University Of Mascara
Université Mustapha STAMBOULI

ICAECCT

Department of Electrical Engineering
Faculty of Sciences and Technology
MUSTAPHA STAMBOULI University

The 1st International Conference on Advances in Electronics, Control and Computer Technologies.

October 25th - 26th, 2023
Mascara, Algeria

PROGRAM SCHEDULE

ICAECCT'23

Scientific Committee Chairs

CHAIR
Dr. Soufyane CHEKROUN
University Mustapha Stambouli
    of Mascara. Algeria

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Dr. Mourad HEBALI
University Mustapha Stambouli
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University Mustapha Stambouli
    of Mascara, Algeria

Dr. Abdelkader MAACHOU
University Mustapha Stambouli
    of Mascara, Algeria

Dr. Abdelhak ZOUGGARET
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Dr. Mokhtar BESSEGHIER
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    of Mascara, Algeria

Dr. Youcef Islam DJILANI KOBIBI
University Mustapha Stambouli
    of Mascara, Algeria

ICAECCT 2023

ABOUT

The ICAECCT is the first international Conference on Advances in Electronics, Control and Computer Technology, organized by the faculty of Sciences and technology, Mustapha Stambouli University of Mascara, Algeria.

This conference aims to bring all prominent scientists, researchers, innovators, inventors, and industrial practitioners to exchange and share experiences and research results on automatics, electronics, Telecommunications and biomedical engineering.

The ICAECCT'23 includes variety topics related to the: control systems, robotics and automation, electronics and its applications, telecommunications, biomedical engineering and High Voltage Engineering.

For the first edition of the ICAECCT'23 will be a hybrid conference that will run fully in-person and fully virtually.

CONFERENCE TOPICS

CONTROL SYSTEMS, ROBOTICS AND AUTOMATION
ELECTRONICS AND ITS APPLICATIONS
TELECOMMUNICATIONS
BIOMEDICAL ENGINEERING
HIGH VOLTAGE ENGINEERING AND APPLICATIONS

HONORARY PRESIDENTS

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Prof. Abed BOUADI
Rector of Mustapha Stambouli University, Mascara, Algeria

Co-President
Prof. Rabah KHENATA
Vice Rector for External Relations, Cooperation, Animation, Communication and Scientific Events

Co-President
Dr. Amaria BEKHTI SIAD
Interim Dean of the Faculty of Sciences and Technology

CONFERENCE PRESIDENT

Dr. Samir GHOUALI
University Mustapha Stambouli of Mascara, Algeria

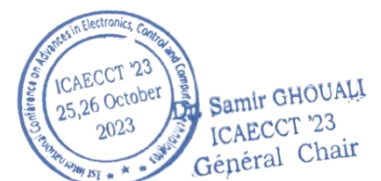| 0 8 : 3 0 – 1 7 : 0 0	CONFERENCE REGISTRATION AND CUSTOMER RELATIONS
0 8 : 3 0 – 0 9 : 0 0	WELCOMING ATTENDEES
0 9 : 0 0 – 0 9 : 2 0	NATIONAL ANTHEM النشيد الوطني RECITATION OF VERSES FROM THE HOLY QURAN تلاوة آيات من القرآن الكريم
0 9 : 2 0 – 1 0 : 0 0	**OPENING CEREMONY** *Mr. Farid Mohamedi* WALI de Mascara *Prof. Abed BOUADI* Rector of Mustapha Stambouli University, Mascara, Algeria Honorary Co-President *Prof. Rabah KHENATA* Vice Rector for External Relations, Cooperation, Animation, Communication and Scientific Events Honorary Co-President *Dr. Amaria BEKHTI-SIAD* Interim Dean of the Faculty of Sciences and Technology Conference Chair *Dr. Samir GHOUALI* Associate Professor, Faculty of Sciences and Technology, Mustapha Stambouli University Mascara Algeria

1 0 : 2 0 – 1 0 : 4 0	**P** **L** **E** **N** **A** **R** **Y**	Prof. Mohamed Benaoumeur Senouci University of Southern Denmark
		(PRESENTIAL) **BRINGING THE POWER OF AI TO THE INTERNET OF THINGS**
1 0 : 4 0 – 1 1 : 0 0		Prof. Miloud Rezkallah Senior Researcher/Project Manager CR2IE | Energy Intelligence Research and Innovation Center Associate Professor; School of Higher Technology (ETS), Canada
		(PRESENTIAL) **CHALLENGES AND IMPLEMENTATION OF DECENTRALIZED SMART ENERGY SYSTEMS FOR REMOTE SITES IN CANADA**
1 1 : 0 0 – 1 1 : 2 0		Prof. Mustapha HATTI Research Director - UDES/EPST-CDER
		(PRESENTIAL) **SMART CITIES: CONCEPTS AND CONDITIONS OF SUCCESS**
1 1 : 2 0 – 1 1 : 4 0		Dr. Michael Onyema EDEH Head of Department, Mathematics and Computer Science at Coal City University, Nigeria
		(VIRTUAL) **Cybersecurity implication of Mobile Banking**
1 1 : 4 0 – 1 2 : 0 0		Prof. Kamil Hussein EMAD Doctor of Engineering, Professor of Mechanical Engineering at Al-Furat Al-Awsat Technical University - Iraq
		(VIRTUAL)

1 2 : 0 0 – 1 4 : 0 0	

LUNCH TIME

FACE TO FACE CONFERENCE ORAL SESSION (Physical)

		ROOM A: Control Systems, Robotics and Automation	
Session Chairmen		**Prof. Miloud REZKALLAH** Senior Researcher/Project Manager at CR2IE	Energy Intelligence Research and Innovation Center Associate Professor; School of Higher Technology (ETS), Canada **Dr. Djamel Eddine CHAOUCH** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Ahmed LARBAOUI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria	
	ID		
14:00– 14:15	55	Modeling a Hybrid Compensation System Using Robust GPC Control with a Recurrent Neural Network to Compensate for Powers in a Transmission Line	
		Participant	Abdelkrim BOUANANE *Dr. Moulay Taher University Saida*
		Co-authors	NERZIOU MADANI, RAOUTI DRISS, YAHIAOUI MERZOUG
14:15– 14:30	71	Study the Influence of Emotions on Language Identification from Speech	
		Participant	Houari HORKOUS *Ecole National Polytechnique*
		Co-authors	
14:30– 14:45	72	Passivity based control of a two-link flexible manipulator	
		Participant	Adel BELHERAZEM *University of sciences and technologies of Oran*
		Co-authors	Zakaria BELLAHCENE, Abdelmalek LAIDANI
14:45– 15:00	73	Robust Adaptive Control of Remotely Operated Underwater Vehicle (ROV) for Dam Inspection	
		Participant	Zakaria BELLAHCENE *University of sciences and technology of Oran*
		Co-authors	ADEL BELHERAZEM, Abdelmalek LAIDANI, Mohammed BOUHAMIDA
15:00– 15:15	75	Photovoltaic Generator Analysis based on Maximum Power Point Tracking with DC/DC Converter for Motor Pump Applications	
		Participant	Fatima MOULAY *University of Technology Djilali Liabes of Sidi bel abbes*
		Co-authors	HABBATI ASSIA, OUKLI MIMOUNA
15:15– 16:15		Poster session 1 & coffee break	
16:15– 16:30	302	Telemetries forecasting: A preventive approach for satellite operations, diagnostic and monitoring	
		Participant	Ali KADDOURI *Algerian Space Agency*
		Co-authors	Saiah Bekkar, Djelloul Saiah
16:30– 16:45	78	Energy Management System Enhancement for Electric Vehicle Application	
		Participant	Ibrahim Farouk BOUGUENNA *University Mustapha Stambouli of Mascara*
		Co-authors	Abdelghani ZABEL, Ahmed TAHOUR, Mohammed Benmadani DEBBAT, Mohamed AMRI

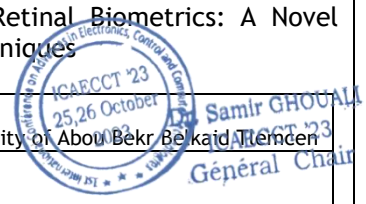# ROOM B: Electronics and its Applications

Session Chairmen		**Prof. Mustapha HATTI** Research Director - UDES/EPST-CDER **Dr. Mourad HEBALI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Hocine Abdelhak AZZEDDINE** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Abdelkader MAACHOU** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria
	ID	
14:00– 14:15	50	Optimization of Technological Parameters Process of Mechanically Stacked Si/Ge Solar Cell for High Performance
		Participant — Kheira AMEUR *University Djillali Liabes of Sidi Bel Abbes*
		Co-authors — Nadia BENSEDDIK, Halima MAZARI, Kheira OUARI, Zineb BENAMARA
14:15– 14:30	156	Effective MPPT Technique for Wind Energy Conversion System
		Participant — Mohamed KAOUANE *Faculty of technology - UMBB*
		Co-authors — Akkila BOUKHELIFA
14:30– 14:45	166	Small Size, Big Impact: CubeSat Imaging with COTS Hardware
		Participant — Mohammed amine ZAFRANE *University of Science and Technologies of Oran*
		Co-authors — AHMED RAMZI HOUALEF, AHMED TAHIR
14:45– 15:00	51	Forest Firefighting Using Drone and Artificial Intelligence
		Participant — Ibrahim Farouk BOUGUENNA *University Mustapha Stambouli of Mascara*
		Co-authors — Zolikha DAHNOUN
15:00– 15:15	161	Closed Loop Ćuk Converter Modeling for Photovoltaic Conversion System
		Participant — Mohamed Kaouane *Faculty of technology - UMBB*
		Co-authors — Akkila BOUKHELIFA
15:15– 16:15		**Poster session 1 & coffee break**
16:15– 16:30	123	Spontaneous Electric Polarization and Photovoltaic Properties of Stephanite for Thin-Film Solar Celle: A First-Principles Investigation
		Participant — Naouel CHELIL *University Mustapha Stambouli of Mascara*
		Co-authors — Mohammed SAHNOUN
16:30– 16:45	177	Study and development of a pseudo-random number generator on FPGA
		Participant — Omar Medjadj *University Mustapha Stambouli of Mascara*
		Co-authors — Benaoumeur IBARI, Mourad HEBALI, Rezali BAGHDADI, Mohammed El-Amine BEYOUR, Hocine Abdelhak AZZEDDINE
16:45– 17:00	196	Study the Electrical Characteristics of a Schottky Diode Based Au/n-type InN/InP at Different Frequencies
		Participant — Abdelkader BAGHDAD BEY *University Mustapha Stambouli of Mascara*
		Co-authors — A. TALBI, M. A. BENAMARA, Z. BENAMARA, F. DUCROQUET

ICAECCT '23
25,26 October
2023

Samir GHOUALI
ICAECCT '23
Général Chair

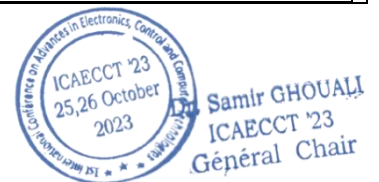# ROOM C: Telecommunications and its Applications

Session Chairmen	**Prof. Mohamed Benaoumeur Senouci** University of Southern Denmark **Dr. Mohamed Larbi TAYEBI TAYEBI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Mokhtar BESSEGHIER** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Mouweffeq BOUREGAA** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Fouad KHERBOUCHE** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria

	ID	
14:00– 14:15	14	**Electromagnetic Optimization of Bandpass Cross-Coupled Filter for mobile Communications**
		Participant — Lamia SENASLI Laboratory of Electronics, Advanced Signal Processing and Microwave
		Co-authors — MEHDI DAMOU, NOUR EL HOUDA SARA SENASLI, CHETIOUI MOHAMMED GOUNI SLIMANE, ABDELHAKIM BOUDKHIL
14:15– 14:30	256	**Preamble Design for Channel Estimation in FBMC/OQAM systems**
		Participant — Ahmed Bouzidi DJEBBAR Djillali Liabes University, Sidi-Bel-Abbes
		Co-authors — DAHMANE REBOUH, MOKHTAR BESSEGHIER
14:30– 14:45	19	**Design of a Filter Based on Direct Coupled Resonators Using the Coupling Matrix Technique**
		Participant — Mehdi DAMOU Laboratory of Electronics, Advanced Signal Processing and Microwave
		Co-authors — GOUNI SLIMANE, BOURAS MAROUA, CHETIOUI MOHAMMED, BOUDLHIL ANDELHAKIM, NOURI KELTOUMA
14:45– 15:00	108	**Optimization of Pedestrian Mobility Management in 5G NR Network based on Spectrum Sensing and NLMS Algorithm**
		Participant — Zineb ZIANI USTO-MB University, Oran
		Co-authors — MOHAMMED HICHAM HACHEMI, MILOUD BENCHEHIMA, IKRAM SARI MOHAMMED, FARAH SABRI, BOUABDELLA RAHMANI
15:00– 15:15	143	**Miniaturization of a Low-Cost Dual Band Antenna for C Band Applications**
		Participant — Abdellatif BERKAT Abou Bakr Belkaid University-Tlemcen
		Co-authors — Zeyneb BERKAT, Mohamed LATRACH

15:15– 16:15	Poster session 1 & coffee break		
16:15– 16:30	169	Design and Analysis Frequency Reconfigurable Multiband Patch Antenna for 5G Networks and Beyond	
		Participant	REFSI Ismahane USTO-MB University, Oran
		Co-authors	MILOUD BENCHEHIMA, MOHAMMED HICHAM HACHEMI, BOUABDELLA RAHMANI
16:45– 17:00	167	Enhanced Mobility Management on Vehicular Communication System in 5G New Radio Wireless Networks	
		Participant	Bahmed BABA OU SMAIL USTO-MB University, Oran
		Co-authors	MOHAMMED HICHAM HACHEMI, MILOUD BENCHEHIMA, MOHAMMED EL-KHALLIL BELHADJ, MEHDI ABDELHAK AND BOUABDELLA RAHMANI

ROOM D: Biomedical Engineering

| Session Chairmen	**Dr. Khadidja GOUIZI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Nabila HAMLIL** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Abdelkader HORCH** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. MOHAMMED SEGHIR GUELLIL** Faculty SEGC, University Mustapha Stambouli of Mascara, Algeria		
	ID		
14:00– 14:15	151	Multimodal MRI-Based Alzheimer's disease Classification Using CNN	
		Participant	HOURIA Latifa University of Blida 1
		Co-authors	LATIFA HOURIA, ASMAE MAMA ZAIR, ASSIA BOUZOUAD CHERFA, YAZID CHERFA, NOUREDDINE BELKHAMSA
14:15– 14:30	33	LSTM for epileptic disease recognition	
		Participant	Ghezala CHEKHMANE University of Abou Bekr Belkaid Tlemcen
		Co-authors	RADHWANE BENALI
14:30– 14:45	65	Secure and Accurate Identity Verification through Retinal Biometrics: A Novel Approach with Isodata and Entropic Thresholding Techniques	
		Participant	Aicha MOKHTARI University of Abou Bekr Belkaid Tlemcen
		Co-authors	HADJ SLIMANE ZINE EDDINE

Time	#	Details
14:45– 15:00	24	**Blood Product Prediction using Supervised Machine Learning**
		Participant — Amel YKHLEF — *National Polytechnic School of Oran*
		Co-authors — LABRI NADJLA SELMA, BRAHAMI MENAOUER
15:00– 15:15	150	**Advancing MRI-Based Tumor Detection and Classification in Brain Images: A Comprehensive Framework Utilizing Image Processing and Machine Learning with MATLAB GUI Integration**
		Participant — Abdallah OUMSALEM — *Hassiba Ben Bouali University of Chlef, Algeria*
		Co-authors — Yamina BOUREZIG
15:15– 16:15		**Poster session 1 & coffee break**
16:15– 16:30	136	**Medical Image Registration Using Local Feature Points & Genetic Search**
		Participant — Fatiha MESKINE — *Djillali Liabes University of Sidi-Bel-Abbes*
		Co-authors — Oussama MEZOUAR
16:30– 16:45	193	**Machine Learning for Optimizing Diabetes Prediction: A Comparative Analysis**
		Participant — Mohamed AMMARA — *University Mustapha Stambouli of Mascara*
		Co-authors — Mokhtar BESSEGHIER
16:45– 17:00	142	**Study and simulation of biosensors based AlGaN/GaN MOS-HEMTs for specific detection of biomolecules**
		Participant — Abdellah BOUGUENNA — *University of Sciences & Technology of Oran (USTO-MB)*
		Co-authors — DRISS BOUGUENNA, AMINE BOUDGHENE STAMBOULI
17:00– 17:15	38	**New hybrid FCM-ABC algorithm for Brain MRI segmentation**
		Participant — Boumediene Ghaouti GHAZI — *University Mustapha Stambouli of Mascara*
		Co-authors — BOUDJELAL MEFTAH

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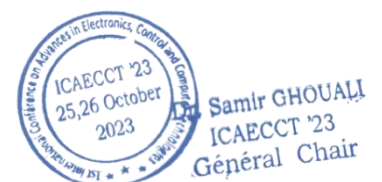2023

Dr Samir GHOUALI
ICAECCT '23
Général Chair

CONFERENCE POSTER SESSION 1

Session Chairman	**Dr. Mokhtar BESSEGHIER** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Menouer BENNAOUM** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Radia MADJIDI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria
ID	

84	Design of a New Direct Vector Control Using Synergetic Theory for Five-Phase Induction Motor	
	Participant	Fayçal MEHEDI Hassiba Benbouali University, Chlef
	Co-authors	ISMAIL BOUYAKOUB, LEMYA DJAFER, NEZLI LAZHARI, DJAMEL BOUDANA

112	A competitive dual axis solar tracker system	
	Participant	Ghalem Kamel Ghanem Higher School of Energetic and Electrical Engineering, Oran
	Co-authors	BELAIDI IKHLAS, ANTAR KAWTHER, BENOUAR ALI, AHMED BACHA MOHAMED REDA

117	Optimal choice of weightings functions for synthesis a robust H∞ controller based on Loop –Shaping using Genetics Algorithms	
	Participant	Djamel eddine GHOURAF National Polytechnic School- Oran
	Co-authors	NACERI ABDELLATIF

126	Design of a robust nonlinear surface sliding mode controller for a quadrotor helicopter	
	Participant	Naima BOUHABZA Université Blida1
	Co-authors	KARA KAMEL

158	Algerian Database Under Development for Automatic Emotion Recognition	
	Participant	Zineddine S. KAHHOUL University of Mohamed Khider Biskra
	Co-authors	SELMA BOUTIBA, HABIBA DAHMANI, NADJIBA TERKI, MOHAMED L. TIAR, ABIR BETKA, ZAYED FERHAT, RIYAD BARKA

178	Real time control of a flight simulator	
	Participant	Sadek NEKROUF University Mustapha Stambouli of Mascara
	Co-authors	SOUFYANE CHEKROUN, KHATIR TABTI

175	Application of fuzzy logic to the control of an industrial 3D Crane	
	Participant	Fatima AFFANE University Mustapha Stambouli of Mascara
	Co-authors	M.ZAREB, A. KHEDIM, M. ALQUDAMI

183	Sliding Mode Controller with a Neuro-Fuzzy Optimized Network (STFIS) for Robotic Manipulator Trajectory Tracking	
	Participant	Djamel Eddine CHAOUCH University Mustapha Stambouli of Mascara
	Co-authors	AHMED LARBAOUI, HOCINE ABDELHAK AZZEDINE
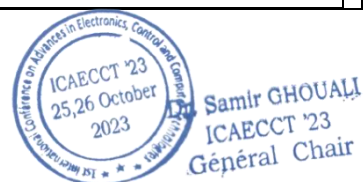
184	Application Of Direct and Indirect Adaptive Controller Neural Network Based on Rbf Nn for Temperature Control of Electric Resistance	
	Participant	Benyekhlef KADA University Mustapha Stambouli of Mascara
	Co-authors	DJAMEL EDDINE CHAOUCH, ABDELKADER ELKEBIR
250	Applied the different Direct Torque control on the IM	
	Participant	Moulay ldriss CHERGUI University Mustapha Stambouli of Mascara
	Co-authors	ABDELHAQ LAOUFI, SOUFYANE CHEKROUN
301	Real-time implementation of single-phase inverter for photovoltaic system based on DC/DC and DC/AC stages	
	Participant	Abdelkader EL KEBIR University Mustapha Stambouli of Mascara
	Co-authors	HAFIDA BELHADJ
400	Design of a Fly back converter using TL494 control circuit for a photovoltaic system	
	Participant	HAFIDA BELHADJ University Mustapha Stambouli of Mascara
	Co-authors	Abdelkader EL KEBIR
251	Morphology influence of the donor and acceptor molecules of the active layer on the response parameters of organic photovoltaic cells OPVCs	
	Participant	Mohamed Benamar SIAD University Mustapha Stambouli of Mascara
	Co-authors	Y. MOUCHAAL, A. KHELIL, J.C. BERNEDE
96	Image Transmission Through OFDM System	
	Participant	Fatiha MESKINE Djillali Liabes University, Sidi Bel Abbes
	Co-authors	Amina DJIR, Brahim DEHRI
190	Deforestation detection using NRCS features extracted from multi dates SAR images	
	Participant	Abdelkader Horch University Mustapha Stambouli of Mascara
	Co-authors	IMANE MAHFOUF, MOKHTAR BESSEGHIER, HOCINE ABDELHAK AZZEDDINE, ABDERAHMANE LOUNI
310	Detection of Sleep Apnea Using Machine Learning Algorithms Based on The ECG Signal	
	Participant	Leila RIZOUG University Mustapha Stambouli of Mascara
	Co-authors	ISMAHENE BAADJA, NORA BELHAJ, ABDELKADER HORCH, ABDERRAHMANE LOUNI
176	Application of Artificial Neural Network (ANN) to Predict the Electrical Properties of 4H-SiC Schottky Diodes	
	Participant	Mohammed El-Amine BEYOUR University Mustapha Stambouli of Mascara
	Co-authors	MOURAD HEBALI, BENOUMEUR IBARI, OMAR MEDJADJ, REZALI BAGHDADI, ABDELKADER MAACHOU, HOCINE ABDELHAK AZZEDDINE, MENAOUER BENNAOUM

186	Advances in Power Sources and Power Electronic Converters for Multi-Source Electric Vehicles	
	Participant	Khaled BOUHADEF University Mustapha Stambouli of Mascara
	Co-authors	DJAMEL EDDINE CHAOUCH, HOCINE ABDELHAK AZZEDINE

139	Dual-Band Planar Antenna Design with Complementary Metamaterial Resonators for 5G systems	
	Participant	Nour El Houda BOUKHLIF University Mustapha Stambouli of Mascara
	Co-authors	SAMIR GHOUALI, ABDELFETTAH MIRAOUI

187	Exploring the Security Landscape Internet of Things	
	Participant	Hadjer BOUKHLIF University Mustapha Stambouli of Mascara
	Co-authors	MOUWEFFEQ BOUREGAA, MOHAMMED MOULAY

194	Wireless Technology in Medical Applications: State of the Art, Challenges, and Opportunities	
	Participant	Abderrahmane BENHALIMA University Mustapha Stambouli of Mascara
	Co-authors	BENZERGA FELLAH, SAMIR GHOUALI

185	Revolutionizing Diabetic Retinopathy Detection: A Comprehensive Review of AI Approaches	
	Participant	Imane MAHFOUF University Mustapha Stambouli of Mascara
	Co-authors	ABDELKADER HORCH, BOUALEM MERABET

197	Optimizing Chromatic Dispersion in Fiber with Air-Silica Microstructured (FMAS) for Advanced Optical Telecommunications	
	Participant	Mohammed DEBBAL University Mustapha Stambouli of Mascara
	Co-authors	MOUWEFFEQ BOUREGAA, MOHAMMED CHAMSE EDDINE OUADAH, HICHAM CHIKH-BLED

405	The role of formants and subglottal resonance frequencies for emphatic feature identification in Arabic speech	
	Participant	Abderrahmane LOUNI University Mustapha Stambouli of Mascara
	Co-authors	LEILA RIZOUG, ABDELHAK ZOUGGARET, BOUALEM MERABET, ABDERRAHIM BELMADANI

303	Photo-electrochemical and Physical Properties of the Spinel $CuMn_2O_4$ Prepared by Chemical Route: Application to Photodegradation of carminic acid dye	
	Participant	Hafidha BOUCHAABA University Mustapha Stambouli of Mascara
	Co-authors	SARRA GOUDJILI, ZOHRA FERGOUG

17	Control of six-phase two-motor drive machine serie-connected fed by five-level six-phase inverter	
	Participant	Taieb BESSAAD Hassiba Benbouali University Chlef
	Co-authors	ABDERRAHMEN BENBOUALI

Samir GHOUALI
ICAECCT '23
Général Chair

VIRTUAL CONFERENCE SESSION

ROOM E: Control Systems, Robotics and Automation (VIRTUAL)

Session Chairmen	**Dr. Soufyane CHEKROUN** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Omar DAHOU** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Benyekhlef KADA** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Boumediene BENABDALLAH SEREIR** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria

	ID	
14:00– 14:15	11	Detecting Bearing Faults by Processing Vibration Signals
		Participant — Karim BOUAOUICHE — *Badji Mokhtar-Annaba University*
		Co-authors — YAMINA MENASRIA, DALILA KHALFA
14:15– 14:30	20	Enhancing Performance and Robustness of Vector Control for Three-Phase Synchronous Reluctance Machine Using Second-Order Sliding Mode
		Participant — Belkacem SELMA — *Hassiba Benbouali University of Chlef*
		Co-authors — ELHADJ BOUNADJA, BACHIR BELMADANI, BOUMEDIENE SELMA
14:30– 14:45	23	Second Order Sliding Mode Control of a Hybrid Excitation Synchronous Generator-based Wind Turbine supplying a DC Load
		Participant — Walid Mohammed KACEMI — *Hassiba Benbouali University of Chlef*
		Co-authors — ELHADJ BOUNADJA, ABDELKADIR BELHADJ DJILALI
14:45– 15:00	21	Modeling and Control of Variable Structure Scheme for Grid-Connected Wind Power Production System with Parallel-Connected Synchronous Reluctance Generators
		Participant — Belkacem SELMA — *Hassiba Benbouali University of Chlef*
		Co-authors — ELHADJ BOUNADJA, BACHIR BELMADANI, BOUMEDIENE SELMA
15:00– 15:15	59	Modeling and control of a twin-rotor drone
		Participant — Aissa MEKSI — *University of Sciences and Technology of Oran*
		Co-authors — Laid ABDELALI
15:15– 16:15		**Poster session 1 & Coffee /Tea break**
16:15– 16:30	60	Induction Machine Parameters Identification By Using Hybridation Between Genetic Algorithm And Hooke-Jeeves method
		Participant — El-Ghalia BOUDISSA — *Saad Dahlab University of Blida1*
		Co-authors — F. HABBI, N. DIF, N.E.H. GABOUR, M. BOUNEKHLA

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25,26 October 2023

Samir GHOUALI
ICAECCT '23
Général Chair

Time	No.	Details
16:30– 16:45	68	**Particle Swarm Optimization Algorithm-Based PID Controller for Output Voltage Regulation of Synchronous Generator** **Participant:** El-Ghalia BOUDISSA *Saad Dahlab University of Blida1* **Co-authors:** FATIHA HABBI, NOUR EL HOUDA GABOUR, MOHAMED BOUNEKHLA AND DIF NAAS
16:45– 17:00	253	**Fuzzy Neuronal with Robust Control for Uncertain Nonlinear Systems** **Participant:** Fatima Zohra DAIKH *University Mustapha Stambouli of Mascara* **Co-authors:** MOHAMMED SEGHIR GUELLIL, MOHAMMED AMINE HAMADOUCHE
17:00– 17:15	8	**Sliding Mode Control of a Five-Phase Series- Connected Two-Motor Drive** **Participant:** Omar ZOUAID *polytechnic national school of Algiers* **Co-authors:** LAZHARI NEZLI
17:15– 17:30	25	**Simplified Control of PMSM Motors with Matrix Converter using SVM Strategy** **Participant:** Fayssal SAIDI *Hassiba Benbouali University Chlef* **Co-authors:** ELHADJ BOUNADJA, ABDELKADER DJAHBAR
17:30– 17:45	85	**Speed Sliding Control of Squirrel Cage Motor combined NPC Five Level Inverter** **Participant:** Kheira MENDAZ *University Ain Temouchent* **Co-authors:** BENHADDA YAMINA, YOUNES KHADIDJA

Samir GHOUALI
ICAECCT '23
Général Chair

ICAECCT '23
25,26 October
2023

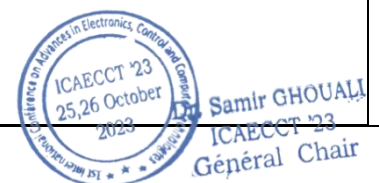| ROOM F: Telecommunications and its Applications (VIRTUAL)		
Session Chairmen	**Dr. Abdelhak ZOUGGARET** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Benzerga FELLAH** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Abderrahmane LOUNI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Fatima Zohra BOUMEDIENE** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria	
	ID	
14:00– 14:15	18	Millimeter-wave transmission at 90 GHz in a hybrid fiber/FSO communication system using MIMO-FSO channel performance
		Participant	Samra DEROUICHE UABT University, Tlemcen
		Co-authors	SAMIR KAMECHE, HAROUN ERRACHID ADARDOUR
14:15– 14:30	16	Performance Analysis of Hybrid Multiple Access OCDMA/OFDM System Using Spectral Cyclic Shift Code
		Participant	Mohamed RAHMANI TAHRI Mohamed University of Bechar
		Co-authors	ABDELHAMID CHERIFI, GHOUTIA NAIMA SABRI
14:30– 14:45	5	Performance in Power-Domain of NOMA for fifth-generation mobile networks (5G)
		Participant	Yaakoub BERROUCHE Université Ferhat Abbas Sétif 1
		Co-authors	
14:45– 15:00	28	High Cardinality Optical Multiple Access CDMA Networks Adopting a Novel Incoherent Spectral/Temporal/Spatial Encoding Block
		Participant	Mohamed RAHMANI TAHRI Mohamed University of Bechar
		Co-authors	ABDELHAMID CHERIFI, GHOUTIA NAIMA SABRI
15:00– 15:15	29	Performance Optimization and Comparative Analysis of Reliable Multicast Protocols (AMRHy and DyRAM) in Wireless Mesh Networks
		Participant	Asma BENMOHAMMED Université Abdelhamid Mehri Constantine 2
		Co-authors	MERNIZ SALAH
15:15– 16:15	Poster session 1 & Coffee /Tea break	
16:15– 16:30	56	A hybrid medical images watermarking technique using DWT and DCT
		Participant	Rania HAMAMI LASA laboratory, Badji Mokhtar Annaba university
		Co-authors	NARIMA ZERMI, LARBI BOUBCHIR, AMINE KHALDI
16:30– 16:45	141	Smart Solutions for Smartphone Repair: Connecting Users with Expert Technicians
		Participant	Rajaa BENHADI University Mustapha Stambouli of Mascara
		Co-authors	SAMIR GHOUALI

ICAECCT '23
25,26 October
2023

Samir GHOUALI
ICAECCT '23
Général Chair

	ID	
16:45– 17:00	124	**Implementation of MF - TDMA OTDM-WDM mapping for the DVB-RCS2 system: Functional approach**
		Participant: Meryem Romaissa DJELLOULI — *university Djillali Liabes Sidi Bel Abbes*
		Co-authors: SID AHMED CHOUAKRI, ABDELKRIM GHAZ
17:00– 17:15	180	**Spectro-Temporal Features for Robust AMR-NB Transcoded Speech Recognition Using Deep Neural Networks**
		Participant: Lallouani OUCHAKOUR — *USTHB*
		Co-authors: MOHAMED DEBYECHE
17:15– 17:30	77	**An overview on DNA-based cryptography**
		Participant: Djihad DJAA — *Djillali Liabes University, Sidi Bel Abbes*
		Co-authors: KHEIREDDINE MEKKAOUI, SOFIANE BOUKLI-HACENE
17:30– 17:45	47	**Modeling of Radar Sea Clutter Using the Mixture of Three Weibull Distributions**
		Participant: Sarah LEFAIDA — *University Des Frères Mentouri Constantine*
		Co-authors: Faouzi SOLTANI, Amar MEZACHE

ROOM G: Telecommunications and its Applications (VIRTUAL)

Session Chairmen	
	Prof. Larbi SEKHRI Industrial Computing and Networks Research Laboratory (LIIR), University of Oran **Prof. Amina BENDAOUDI** Djillali Liabes University of Sidi Bel-Abbes, Algeria **Dr. Abdelfettah MIRAOUI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Mokhtar BOUHALOUANE** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria

	ID	
14:00– 14:15	34	**Design and Performance Evaluation of X-Band Satellite Antenna with Frequency Reconfigurability Using Varactor Diode**
		Participant: Rahma Djaouda TALEB — *ABOU BEKR BELKAID University, Tlemcen*
		Co-authors: MOHAMMED ZAKARYA BABA-AHMED, MOHAMMED AMIN RABAH, SIDAHMED BENABBOU, MERIEM IKRAM SOUFI
14:15– 14:30	39	**A Log Periodic Dipole Antenna Array SIW Feeding For 5G Millimiter-Wave Applications**
		Participant: Hanane METAHRI — *ABOU BEKR BELKAID University, Tlemcen*
		Co-authors: MEHADJI ABRI, MOHAMMED MOULAY, HANAA MOUSSAOUI, NABIL CHERIF

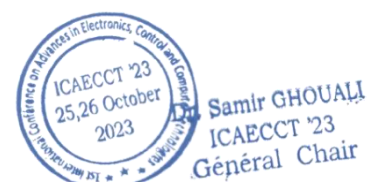| Time	No.		
14:30– 14:45	43	Inovation of a Miniaturized Antenna Array Based On A High Frequency Substrate And Metamaterial Cells	
		Participant	Fayza BOUSALAH ABOU BEKR BELKAID University, Tlemcen
		Co-authors	HAYAT BENOSMAN, AMIN MOHAMMED RABAH, ZAKARIYA MOHAMMED BABA AHMED
14:45– 15:00	48	Efficiency of 40 Gbps OTDM-FSO optical system under weather conditions	
		Participant	Haroun Errachid ADARDOUR UHBC University, Chelf
		Co-authors	SINGH MEHTAB, IKRAM KHELOUF, C. ABDELHAKIM FELLAGUE
15:00– 15:15	49	Design of a Miniature Circularly Polarized Microstrip Antenna for GNSSS Applications	
		Participant	Hayet BENOSMAN ABOU BEKR BELKAID University, Tlemcen
		Co-authors	FAYZA BOUSALAH, AMINE RABAH
15:15– 16:15		**Poster session 1 & Coffee /Tea break**	
16:15– 16:30	63	Numerical Dynamics Analysis of a Chaotic Third-Order Phase-Locked Loop	
		Participant	Mohammed BENDAOUD ABOU BEKR BELKAID University, Tlemcen
		Co-authors	SAMIR KAMECHE, ACHOUR OUSLIMANI
16:30– 16:45	115	Blind Speech Enhancement Based on Adaptive Filtering and Improved Bat Algorithm	
		Participant	Sofiane FISLI 8 Mai 1945- Guelma University
		Co-authors	MOHAMED DJENDI
16:45– 17:00	121	Study of a dual polarized RoF OFDM system with WDM-PON structure for mobile broadband networks	
		Participant	chebra abdennour FELLAG ABOU BEKR BELKAID University, Tlemcen
		Co-authors	AHMED RIAD BORSALI, MEHDI ROUISSAT
17:00– 17:15	89	Design and Simulation of U-slotted Microstrip Patch Antenna for L, S, C and X Band	
		Participant	Riadh DEGACHI University of El-Oued
		Co-authors	GHENDIR SAID
17:15– 17:30	31	A Nano rectangular gold and graphene patch antenna for WBAN applications	
		Participant	Bouchra MOULFI University of Ain Temouchent
		Co-authors	SOUHEYLA FEROUANI, DJALAL ZIANI KERARTI AND FATIMA ZAHRA MOUSSA
17:30– 17:45	131	Design and Simulation of a Leaky Wave Antenna Based on Metamaterial Substrate Integrated Waveguide for Millimeter-wave Application	
		Participant	Chaabane SOUMALI University of Yahia Fares Medea
		Co-authors	MOUNIR BELATTAR

26 October 2023

FACE TO FACE CONFERENCE ORAL SESSION (Physical)

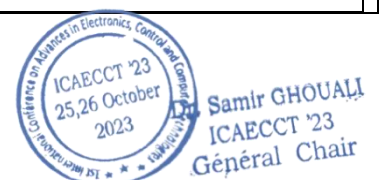### ROOM A: Control Systems, Robotics and Automation

Session Chairmen	**Dr. Soufyane CHEKROUN** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Benaoumeur IBARI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Mohammed El Amine SENOUSSAOUI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Adel BENABBOUN** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria

	ID	
09:00– 09:15	114	**Enhancing Industrial Process Control using multi-layer perceptron (MLP)**
		Participant: Leila BENAISSA KADDAR — University Mustapha Stambouli of Mascara
		Co-authors: Mohamed El Mehdi ZAREB
09:15– 09:30	171	**Velocity observer-based computed torque control for trajectory tracking of uncertain robotic manipulators**
		Participant: Rezali BAGHDADI — University Mustapha Stambouli of Mascara
		Co-authors: BENAOUMEUR IBARI, MOURAD HEBALI, OMAR MEDJADJ, MOHAMMED EL-AMINE BEYOUR, AHMED FOITIH ZOUBIR
09:30– 09:45	179	**Electric Vehicle Wheel-Slip control Based on Sliding Mode Controller**
		Participant: Tabti KHATIR — University Mustapha Stambouli of Mascara
		Co-authors: MOSTEFAI LOTFI, CHEKROUN SOUFYANE, NEKROUF SADEK, LARBAOUI AHMED
09:45– 10:45		**Poster session 2 & coffee break**
10:45– 11:00	109	**Intelligent control strategy of induction motor through Fuzzy Logic Direct Torque Control**
		Participant: Ameur Fethi AIMER — University Dr. Tahar Moulay of Saida, Algeria
		Co-authors: AHMED HAMIDA BOUDINAR, MOHAMED EL-AMINE KHODJA, AZEDDINE BENDIABDELLAH
11:00– 11:15	257	**Full State Feedback Control for Underactuated Nonlinear Mechanical Systems**
		Participant: Anis FEDDAOUI — Badji Mokhtar University
		Co-authors: M.A. DJEHAF, Y.I. DJILLANI KOBIBI, O. FEZAZI

11:15– 11:30	132	A comparative analysis of bioreactor system control with the high-order sliding controller and the classic sliding control	
		Participant	Mohamed MESSABIH
			University of Science and Technology of Oran, USTO
		Co-authors	BACHIR DAAOU, ABDERRAHMENE KACIMI, ABDERRAHMENE SNOUSSAOUI
11:30– 11:45	113	Identifying Spatial Risk of Road Accidents Based On Fuzzy Logic Approach	
		Participant	Miloud DRISS
			University Mustapha Stambouli of Mascara
		Co-authors	MOHAMED AMINE HAMADOUCHE, MUSTAPHA LALLAM, OUALID LARGUECHE, SOFIANE ADJLOUT

FACE TO FACE CONFERENCE ORAL SESSION (Physical)

ROOM B: Telecommunications and its Applications	
Session Chairmen	**Dr. Abdelfettah MIRAOUI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Mohamed MOULAY** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Mokhtar BESSEGHIER** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Belhassane AHMEDBLAHA** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria

	ID		
09:00– 09:15	122	Turbulence Effect on RGB Image Transmission over IM/DD Communication-Oriented Free-Space Optical Systems	
		Participant	Amina DJIR
			Djillali Liabes University, Sidi-Bel-Abbes
		Co-authors	Fatiha MESKINE, Mohamed Larbi TAYEBI
09:15– 09:30	119	Deep learning for Microwave Modeling and Design	
		Participant	Nour El Houda Sara SENASLI
			University Dr. Tahar Moulay of Saida, Algeria
		Co-authors	MOHAMMED CHETIOUI, LAMIA SENASLI, MEHDI DAMOU
09:30– 10:30		Poster session 2 & coffee break	
10:30– 10:45	252	Compressive Spectrum Sensing for Cognitive Radio: Recovery and Detection	
		Participant	Hadj Abdelkader BENZATER
			Ecole militaire polytechnique, Alger
		Co-authors	DJAMEL TEGUIG, NACERREDINE LASSAMI
10:45– 11:00	95	Design and Performance Analysis of a High-Gain Coaxial Probe-Fed Fractal Antenna for Multiband Applications Using Sierpinski Triangle Geometry	
		Participant	ABDELBASSET AZZOUZ
			Dr. Moulay Taher University Saida
		Co-authors	RACHID BOUHMIDI, ABDELLATIF KHELIL
11:00– 11:15	67	Intelligent Recognition of Digital Modulation on Terahertz Channel	
		Participant	Asmâa OUESSAI
			University of Saida
		Co-authors	ABDELKADER TAMI, HACHEMI SOUMAYA, KOURAT IKRAM

FACE TO FACE CONFERENCE ORAL SESSION (Physical)

ROOM C: High Voltage Engineering and Applications

Session Chairmen	**Prof. Youcef BENMIMOUN** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Fouad KHERBOUCHE** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Toufik Ahmed HOUARI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria

	ID	
09:30– 09:45	**138**	Analyzing Particles Trajectories in a Free-Fall Electrostatic Separator
		Participant / Mohammed Fethi BEKKARA — University Mustapha Stambouli of Mascara
		Co-authors / A. BOUARGOUB, A. CHELIH, D. AZZEDDINE, H.A. AZZEDDINE, Y. BENMIMOUN
09:45– 10:00	**81**	Experimental Study of Current Density and Electric Field at Various Temperatures in Electrostatic Precipitator
		Participant / Hakim AIT SAID — University of Relizane
		Co-authors / ABDELKRIM LAIFAOUI, BOUZIANE MELIANI, MEZIANE KACI, NIHAD HEBBAR, MASSINISSA AISSOU, HAMOU NOURI
10:00– 10:15	**64**	Multi objective particle swarm optimization with Selective harmonic elimination technique for neutral point clamped multilevel inverters
		Participant / Nour El Houda GABOUR — University M'hamed Bougara Boumerdes
		Co-authors / EL GHALIA BOUDISSA, FATIHA HABBI, MOHAMED BOUNEKHLA

CLOSING CEREMONY

CONFERENCE POSTER SESSION 2

Session Chairmen	**Dr. Abdelkader BESSAKRA** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Isma HATRAF** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria
ID	

35	Planar Micro-Inductor Design for Stand-Alone Photovoltaic DC-DC Converter	
	Participant	Mokhtaria DERKAOUI National Higher School of Telecommunications & ICT of Oran
	Co-authors	YAMINA BENHADDA, AZZEDINE HAMID

36	Monolithic Micro-Transformer Magneto-Thermal Behaviour for MEMS	
	Participant	Mokhtaria DERKAOUI National Higher School of Telecommunications & ICT of Oran
	Co-authors	YAMINA BENHADDA, AZZEDINE HAMID

42	Design and Realization of Power Divider Using Microstrip Stubs Line	
	Participant	Rahmouna EL BOUSLEMTI Ecole Nationale polytechnique d'oran, Maurice audin
	Co-authors	

41	Real-Time Hardware and Software System for Assistance in Daily-life Mobility of Visually Impaired Individuals	
	Participant	Rahmouna EL BOUSLEMTI Ecole Nationale polytechnique d'oran, Maurice audin
	Co-authors	N. BENTYAEB, W. KROUCHI

46	Implementation of GA based selective harmonic elimination pulse width modulation for two level three phase inverters using DSPACE DS1104	
	Participant	Lemya DJAFER Hassiba Benbouali University of Chlef
	Co-authors	Rachid TALEB, Fayçal MEHEDI, Aicha AISSA BOKHTACHE

58	U-Net vs. TransUNet for Weed Segmentation: A Comparative Study	
	Participant	Mohamed El Amine BOUHADJER Djillali Liabes University Sidi Bel Abbes
	Co-authors	SARAH MAZARI, MILOUD CHIKRELMEZOUAR

66	Design of an All-Optical Half Adder Around 1.31 μm Based on Nonlinear 2DPhCRRs	
	Participant	Abdallah IKHLEF Abou Bakr Belkaid University of Tlemcen
	Co-authors	HADJIRA BADAOUI, MEHADJI ABRI

173	Study of the MWT (Metal Wrap Through) heterojunction solar cell with numerical simulation	
	Participant	Nadjet BENADLA Abou Bakr Belkaid University of Tlemcen
	Co-authors	

129	A Comprehensive Analysis of 433MHz Image Telemetry in Educational CubeSat Context	
	Participant	Mohammed amine ZAFRANE University of Science and Technologies of Oran
	Co-authors	MILOUD BECHEHIMA, AHMED RAMZI HOUALEF

133	Simulation of Harmonic Perturbation for AC Impedance Measurement in a SOFC Cathode	
	Participant	Ismail BENCHEBIBA University of Chlef
	Co-authors	MOHAMED MOSTEFAOUI, NEDJAR YAHIA MOUHAMED AMINE

26	Water Treatment Using a Kit Consisting of Two Identical Series Ozone Generators Powered by a Pv (Photovoltaic) System, Designed for Isolated Areas	
	Participant	Souhila BOUDJELLA university Mustapha Stambouli of Mascara
	Co-authors	M NADJIB BRAHAMI, FATIMA Z BOUDJELLA, SAID NEMMICH, AMAR TILMATINE, MOSTEFA BRAHAMI

70	Investigating the impact of the receiver in protecting two wind turbines with different settings from lightning	
	Participant	Younes ABDELBARI University of Tiaret
	Co-authors	MIMOUNI ABDENBI

116	Modeling and Optimization of an Industrial Roll-type Separator Using the Response Surface Methodology	
	Participant	Djillali AZZEDDINE university Mustapha Stambouli of Mascara
	Co-authors	MOHAMMED FETHI BEKKARA, YOUCEF BENMIMOUN, HOCINE ABDELHAK AZZEDDINE

130	Analyzing Ozone Generation: An Experimental Study of Volume Dielectric Barrier Discharge Generators	
	Participant	Ibrahim NEDJAR university Mustapha Stambouli of Mascara
	Co-authors	A. BENABBOUN, A. MOUFFAK, S. NEMMICH

144	Two-dimensional simulation of dielectric barrier discharge in argon gas at atmospheric pressure	
	Participant	Nedjar Yahia Mohamed Amine Hassiba Ben bouali University of Chlef
	Co-authors	MOHAMED MOSTEFAOUI, ISMAIL BENCHEBIBA, DJILALI BENYOUCEF

147	Automatic Voltage Regulator of a Synchronous Generator by Using Fuzzy Logic	
	Participant	Yassine ADJISSI Saad Dahlab University, Blida
	Co-authors	BOUDISSA EL-GHALIA, BOUNEKHLA M'HAMED

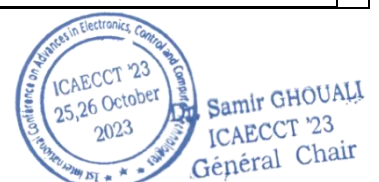| 153	Efficiency and Sustainability in Public Transit: The Sidi Bel Abbès Tramway Line Extension and Energy Recovery System	
	Participant	Houaria BELAHCENE university Mustapha Stambouli of Mascara
	Co-authors	O. DAHOU, A. MOUFFAK AND Y.I. DJILANI KOBIBI

192	Current Control for an Electrostatic Separator		
	Participant	Hocine Abdelhak AZZEDDINE	
			university Mustapha Stambouli of Mascara
	Co-authors	MOHAMMED FATHI BEKKARA, DJILLALI AZZEDINE, YOUCEF BENMIMOUN, ABDELKADER HORCH, MOURAD HEBALI, BENAOUMEUR IBARI, DJAMEL EDDINE CHAOUCH, AHMED ARBAOUI	

ROOM D: Control Systems, Robotics and Automation (VIRTUAL)

Session Chairmen	**Dr. Djamel Eddine CHAOUCH** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Adnane MOUFFAK** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Khatir TABTI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Djillali AZZEDDINE** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria

	ID	
09:00– 09:15	93	Neural Input Output Linearization Control of Induction Motor
		Participant: kheira MENDAZ — university Ain Temouchent
		Co-authors: YAMINA BENHADDA, NARIMENE KHADRAOUA
09:15– 09:30	146	Electronic Differential with Sliding Mode Backstepping Control for Vehicle Propulsion System
		Participant: Ahmed LARBAOUI — University Mustapha Stambouli of Mascara
		Co-authors: A.BENABBOUN, H. AZZEDINE, K. TABTI, A. ZOGGARET, D. CHAOUCH, Y.I. DJILANI KOBIBI, A. BERROUDJI, K. BOUHADEF
09:30– 09:45	99	Exploiting the Open-Source ROS Framework for Self-Governing Drone Flight Empowered by Artificial Intelligence
		Participant: Marwa GAIDI — University Mustapha Stambouli of Mascara
		Co-authors: SOUFYANE CHEKROUN, MOKHTAR ZERIKAT, MOHAMED EL MEHDI ZAREB
09:45– 10:45		**Poster session 2 & coffee break**
10:45– 11:00	106	Signal Processing-based Fault Detection
		Participant: Chaima TAMRABET — Badji Mokhtar University, Annaba
		Co-authors: ELIAS HADJADJ AOUL, MOHAMED TAHAR DEKHMOUCHE
11:00– 11:15	125	Integration and modeling thermal effect in Preisach model associated with the student distribution function using the finite element method
		Participant: Mourad DAFRI — Badji Mokhtar University, Annaba
		Co-authors: MOURAD NAIDJI, ABDELAZIZ LADJIMI

		Hybrid GA-ANN model for the prediction of EV Wheel speeds	
11:15– 11:30	135	Participant	Medjdoub KHESSAM Center univ Naama
		Co-authors	HAZZAB ABDELDJEBAR, MOUNA HADJADJ, REZKALLAH MILOUD, AMBRISH CHANDRA
11:30– 11:45	168	Simulation and control of energy storage systems in the hybrid renewable energies DC-Microgrid: a comparative study	
		Participant	Oussama HAFSI Ahmed Draia University, Adrar
		Co-authors	MOHAMED AMINE SOUMEUR, MOHAMED AMINE HARTANI, ABDESELEM CHAKAR, AISSA BENHAMOU, OTHMANE ABDELKHALEK
11:45– 12:00	174	State Estimation for Nonlinear System Using Line Integral Lyapunov Function: A Polytopic Approach with Unmeasurable Premises	
		Participant	Khalida MIMOUNE university of Biskra
		Co-authors	KHALIDA MIMOUNE, MOHAMED YACINE HAMMOUDI, SOURI MOHAMED MIMOUNE
12:00– 12:15	202	Fractional Order Adaptive MRAC Controller Design	
		Participant	Souad ANTEUR University Mustapha Stambouli of Mascara
		Co-authors	BACHIR BOUIADJRA ROCHDI, MOHAMMED BENMADANI DEBBAT
12:15– 12:30	62	Ear recognition system based on multi-scale feature extraction technique	
		Participant	Lebed Toufik University of May 08, 1945 Guelma
		Co-authors	ABDELHAK BOUKHAROUBA

ROOM E: Electronics and its Applications (VIRTUAL)

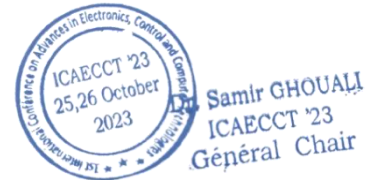| Session Chairmen	**Prof. Abdelkader EL KEBIR** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Mourad HEBALI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Menouer BENNAOUM** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Abdelkader BAGHDAD BEY** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria		
	ID		
09:00– 09:15	12	Optimal Power Flow Solution using QPSODM Algorithm	
		Participant	Mourad NAIDJI Badji Mokthar University, Annaba
		Co-authors	MOURAD DAFRI, ABDELBASET LAIB
09:15– 09:30	13	A novel approach for wind farm layout optimization using QPSODM algorithm	
		Participant	Mourad NAIDJI Badji Mokthar University, Annaba
		Co-authors	MOURAD DAFRI

09:30– 09:45	30	Thermal Analysis and Heat Sink Optimization for Power Transistor Cooling		
		Participant	Yamina BENHADDA	
				USTO, Oran
		Co-authors	K. MENDAZ, M. DERKAOUI, H. KHARBOUCH	

09:45– 10:45	Poster session 2 & coffee break

10:45– 11:00	52	High Transmission Dielectric Grating at the Littrow Angle Using Antireflection Coating in the Visible Spectral Range		
		Participant	Mounira ZOUTAT	
				University of Sciences and Technology Houari Boumediene
		Co-authors	BERBAR TARIK BOUZIAN	

11:00– 11:15	137	Contribution to the Study of the Electrical Behavior of an 1T- 1C-DRAM Memory Cell in 250nm CMOS (3C-SiC) Technology		
		Participant	Jilali BERBARA	
				Tissemsilt University
		Co-authors	MOURAD HEBALI, MOHAMMED EL-AMIN BEYOUR, MILOUD ABBOUN ABID, DJILALI CHALABI	

11:15– 11:30	188	A New Design of Non-Causal Recursive Digital Filters with a backward-forward realization for both Standard and Non-standard Magnitude Specifications		
		Participant	Adnane MOUFFAK	
				University Mustapha Stambouli of Mascara
		Co-authors	HAZZAB ABDELDJEBAR, MOUNA HADJADJ, REZKALLAH MILOUD, AMBRISH CHANDRA	

11:30– 11:45	200	Compact modeling of I-V characteristics in AlxGa1- xN/GaN HEMTs		
		Participant	Nawel KERMAS	
				Tiaret university
		Co-authors	Driss BOUGUENNA	

11:45– 12:00	220	Device Performance of AlGaN/AlN/GaN MIS HEMTs with La2O3 high κ as Gate Dielectric Insulator Layer		
		Participant	Khaled HEBALI	
				University Mustapha Stambouli of Mascara
		Co-authors	DRISS BOUGUENNA, ABBES BELOUFA	

12:00– 12:15	3	Study of the Energy Levels in The Structure of The Laser Diode GAINP/ALGAINP		
		Participant	Abdelali LAID	
				Sidi Bel Abbes University
		Co-authors	ABID HAMZA	

12:15– 12:30	118	Modeling and numerical simulation of a of Eco-Friendly CH3NH3SnI3-based Perovskite Solar Cell by the SCAPS1-D simulator		
		Participant	Selma RABHI	
				University of Medea
		Co-authors	ABDLEHADI SLAMI, FATIMA ZAHRA SAIDOUNE, KARIMA DADDA	

12:30– 12:45	402	PANI/ZnO for Optical Applications: Synthesis and Characterization		
		Participant	Faiza CHOULI	
				University Mustapha Stambouli of Mascara
		Co-authors	ABDELGHANI BENYOUCEF, SAMIA DAIKH, AMINA BEKHOUKH	

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Général Chair

ROOM F: Biomedical Engineering (VIRTUAL)		
Session Chairmen	**Dr. Ibrahim Farouk BOUGUENNA** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Khadidja GOUIZI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Ahmed BOUDAA** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Abderrahmane LOUNI** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria	
	ID	
09:00– 09:15	57	ECG-Based Biometric System using TinyML: Implementation and Performance Evaluation on ESP32
		Participant — Hatem ZEHIR — *Badji Mokthar University, Annaba*
		Co-authors — TOUFIK HAFS, SARA DAAS
09:15– 09:30	102	Gender, Age, and Anthropometric Influences on Rotatory Angles in Load Lifting
		Participant — Ali Khan MOAZZAM — *Ziauddin University, Pakistan*
		Co-authors — MYRA ASLAM QURESHI
09:30– 09:45	104	Deep Learning System for Automatic Skull Stripping of Human Brain MRI
		Participant — Abdelhai LATI — *University of Kasdi Merbah Ouargla (UKMO)*
		Co-authors — ZAKARIA MOKADEM, DJALILA BELEKBIR, DJIHENE NECIB AND RAYANE DJABOUREBBI
09:45– 10:45		**Poster session 2 & coffee break**
10:45– 11:00	134	A new MRI Brain Tumor Detection and Segmentation approach based on a combination of Thresholding and Generalized Gaussian Mixture Model-EM algorithm
		Participant — Khalil Ibrahim LAIREDJ — *University of DJillali Liabes, Sidi Belabes*
		Co-authors — AMINA BAGDAOUI, SID AHMED BOUCENNA, ZOUAOUI CHAMA
11:00– 11:15	148	Cancerous Regions Extraction by Segmentation of Medical Images
		Participant — Abdellatif BOUZID-DAHO — *University of TIZI OUZOU*
		Co-authors — Patrick SIARRY
11:15– 11:30	152	Voice pathology detection along feature distribution and normal distribution Study case: Parkinson disease
		Participant — Djamila MEGHRAOUI — *University of Science and Technology Houari Boumediene*
		Co-authors —
11:30– 11:45	163	Efficient Statistical Approach for Combining Multimodal Images Using Wavelet Transform
		Participant — Abdallah BENGUEDDOUDJ — *University of bordj bou arreridj*
		Co-authors — MERWAN SAAD SAOUD, TAREK BENSIDHOUM

Time	ID	Presentation Details
11:45– 12:00	170	**Internet of Things based Approach for Detecting Diabetes using Deep Learning Models** **Participant:** Messaoud HAMEURLAINE — *Tissemsilt Univesrsity* **Co-authors:**
12:00– 12:15	6	**Facial kinship Verification using Siamese Neural Network** **Participant:** Abdelhakim CHERGUI — *Ouargla University* **Co-authors:** NOUR EL HOUDA BOUAKAL, BRAHIM MELLAH, MESSAOUD HETTIRI, SALIM OUCHTATI
12:15– 12:30	40	**Muscle movement detection** **Participant:** Fatima Ezahraa BARKAT — *Oran1 Ahmed Ben Bella University* **Co-authors:** DJAMILA BOUBEKEUR, MOHAMMED EL AMINE CHERIET
12:30– 12:45	300	**Development of GaN MOS-HEMTs transistors-based biosensors for the detection of a novel SARS-Cov-19 Virus** **Participant:** Faiza MOUFFOKI — *University Mustapha Stambouli of Mascara* **Co-authors:** Driss BOUGUENNA
12:45– 13:00	157	**Detection of Spasmodic Dysphonia Voice Pathology using Deep Learning** **Participant:** Nardjes MERZOUGUI — *University Badji Mokhtar Annaba* **Co-authors:** MOHAMED CHERIF AMARA KORBA, FETHI AMARA

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2023

ROOM G: HIGH VOLTAGE ENGINEERING AND APPLICATIONS (VIRTUAL)

Session Chairmen	**Dr. Youcef Islam DJILANI KOBIBI**
	Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria
	Dr. Moulay Idriss CHERGUI
	Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria
	Dr. Mohammed Fethi BEKKARA
	Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria
	Dr. Maamar YAHIAOUI
	Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria
	Dr. Hocine BOUCHEKARA
	Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria

	ID	
09:15– 09:30	**61**	Utilizing Convex Optimization for State and Unknown Input Estimation in Polytopic Models
		Participant — Khalida MIMOUNE — *University of Biskra*
		Co-authors — MOHAMED YACINE HAMMOUDI, SOURI MOHAMED MIMOUNE
09:30– 09:45	**83**	Dual-Stage Grid Connected Boost-Modular Multilevel Converter with MPPT Fuzzy Logic Controller for Solar System
		Participant — Imane ALIA — *Ziane Achour University, Djelfa*
		Co-authors — IMAD MERZOUK
09:45– 10:45		**Poster session 2 & coffee break**
10:45– 11:00	**86**	Application of Deep Learning and Markov Chains Approachs for ICS security in Smart Grids based zero trust model
		Participant — Nousseiba GUERGOURI — *University of Constantine 2 Abdelhamid Mehri*
		Co-authors — NABIL SAHLI, MOHAMED BENMOHAMMED, LYES KHOUKHI
11:00– 11:15	**100**	Fuzzy Logic and Neural Network Control of Unified Power Flow Controller Systems (UPFC)
		Participant — Benyekhlef LAROUCI — *University Kasdi Merbah Ouargla*
		Co-authors — AYAD AHMED NOUR ISLEM
11:15– 11:30	**110**	Enhancing the Potential of PEMFC EVs with Cutting-Edge FOPI Control based PDO Algorithm for a Three-Phase Interleaved Boost Converter
		Participant — Salah OKBA — *University of Biskra*
		Co-authors — RAMZI SAADI, MOHAMED YACINE HAMMOUDI, WAIL HAMDI AND ABIR BETKA
11:30– 11:45	**155**	Influence of the ADALINE extraction method with the fuzzy hysteresis band technique applied to the UPQC filter under DC bus fuzzy control
		Participant — Noureddine KHENFAR — *Djillali Liabes University, Sidi Bel-Abbes*
		Co-authors — ABEDLHAFID SEMMAH, SIHAM KHELIFA
11:45– 12:00	**204**	Analysis of Grid-tied Fuel Cell System with Synchronous Reference Frame Control
		Participant — Yahia FOUGHALI — *University of Saida*
		Co-authors — Mohamed MANKOUR, Mhamed SEKOUR

12:00– 12:15	7	Finite Element Modelling of Electric Field Distribution in Point- Barrier-Plane Air Gaps under Positive Lightning Impulse Voltage: Based on Experimental Tests	
		Participant	Mohamed Abdelghani BENZIADA Ecole Nationale Polytechnique d'Alger
		Co-authors	AHMED BOUBAKEUR, ABDELOUAHAB MEKHALDI

ROOM H: E-poster Session (VIRTUAL)

Session Chairmen	**Dr. Hocine Abdelhak AZZEDDINE** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Benameur AFIF** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Attaouia BENTAHAR** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria **Dr. Isma HATRAF** Faculty of Sciences and Technology University Mustapha Stambouli of Mascara, Algeria

	ID		
Topic 1: Control Systems, Robotics and Automation			
09:00– 09:10	69	Chaotic Blended Biogeography-Based Optimization for Parameter Estimation of Induction Machine	
		Participant	Naas DIF University of Djelfa
		Co-authors	EL-GHALIA BOUDISSA, FATIHA HABBI, MOHAMED BOUNEKHLA
09:10– 09:20	79	Enhancing the Power Quality of Grid-Connected Wind Systems through Multicell Converters	
		Participant	Karim BELALIA University of Relizane
		Co-authors	ABDELKADER MOSTEFA, SOFIANE MIHOUBI, HOUARI MERABET BOULOUIHA
09:20– 09:30	160	Backstepping Control of a Direct Driven PMSG wind Turbine	
		Participant	Hamid AOUDJEREGBA University Mustapha Stambouli of Mascara
		Co-authors	AHMED TAHOUR
09:30– 09:40	254	Employ the Adaptive Neuro-Fuzzy inference system ANFIS for Improve the Direct Torque Control	
		Participant	Abdelhaq LAOUFI University Mustapha Stambouli of Mascara
		Co-authors	MOULAY-IDRISS CHERGUI, SOUFYANE CHEKROUN
09:45– 10:45	Poster session 2 & coffee break		
Topic 2: Electronics and its Applications			
10:45– 10:55	27	Thermal Simulation in Intertwined Planar Micro-Transformer	
		Participant	Yamina BENHADDA USTO, Oran
		Co-authors	M. DERKAOUI, K. MENDAZ, H. KHARBOUCH

Time	No.	Title / Details
11:05– 11:15	35	**Integrated Octagonal On-Chip Inductor in DC-DC Buck Converter for Photovoltaic Applications**
		Participant: Mokhtaria DERKAOUI — National Higher School of Telecommunications & ICT of Oran
		Co-authors: YAMINA BENHADDA, AZZEDINE HAMID
11:15– 11:25	36	**Monolithic Micro-Transformer Magneto-Thermal Behaviour for MEMS**
		Participant: Mokhtaria DERKAOUI — National Higher School of Telecommunications & ICT of Oran
		Co-authors: YAMINA BENHADDA, AZZEDINE HAMID
11:25– 11:35	37	**Using spectroscopic ellipsometry to extract the electrical properties of AZO thin films deposited by DC reactive sputtering in various temperature**
		Participant: Toufik DIB — University of Jijel
		Co-authors: BOUBEKEUR BIROUK

Topic 3: Telecommunications and its Applications

Time	No.	Title / Details
11:35– 11:45	92	**Localization of Mobile Robots with Global Position System Sensor**
		Participant: Wahiba MENASRI — University of Yahia Farès Médéa
		Co-authors: AMINA YAHIA, ABDELKADER MORSLI, MOHAMED LAMINE MOUHOUBI, AKIL BATTACHE, ABDEREZZAK GACEMI
11:45– 11:55	154	**An Ultrathin Metamaterial Absorber for Conformal Applications at Ka Frequency Band**
		Participant: Ghada MEBARKI — University of Tlemcen
		Co-authors: NAIMA BENMOSTEFA
11:55– 12:05	87	**An IoT-based System to Control the Greenhouse's Microclimate**
		Participant: Noureddine SEDDIKI — University of tahri Mohamed Bechar
		Co-authors: KAMAL ABDELMADJID MOKEDDEM

Topic 4: Biomedical Engineering

Time	No.	Title / Details
12:05– 12:15	98	**Application Crow Search Algorithm (CSA) with the Empirical Mode Decomposition (EMD) method on Phonocardiogram (PCG) signals for Efficient Noise Suppression**
		Participant: Mohamed ROUIS — University of Djilali Bounaama-Khemis Miliana
		Co-authors: SALIM SBAA, AYOUB TAALLAH, BOUNIF AOUDA
12:25– 12:35	165	**ANN for Medical Image Denoising**
		Participant: Nail ALAOUI — University ZIANE Achour de Djelfa
		Co-authors: SOFIAN KIRECH, RANIA IBTISSEM BENMLOUKA, SOUAD KSENNA, LAKHDAR BOUHAMLA, ABDALLAH AZZOUZ

Topic 5: High Voltage Engineering and Applications

| Time	No.	Title / Details
12:35– 12:45	259	**Multiphysics Simulation of Submicron Particle Behaviour Inside a Novel Multicylinder Electrostatic Precipitator (MCESP)**
		Participant: Fouad Kherbouche — University Mustapha Stambouli of Mascara
		Co-authors:

The Venue

MASCARA, ALGERIA

ABOUT

Mascara (Arabic: معسكر, romanized: Muʿaskar) is the capital city of Mascara Province. It has 150,000 inhabitants (2008 estimate). It was founded in the 10th century by the Banu Ifran, a Berber tribe and was the capital city of Emir Abd al-Qadir, a leader of the Algerian resistance to early French colonial rule. Mascara is an administrative, commercial and a market centre. Its trade is mostly centered on leather goods, grains, and olive oil, but it is especially famous for its good wine. It has good road and rail connections with other urban centres of Algeria. Relizane is 65 kilometres (40 miles) northeast, Sidi Bel Abbes 90 km (56 mi) southwest, Oran 105 kkm northwest and Saïda 80 km (50 mi) south.
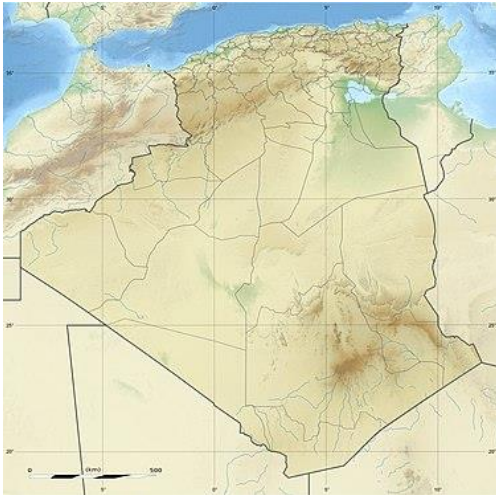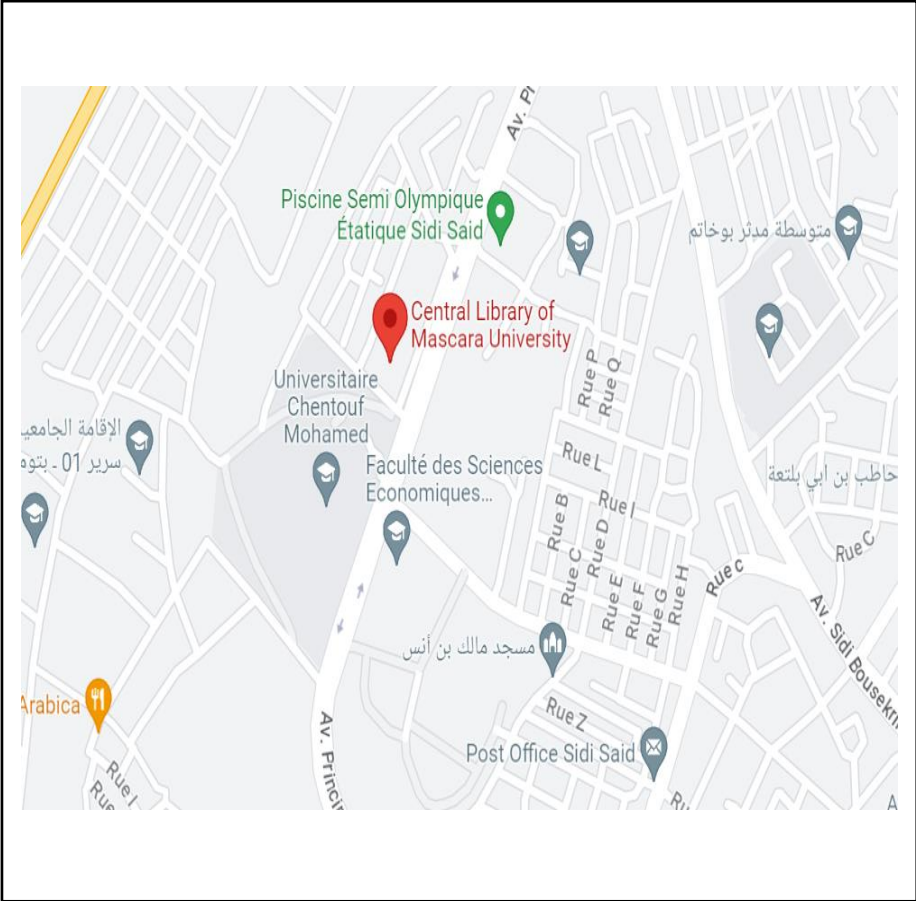
EMIR ABDELKADER

Abdelkader ibn Muhieddine (6 September 1808 – 26 May 1883; Arabic: عبد القادر ابن محي الدين ʻAbd al-Qādir ibn Muḥy al-dīn), known as the Emir Abdelkader or Abdelkader El Hassani El Djazairi, was an Algerian religious and military leader who led a struggle against the French colonial invasion of Algiers in the early 19th century. As an Islamic scholar and Sufi who unexpectedly found himself leading a military campaign, he built up a collection of Algerian tribesmen that for many years successfully held out against one of the most advanced armies in Europe.

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