems with Application to Sensor Fault Estimation**

Authors: Farah HAOUARI (Université Aboubekr Belkaid) , Brahim Cherki (University of Abou Bekr Belkaid, Tlemcen ) , Mohamed DJEMAI (UVHC)

2540

**An LMI Approach to Robust  $H^\infty$  Control and Stabilization Analysis for Uncertain T-S Fuzzy Systems with State and Input Time-Delays**

Authors: Faiçal BOURAHALA () , Nafir Nourreddine (Universty)

2559

**A Multiobjective Integer Differential Evolution Approach for Computer Aided Drug Design**

Authors: Abla Mahdadi (Computer Science Department ) , Souham Meshoul (Computer Science Department Constantine 2 University-A.Mehri Constantine,Algeria)

2581

**Backstepping Approach for Nonlinear Super Twisting Sliding Mode Control of an Induction Motor**

Authors: Mohamed Horch (Université de Tlemcen) , Abdelmadjid Boumediene (Tlemcen university) , Lotfi BAGHLI (Université de Tlemcen)

2597

**Output feedback based sliding mode control of active suspension using backstepping**

Authors: Jagat Rath (Kyungpook National Univeristy) , Veluvolu Kalyana () , Michael Defoort ()

17:00 - 18:40

TuC4

TuC4 : Maintenance and Reliability

Room 1

*Session Chair(s): Dr. Mohamed-Larbi Rebaiaia () and Dr. A. Khattab*

- 2844**      **A maintenance optimization model for a second hand stochastically deteriorating system under different operating environments**  
Authors: Daoud Ait-Kadi (Laval University)
- 2845**      **Risk Assessment in ERP projects using an integrated method**  
Authors: Daoud Ait-Kadi (Laval University) , Mohamed-Larbi Rebaiaia () , Afshin Jamshidi (Laval University)
- 2846**      **Prioritization of Health Service Failures; A novel Cost-based framework**  
Authors: Samira Abbasgholizadeh-rahimi (Laval University) , Afshin Jamshidi (Laval University) , Daoud Ait-Kadi (Laval University) , Mohamed-Larbi Rebaiaia ()
- 2847**      **Modified Block Replacement with Used Items at Scheduled Periods and at Failures**  
Authors: Mohamed-Larbi Rebaiaia () , Daoud Ait-Kadi (Laval University) , Samira Abbasgholizadeh-rahimi (Laval University) , Afshin Jamshidi (Laval University)
- 2848**      **A combination of reliability calculus and Importance Measures for Probability Risk Analysis**  
Authors: Mohamed-Larbi Rebaiaia () , Daoud Ait-Kadi (Laval University) , Afshin Jamshidi (Laval University) , Samira Abbasgholizadeh-rahimi (Laval University)

17:00 - 18:40

TuC5

Renewable Energy 3

Room 2

*Session Chair(s): Krishna Busawon ( ) , Abdelmadjid Boumediene (Tlemcen university)*

2373

**Numerical Solution of NEPCM Melting inside Spherical Enclosure**

Authors: BECHIRI Mohammed (University M'Hamed Bougara) , Mansouri Kacem (University M. Bougara, Energy and Mechanical Engineering Laboratory) , Hamlet Nawal (University M. Bougara, Energy and Mechanical Engineering Laboratory) , Amirat Silia (University M. Bougara, Energy and Mechanical Engineering Laboratory)

2437

**Improvements of the Combustion Characteristics by the Hydrogen Enrichment**

Authors: Fethi BOURAS (University of El Oued)

2466

**Voltage and Frequency Control of Wind-Powered Islanded Microgrids based on Induction Generator and STATCOM**

Authors: Allal El Moubarek BOUZID (Department of Electrical & Com) , Pierre Sicard (Department of Electrical & Computer Engineering Université du Québec à Trois-R) , Ahmed Cheriti (1 Department of Electrical & Computer Engineering Université du Québec à Trois-R) , Josep M Guerrero (Department of Energy Technology, Aalborg University, Aalborg East 9220, Denmark) , Mohamed Bouhamida (Department of Electrical Engineering, Université des Sciences et de la Technolo) , Mohammad S Golsorkhi (4The School of Electrical and Information Engineering, The University of Sydney)

2499

**Channels design and dimensions Effect on performance of proton exchange membrane fuel cell (PEMFC)**

Authors: Kerkoub Youcef (USTHB) , Benzaoui Ahmed (USTHB) , Yasmina Kerboua Ziari (USTHB) , haddad Fadila (usthb) , Babbou Allal (USTHB)

2727

**LMI Conditions for Non-Quadratic Stabilization of T-S Models with Pole Placement Assignment**

Authors: Abdelmadjid CHERIFI (URCA) , Kevin Guelton (University of Reims, France) , Laurent Arcese (University of Reims, France)

09:20 - 11:00

WeA1

WeA1 : Wind Energy

Auditorium

*Session Chair(s): Nadhir Messai (CReSTIC, University of Reims Champagne-Ardenne) , Amal Choukchou-Braham (University of Tlemcen Algeria)*

84

**Computer Aided Design and Multiple Coupled Circuit Modelling of BDFM**

Authors: Saad CHAOUCH (Hadj lakhdar University, Batna)

**Modeling and Direct Power Control for a DFIG Under Wind Speed Variation**

2229

Authors: Mourad Loucif (Tlemcen university) , Abdelmadjid Boumediene (Tlemcen university)

2668

**Fuzzy Logic based Sensorless MPPT Algorithm for Wind Turbine System Driven DFIG**

Authors: Dida Abdelhak (Biskra university) , benattous Djilani ()

2670

**Modeling and Control of DFIG via Back-to-Back Multilevel Converters using Fuzzy Logic Controller**

Authors: Dida Abdelhak (Biskra university) , benattous Djilani ()

2682

**State Space Modeling and Performance Analysis of Self-Excited Induction Generators for Wind Simulation**

Authors: Allal El Moubarek BOUZID (Department of Electrical & Com) , Ahmed Cheriti (1 Department of Electrical & Computer Engineering Université du Québec à Trois-R) , Pierre Sicard (Department of Electrical & Computer Engineering Université du Québec à Trois-R) , Mohamed Bouhamida (Department of Electrical Engineering, Université des Sciences et de la Technolo) , Mustapha Benghanem (Université des sciences et de la technologie d'Oran - Mohamed-Boudiaf)

09:20 - 11:00

**WeA2 : Model Predictive Control and Application (SS): Special Session**

Amphi 1

*Session Chair(s): Hafaifa Ahmed ( ) , Abdellah KOUZOU (University of Djelfa, Algeria)*

- 1131 State Constrained predictive control of Cart with Inverted Pendulum**  
Authors: Bdirina El Khansa (ENP) , Boucherit Mohamed Seghir (ENP) , Madni Zineb (Djelfa university) , Hadjar Ramdane (King Saoud university)
- 2205 Genetic Algorithm Based Adaptive Fuzzy Terminal Synergetic DC-DC Converter Control**  
Authors: YAKOUB NETTARI (University setif1) , Mohamed harmas (university )
- 2237 Sliding Mode Control And Optimal GPC Algorithm for Coupled Tanks**  
Authors: Nail Bachir (Djelfa) , Bekhiti Belkacem ( ) , Bdirina El Khansa (ENP) , Kouzou Abdellah ( ) , Hafaifa Ahmed ( )
- 2797 Simple Sliding Mode Applied to the Three-Level Boost Converter for Fuel Cell Applications**  
Authors: Mohamed Djameleddine BOUGRINE (University of Laghouat) , Atallah BENALIA (Amar telidji university) , Mohamed El Hachemi BENBOUZID (LBMS, Université de Bretagne Occidentale UBO - Brest.)
- 2838 Development of MPC Algorithm for quasi Z-Source Inverter (qZSI)**  
Authors: Kouzou Abdellah ( ) , bakeer abualkasim (U. Aswan, Egypt) , Mohamed Ali Alzanaty (U. Aswan, Egypt) , Mohamed Orabi (U. Aswan, Egypt)

09:20 - 11:00

WeA3

Information Technology 3

Amphi 2

*Session Chair(s): Nidhal Bouaynaya (Rowan University, USA)*

- 1152**      **Homogenous and Secure Weighted Clustering Algorithm for Mobile Wireless Sensor Networks**  
Authors: Dahane Amine (Laresi Laboratory, USTO, Oran) , Berrached Nasreddine (Laresi Laboratory, USTO, Oran) , Loukil Abdelhamid (Laresi Laboratory, USTO, Oran)
- 2171**      **Arbitrary Shaped Antenna Design for LTE2300/LTE2500/WLAN Applications**  
Authors: Mohammed MOULAY (TLEMCEN UNIVERSITY) , ABRI MEHADJI (ABOU BEKR BELAKID UNIVERSITY) , Hadjra ABRI BADAOU (Tlemce, university)
- 2344**      **A low overhead routing protocol for Ad hoc networks**  
Authors: DIDI FEDOUA (University of TLEMCEN) , BAMBRIK ILYAS (University of Tlemcen)
- 2441**      **Network Selection Using Game Theory**  
Authors: Fayssal Bendaoud (Université de Tlemcen) , Marwen Abdennebi (L2TI, Paris 13 University) , DIDI FEDOUA (University of TLEMCEN)
- 2767**      **Framework for VOIP speech database generation and a comparison of different features extraction methods for speaker identification on VOIP**  
Authors: El-taani Imene (USTHB) , amrous Anissa Imen (USTHB) , Mohamed Debyeche (USTHB)



09:20 - 11:00

WeA4

Power Systems

Room 1

*Session Chair(s): Abdulrahman Bajodah (King Abdulaziz University) , Belkacem Kada (KAU University)*

66

**Study and Implementation of indirect space vector modulation (ISVM) for direct matrix converter**

Authors: Ali BENACHOUR (ENP) , BERKOUK El Madjid (National Polytechnique School) , Mohaned oulhadj mahmoudi (ENP)

2264

**Improvement of a photovoltaic pumping system for irrigation of greenhouses Case study for Laghouat, Algeria**

Authors: HADJAISSA Boubakeur (Laghouat university) , AMEUR Khaled (Laghouat university) , Najib Essounbouli (CRESTIC, IUT de Troyes) , AIT CHEIKH Mohamed Salah ( )

2290

**$\mu$ -Synthesis Based Robust Voltage Control for Cascade Boost Power Converter**

Authors: Noureddine Goléa (Larbi Ben M'hidi University) , Fateh Ounis (Larbi Ben M'hidi University)

2439

**Speed-Sensorless Direct Torque and Flux Control of PMSM Based on Extended Kalman Filter Using Space Vector Modulation**

Authors: KENDOUCI Khedidja (University of Sciences and Tec) , mazari benyounes (USTO) , Mohamed rachid BENHADRIA (University of Sciences and Technology of Oran –Mohamed Boudiaf,) , DADI rachida (University of Sciences and Technology of Oran –Mohamed Boudiaf,)

2440

**Energetic Macroscopic Representation (EMR) based on Internal Model Control (IMC) for Fuel Cell and Supercapacitor Hybrid Electric Vehicles**

Authors: Abderrezak Badji (Université Mouloud Mammeri) , Hakim Djoudi (Université Mouloud Mammeri) , BENYAHIA Nabil (Mouloud MAMMERI University) , Hakim Denoun (Université Mouloud Mammeri) , Mustapha Zaouia (Université Mouloud Mammeri) , BENAMROUCHE Nacereddine (Mouloud MAMMERI University)

09:20 - 11:00

WeA5

**Control Application 3**

Room 2

*Session Chair(s): Samir Otmane (IBISC) , Lotfi Beji (University of EVRY)*

1139

**H-infinity controller design for Blood Glucose Regulation in Diabetes Patients in the Presence of Uncertain parameters**

Authors: Aicha Hachana (Electrotechnic Department) , Abdelaziz Mourad (Setif Universite)

2455

**Stable indirect adaptive HONN control for a class of non affine SISO nonlinear systems**

Authors: Nassira Zerari (University of Constantine 1 C) , Mohamed Chemachema University of Constantine 1 Constantine, Algeria )

2546

**Induction motor cracked rotor bars fault analysis using an improved Root-MUSIC method**

Authors: Ahmed BOUDINAR (USTO) , BENOZZA Nouredine (USTO-MB) , BENDIABDELLAH Azeddine (USTO-MB)

2739

**An Adaptive Backstepping Controller of Doubly-Fed Induction Generators**

Authors: Tarek AOUNALLAH (USTHB) , Abdelaziz Hamzaoui ( ) , Najib Essounbouli (CReSTIC, IUT de Troyes) , Farid Bouchafaa (LINS, USTHB)

2224

**Design and Realization of a Real-Time Control Platform for Quadrotor Unmanned Aerial Vehicles**

Authors: Mohamed Redouane Kafi (Université Ouargla) , Hicham Chaoui (Tennessee Tech. University) , Bekhada HAMANE (University of Quebec (UQTR)) , Abdelrezak Debilou (Université Biskra)

11:00 - 11:40

**WePoster2 Poster Session 2**

Hall

*Session Chair(s): Brahim Cherki (University of Abou Bekr Belkaid, Tlemcen )*

- 7**      **Design of Mobile Robot Teleoperation System Based on Virtual Reality**  
Authors: Masmoudi Mostefa (University of science and tech) , L. KADDOUR EL BOUDADI (USTO Oran) , Abdelhamid Loukil (USTO Oran) , Khelf MOHAMED (USTO Oran) , Dahane AMINE (USTO Oran)
- 16**      **ASE analysis Adaptive Pilot Symbol Assisted Modulation with Imperfect CSI**  
Authors: Assia HAMIDANE (Ecole Nationale Polytechnique) , Abderrahmane ANOU (University of Blida1 ) , Daoud BERKANI (Ecole Nationale Polytechnique)
- 40**      **Control information and analyzing of metering gas system based of orifice plate**  
Authors: Harrouz Abdelkader (University of Adrar) , Benatallah Ali (university of adrar) , Harrouz Omar (ISNAB)
- 57**      **Importance of Eyes and Eyebrows for Face Recognition System**  
Authors: Radji Nadjat (Institute of Electrical and EI)
- 86**      **Voltage control of DC-DC Buck Converter using Second Order Sliding Mode Control**  
Authors: Hamza Sahraoui (Batna university) , Said DRID (university of batna) , Larbi CHRIFI-ALAOUI (University of Picardie Jules Verne) , Mohammed HAMZAOU (Université de Picardie Jules Verne )
- 1165**      **Students' Portal Architecture based on SOA**  
Authors: Rami Raba (Alazhar University-Gaza)
- 2220**      **Facial skin motion localization in a video sequence**  
Authors: Cherabit Noureddine (ENST. National School of Techn) , Djeradi Amar (University of Science and Technology Houari Boumedienne (USTHB)) , Chelali Fatma zohra (University of Science and Technology Houari Boumedienne (USTHB))

11:00 - 11:40

**WePoster2 Poster Session 2**

Hall

*Session Chair(s): Brahim Cherki (University of Abou Bekr Belkaid, Tlemcen )*

- 2328**      **Comparison between Fuzzy, Neural and Neuro-Fuzzy Controllers for Mobile Robot Path Tracking**  
Authors: CHERROUN Lakhmissi (Univ of djelfa)
- 2443**      **A Simple Small Size Disk Microstrip Patch Antenna with a Rectangular Aperture for UWB Application**  
Authors: Djamel KHEDROUCHE (University Mohamed Boudiaf), Tahar BOUGOUTAIA (University Mohamed Boudiaf of M'sila) ,  
Abdesselam Hocini (University of Mohamed Boudiaf )
- 2497**      **A New Thinning Algorithm for Binary Images**  
Authors: Lynda Ben Boudaoud (LIMED) , Abderrahmane Sider (LIMED) , Abdelkamel Tari (LIMED)
- 2517**      **Modeling and generation of seismic ground motion for active control in civil engineering**  
Authors: Azizou Fethi (USTHB)
- 2518**      **Tracking PDC controller for CSTR**  
Authors: Mohamed HAZERCHI (National Polytechnic School) , Rachid ILLOUL (Ecole Nationale Polytechnique )
- 2602**      **Optimal Load Frequency Control Based on Artificial Bee Colony Optimization Applied to Single, Two and Multi-Area Interconnected Power Systems**  
Authors: Nour EL Yakine Kouba (Laboratory of Electrical and Industrial Systems (LSEI), USTHB, Algiers, Algeria) , Mohamed Menaâ (USTHB) , Mourad Hasni (USTHB) , Mohamed BOUDOUR ( )
- 2604**      **Direct Power Control Modeling with Optimized LCL filter for Grid Integrated Renewables**  
Authors: Mohamed Amine Djema (USTHB (LSEI)) , Mohamed BOUDOUR ( ) , Ahmed Amine Ladjici (USTHB (LSEI))

11:00 - 11:40

**WePoster2 Poster Session 2**

Hall

*Session Chair(s): Brahim Cherki (University of Abou Bekr Belkaid, Tlemcen )*

- 2619**      **Outliers' Effect Reduction of One-Class Neural Networks Classifier**  
Authors: Bilal Hadjadji (University of Science and Tech) , Youcef CHIBANI (USTHB)
- 2651**      **Stabilization of Fractional Chen Chaotic System by Linear Feedback Control**  
Authors: Karima Rabah (Skikda University) , Samir Ladaci (National Polytechnic School of) , Mohamed Lashab (Skikda University)
- 2681**      **Expiremental validation of a fault tolerant control of induction motor using a voting algorithm**  
Authors: Abdelmadjid Gouichiche (LGEP,Tiaret) , Mohamed ZABAR (IBN Khaldoun University) , Zakaria CHEDJARA (IBN Khaldoun University) , Ahmed Safa (LGEP,Tiaret) , Mohamed Tadjine ( )
- 2703**      **Polarimetric SAR images clustering with Gaussian Mixtures Model**  
Authors: Boussad Azmedroub (USTHB) , Mounira OUARZEDDINE (LTIR, FEI, USTHB)
- 2724**      **Tomographic Image Reconstruction Using Filtered Back Projection (FBP) And Algebraic Reconstruction Technique (ART)**  
Authors: Nabil Chetih (CSC)
- 2785**      **Building diphone database for Arabic text to speech synthesis system**  
Authors: Aymen El Kadhi (ENIT) , Hamid AMIRI ( )
- 2800**      **Investigations on the flexibility of a Group Sequence and its effect on the Best-Case Schedule**  
Authors: Zakaria YAHOUNI (Tlemcen University) , Nasser Mebarki (Nantes university) , Zaki SARI (Tlemcen University)

11:00 - 11:40

TuPoster

Poster Session 1

Hall

*Session Chair(s): Brahim Cherki (University of Abou Bekr Belkaid, Tlemcen )*

- 20**      **Feedback Linearization-Virtual Flux Direct Power Control for Three-phase Five-Level NPC Boost Rectifier**  
Authors: Bouzidi Mansour (University Kasdi Merbah, Ouarg) , Benaissa Abdelkader (University of Djilali Liabes, Sidi Bel Abbes) , Bouafia Saber (University of Djilali Liabes, Sidi Bel Abbes) , Bouzidi Ali (University of Hadj Lakhdar Batna) , Barkat Said (M'sila University, M'sila)
- 75**      **Fabrication of ZnO thin film based humidity sensor with fast response by sol-gel associated to spin coating method**  
Authors: GHANEM Salah (Constantine1 University) , telia azeddine (Constantine1 univercity) , boukaous chahra (Constantine1 univercity)
- 1159**    **Study of the Variation of the Specific Gravity of the Electrolyte during Charge / Discharge Cycling of a Lead Acid Battery**  
Authors: Redouane Megateli (Centre de Développement des En) , Amar Hadj Arab (Centre de Développement des Energies Renouvelables, CDER) , Idir Gaci (Centre de Développement des Energies Renouvelables, CDER)
- 2190**    **Non Linear Control of a Doubly Fed Induction Generator in Wind Turbines**  
Authors: Doumi M'Hamed (University of Bechar)
- 2299**    **Pre-feasibility study of the hybridization of diesel plants in southern Algerian**  
Authors: AHMED BOUBENIA (University of Boumerdes) , KAMAL MOHAMMEDI (University of Boumerdes Meso team)
- 2307**    **3D Finite Element Analyses and Design Optimization of AFPM for Flywheel Energy Storage System**  
Authors: BENDIB MOHAMED EL HADI (UNIVERSITY SETIF) , KHALED BELHOUCHE (Dr) , hachemi mabrouk (university setif 1)

11:00 - 11:40

TuPoster

Poster Session 1

Hall

*Session Chair(s): Brahim Cherki (University of Abou Bekr Belkaid, Tlemcen )*

- 2404**      **Prediction Global Solar Radiation and Modeling Photovoltaic Module Based on Artificial Neural Networks**  
Authors: Lalia Miloudi (University of Boumerdès)
- 2420**      **Fractional order direct current control algorithm for three-phase grid-connected PV system**  
Authors: Afghoul Hamza (LASS, Msila University) , Fateh Krim (Setif-1 University) , CHIKOUCHE Djamel (M'sila University) , Antar Beddar (Skikda University)
- 2446**      **Energy analyses of a house Heated by Radiators Low Temperature connected with Solar Storage Tank**  
Authors: ILHEM ZEGHIB (Faculty of Exact Sciences) , chaker abla () , DRIFA BELKHARCHOUCHE (UNIVERSITY)
- 2611**      **Investigation of solar air collector with offset strip fin absorber plate for drying agricultural products under different climates of Algeria**  
Authors: Abdelouahab BENSEDDIK (Unité de Recherche Appliquée e) , Abdul Karim Allaf (Laboratory of Engineering Science for Environment LaSIE FRE 3474 CNRS, Universi) , Ahmed AZZI (Unité de Recherche des Matériaux et Energie Renouvelables, (URMER), Faculté des ) , rachid KHENNICHE (Unité de Recherche Appliquée en Energies Renouvelables, URAER,)
- 2665**      **Actuators Fault Detection Using Unknown Input Observer in Hydraulic System**  
Authors: SOUAD TAHRAOUI (University of Tlemcen) , Abdelmadjid Meghabbar (University of Tlemcen) , Abderrahmane Bellaouar (University of Tlemcen) , Djamilia Boubekour (University of Tlemcen)
- 2693**      **Thermal Analysis of The Alsat-1 Satellite Battery Pack Sub Assembly into the Honeycomb Panel**  
Authors: Abdelmadjid Boudjemai (Centre of Satellite Developmen)

11:00 - 11:40

TuPoster

Poster Session 1

Hall

*Session Chair(s): Brahim Cherki (University of Abou Bekr Belkaid, Tlemcen )*

- 2701**      **Detection of High Impedance Faults in Electrical Power Network**  
Authors: SIHEM ALIOUAT (USTHB) , wafiya KORZET (USTHB) , AZZEDINE NACER (USTHB) , KAMEL BOUDJIT (USTHB) , HOUCINE MOULAI (USTHB)
- 2719**      **Fuzzy Logic and Selectivity of Control for Controlling the Paralleling of Four Leg Shunt Active Power Filters Based on Three Dimensional Space Vector Modulation**  
Authors: Chebabhi Ali (Djillali Liabes University ) , Fellah Mohammed Karim (ICEPS Laboratory) , Kessal Abdelhalim (Faculty of Science and Technology University of Bordj Bou Arreridj) , Benkhoris Mohamed Fouad (IREENA Laboratory University of Nantes at Saint Nazaire France)
- 2794**      **An Evaluation of Conventional and Computational Intelligence Methods for Medium and Long-Term Load Forecasting in Algeria**  
Authors: Abderrezak Laouafi (University of 20 August 1955) , Mourad Mordjaoui (University of Skikda) , Farida Laouafi (University of 20 August 1955)
- 2629**      **Analysis of thermal and electrical performance of a solar PV / T air collector, Energetic study for two configurations**  
Authors: Mohamed El Amine Slimani (University of Sciences and Technology Houari Boumediene) , Madjid Amirat (usthb) , Sofiane Bahria (CDER) , Ahmed Mediani (Research unit in Renewable energies in Saharan Medium) , Rabah Sellami (Renewable Energy Equipment Division, Development Unit of Solar )
- 2660**      **PAPR reduction in SFBC-MIMO-MC-CDMA systems using Method of Attenuation Complex Chips**  
Authors: Hocine Merah (University) , Djamel SLIMANI (University of Sétif-1) , Mohammed F Alsharek (university)