

2024 12th International Conference on Systems and Control (ICSC 2024)

**Batna, Algeria
3-5 November 2024**



**IEEE Catalog Number: CFP2486U-POD
ISBN: 979-8-3315-3182-9**

**Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP2486U-POD
ISBN (Print-On-Demand):	979-8-3315-3182-9
ISBN (Online):	979-8-3315-3181-2
ISSN:	2379-0059

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Technical Program for Sunday November 3, 2024

SuAA		Room 1
Autonomous System (Interactive Session)		
Chair: Salim, Ghoggali	The Higher National School of Renewable Energy, Environment, and Sustainable Development (HNS-RE2SD), Algeria	
Co-Chair: Nait Said, Nasreddine	University of Batna 2, Algeria	
10:30-10:50		SuAA.1
<i>Advancing Pedestrian Attribute Classification: A Multi-Head Deep Learning Paradigm</i> , pp. 1-7.		
Bekbolat, Amanali	Nazarbayev University	
Tanveer, Muhammad Hassan	Kennesaw State University	
Kurokawa, Syuhei	Kyushu University	
Ali, Md. Hazrat	Nazarbayev University	
10:50-11:10		SuAA.2
<i>A Model Predictive Control Strategy for Overtaking in Autonomous Vehicles</i> , pp. 8-13.		
Redwan, Alhosainy	Assuit University	
Morsi, Abdelrahman	Electrical Department, Faculty of Engineering, Assuit University	
Hassan, Mohamed	Assuit University	
Abbas, Hossam	Kiel University	
11:10-11:30		SuAA.3
<i>Output Feedback Prescribed Performance Control for Euler-Lagrange Systems with Application to a Robotic Manipulator</i> , pp. 14-19.		
Trakas, Panagiotis S.	University of Patras	
Vlachos, Christos	Department of Electrical and Computer Engineering, University Of	
Bechlioulis, Charalampos	University of Patras	
11:30-11:50		SuAA.4
<i>Target Tracking with an Unmanned Aerial Vehicle Using Visual Servoing</i> , pp. 20-26.		
Idrissa Alhousseini, Djafara	Université Abdou Moumouni	
Mossi Idrissa, Moctar	Université Abdou Moumouni	
Daouda, Abdourahimoun	Université Abdou Moumouni	
11:50-12:10		SuAA.5
<i>Robust Quadrotor Control: An Adaptive Synergetic Approach with Parallel Feedforward Compensation</i> , pp. 27-32.		
Khalil, Mokhtari	University Abbes Laghrour of Khenchela	
El Hadri, AbdelHafid	Université De Versailles	
ABDELAZIZ, Mourad	University of SETIF	
Achour, Saadi	University Amar Telidji of Laghouat	
12:10-12:30		SuAA.6
<i>Modeling, Simulation and Control of Irrigation Canal Networks</i> , pp. 33-40.		
Georgakis, Panagiotis	Department of Electrical and Computer Engineering, University Of	
Bechlioulis, Charalampos	University of Patras	

À

SuAB		Room 2
Renewable Energy I (Regular Session)		
Chair: Azoui, Boubekeur	University of Batna	
Co-Chair: khaldi, Fouad	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria	
10:30-10:50		SuAB.1
<i>Enhanced Finite Control Set MPC for Parallel NPC Inverters in Standalone Microgrids with Diverse Load Conditions</i> , pp. 41-47.		
Grairia, Mohamed Islam	Department of Electrical Engineering, Souk Ahras University, Alg	
Toufouti, Riad	Souk Ahras University, Algeria	
Bousbia, Larbi	Department of Electrical Engineering, Laboratory of Electrical A	
Ahmed, Hafiz	Coventry University	
CAMARA, Mamadou Baïlo	University of Le Havre	
10:50-11:10		SuAB.2
<i>Extremum Seeking Control of a Photovoltaic Reverse Osmosis Desalination System under Uniform Irradiance Conditions</i> , pp. 48-52.		
Boukahil, Fatima Zohra	Science and Technology, University of Biskra, Biskra, Algeria	

betka, achour ABDEDDAIM, Sabrina	University of Biskra University of Biskra, Algeria
11:10-11:30	SuAB.3
<i>Comparative Analysis of Hardware Resource Utilization for MPPT Techniques: P&O, Incremental Conductance, and ANN Using Processor-In-The-Loop Testing on STM32F407</i> , pp. 53-59.	
RIMOUCHE, Wail	Laboratory of Instrumentation, Faculty of Electrical Engenniring
TALHA, ABDELAZIZ	Laboratoire d'Instrumentation, F.E.I, USTHB, BP 32 El Aliaalger
Boumaaraf, Houria	Faculty of Electrical Engenniring, University of Sciences and Te
11:30-11:50	SuAB.4
<i>Optimized Technique of Fractional Order Integral Sliding Mode for Hybrid Renewable Energy Sources Integrated to Micro-Grid System</i> , pp. 60-65.	
boutaghane, karima	University of Constantine 1
Bennecib, Nedjoua	University of Constantine 1
Benboughenni, Habib	Nisantasi University
Chebouki, Ilhem	University of Constantine 1
11:50-12:10	SuAB.5
<i>Fixed-Time Adaptive Control of a DFIG-Based Wind Turbine</i> , pp. 66-71.	
BOUDJEMIA, Seife-ddine	University of Jije
Bounar, Naamane	University of Jijel
Boulkroune, Abdesselem	LAJ, University of Jijel
Labdai, Sami	National Polytechnic School of Algeria
CHRIFI-ALAOUI, Larbi	Université De Picardie Jules Verne
12:10-12:30	SuAB.6
<i>Novel Analytical Approach for PEM Electrolyzer Modelling and Analysis of Parameters Impact on Cell Performance</i> , pp. 72-78.	
Boutaghane, Ayoub	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
Aksas, Mounir	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
Lebaal, Nadhir	ICB UMR 6303 CNRS, Belfort-Montbéliard University of Technology,
GUERBAZI, Mohamed El Amine	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
À	
SuAC	Room 3
Control Applications I (Regular Session)	
Chair: betka, achour	University of Biskra
Co-Chair: nait said, Mohamed Said	High National School of Renewables Energies, Environment and Sustainable Development, Batna
10:30-10:50	SuAC.1
<i>Detection and Suppression of Epileptiform Seizures Via Model-Free Control and Derivatives in a Noisy Environment</i> , pp. 79-84.	
Join, Cédric	Nancy University
Jovellar, D. Blair	University of Tuebingen
Delaleau, Emmanuel	Ecole Nationale D'ingénieurs De Brest (Brest, France)
Fliess, Michel	Ecole Polytechnique
10:50-11:10	SuAC.2
<i>Closed-Loop Color Control of Multichannel LED Lighting System Using a Multilayer Perceptron Network</i> , pp. 85-90.	
GOUDJIL, Abdelhak	IPSA - Institute of Polytechnic Science and Aeronautics
Pigeon, Eric	LAC
Pouliquen, Mathieu	University of Caen
Ménard, Tomas	Ensicaen
SMAIL, Mostafa	Institut Polytechnique Des Sciences Avancées - Laboratoire De Gé
11:10-11:30	SuAC.3
<i>Observer Based Controller for a Foldable Quadrotor</i> , pp. 91-98.	
MEHAL, Zakaria	Complex Systems Control and Simulators Laboratory, Ecole Militai
Rekia, Sidali	Complex Systems Control and Simulators Laboratory, Ecole Militai
BOUZID, YASSER	Ecole Militaire Polytechnique
Guiatni, Mohamed	Ecole Militaire Polytechnique
11:30-11:50	SuAC.4

Nonlinear Sensorless Control of Doubly Fed Induction Machines in Electric Vehicles, pp. 99-103.

ROUBACHE, Toufik

Laboratory of Electromagnetic Induction and Propulsion Systems,

11:50-12:10

SuAC.5

Efficient Indoor RSSI Analysis for IoT-Based Weather Stations Using LoRa Protocol in Agricultural Applications, pp. 104-108.

Chara, kheireddine

LAAAS, Department of Electronics University of Batna 2

SRAIRI, Fawzi

LAAAS, Department of Electronics University of Batna 2

Ghedjati, Samir

LAAAS, Department of Electronics University of Batna2

Radjah, Fayçal

LEPCI, Department of of Electronics University of Setif 1

12:10-12:30

SuAC.6

Robust Stability Analysis of Interval Observer for Linear Continuous-Time Systems: An L_1 -Gain Characterization, pp. 109-114.

Nguyen, Dang Khai

Conservatoire National Des Arts Et Métiers

Dinh, Thach Ngoc

Conservatoire National Des Arts Et Métiers

Marouani, Ghassen

Research Laboratory of Automatic Signal and Image Processing, Na

Wang, Zhenhua

Harbin Institute of Technology

Raïssi, Tarek

Conservatoire National Des Arts Et Métiers

Â

SuAD

Room 4

Renewable Energy and Power Systems II (Regular Session)

Chair: Naimi, Djemai

University of Biskra

Co-Chair: Aksas, Mounir

LEREESI Laboratory, HNS-RE2SD, Batna, Algeria

10:30-10:50

SuAD.1

Numerical Analysis of AgInSe2 Solar Cells Using an Optimized ETL, pp. 115-119.

Younsi, Ziyad

HNS RE2SD

Meddour, Faycal

HNS RE2SD

bencherif, hichem

Higher National School of Renewable Energy, Environment and Sust

Mohammed cherif, okba

University M'hamed BOUGARA of Boumerdes (UMBB), Research
Laborato

Sasikumar, P

Saveetha School of Engineering

Mokrani, Sabrina

Batna 2 University

Aouni, Qoteyba

Batna 2 University

Belferdi, Souad

HNS RE2SD

10:50-11:10

SuAD.2

Enhanced the PQ of NI-Grid Connected to PV Systems Using a SAPF Controlled by the Predictive Controller, pp. 120-125.

Hamouda, Noureddine

Research Center in Industrial Technologies (CRTI)

Zorig, Assam

University Med Boudiaf of M'Sila

Haddad, Mohammed

Research Center in Industrial Technologies (CRTI)

Babes, Badreddine

Research Center in Industrial Technologies (CRTI)

Lekouaghet, Badis

Research Center in Industrial Technologies (CRTI)

Uwe, Râdel

Technische Universität Ilmenau

11:10-11:30

SuAD.3

Numerical Study of All 2D Materials Perovskite Solar Cell Using Scaps 1D Simulation, pp. 126-131.

Belferdi, Souad

HNS RE2SD

abdi, Mohamed Amir

HNS RE2SD

bencherif, hichem

Higher National School of Renewable Energy, Environment and Sust

Mohammed cherif, okba

University M'hamed BOUGARA of Boumerdes (UMBB), Research
Laborato

Sasikumar, P

Saveetha School of Engineering

Mokrani, Sabrina

Batna 2 University

Aouni, Qoteyba

Batna 2 University

Younsi, Ziyad

HNS RE2SD

11:30-11:50

SuAD.4

Control of a 400 kW Grid-Connected PV Array with and without MPPT Algorithm, pp. 132-136.

Ouai Atallah, Atallah

Laghouat University

MOKRANI, Lakhdar

LACoSERE Laboratory

Machmoum, Mohamed

Univ Nantes

11:50-12:10	SuAD.5
<i>Adaptive Control of a Buck Converter in Continuous Conduction Mode Using Sliding Mode Techniques</i> , pp. 137-142.	
BOUDRA, Toufik	University of Mohamed El-Bachir El-Ibrahimi
BENHENICHE, Abdelhak	University of Mohamed El-Bachir El-Ibrahimi
ZEBIRI, Fouad	University of Mohamed El-Bachir El-Ibrahimi
BOUCHAMA, Zyad	University of Mohamed El-Bachir El-Ibrahimi

SuCA Room 1	
Linear and Nonlinear Systems (Interactive Session)	
Chair: Abdelmalek, Nidhal	Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria
Co-Chair: Charrouf, Omar	University of Biskra

14:30-14:50	SuCA.1
<i>Design and Simulation of PI-Improve Funnel Controller</i> , pp. 143-148.	
haouili, wissam	Université Mouloud Mammeri De Tizi Ouzou
Ardjal, Aghiles	Ummto
Bettayeb, Maamar	University of Sharjah

14:50-15:10	SuCA.2
<i>Data-Driven Based Decoupled Control Scheme for Interacting Quadruple Tank Process</i> , pp. 149-154.	
Abdel Aal, Osama	University of California, Merced
Al-Hemeimat, Raghad	University of Jordan

15:10-15:30	SuCA.3
<i>The Euler-Lagrange Equation and Optimal Control: Preliminary Results</i> , pp. 155-160.	
Join, Cédric	Nancy University
Delaleau, Emmanuel	Ecole Nationale D'ingénieurs De Brest (Brest, France)
Fliess, Michel	Ecole Polytechnique

15:30-15:50	SuCA.4
<i>Optimized H^∞ Control for 2-DoF Helicopter Using Adaptive PSO and LMI</i> , pp. 161-166.	
lahoual, yassine	QUERE Laboratory. Faculty of Technology
Doudou, Sofiane	QUERE Laboratory. Faculty of Technology
Dounia, Saifia	LAJ, Faculty of Science and Technology, University of Jijel. P

15:50-16:10	SuCA.5
<i>Monitoring of Manufacturing Systems: Applying Deep Learning Algorithms to Improve Gas Turbine Performance and Sustainability</i> , pp. 167-172.	
Madjour, Hassina	Batna 2 University
ZERMANE, Hanane	University Batna 2

16:10-16:30	SuCA.6
<i>Stress Matrix-Based Formation Control of Multi-Agent Systems with Discrete-Time Communication</i> , pp. 173-177.	
Onuoha, Okechi	The University of Manchester
Ubochi, Brendan Chijioke	Federal University of Technology Akure
Kurawa, Suleiman	Rolls - Royce Plc
TANG, ZEZH	University of Sheffield
WU, Changshun	Université Grenoble Alpes
Dong, Yi	University of Southampton

SuCB Room 2	
Renewable Energy II (Regular Session)	
Chair: CHINE, Adel	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
Co-Chair: Hamizi, Saad-eddine	Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria

14:30-14:50	SuCB.1
<i>Numerical Investigation of Compression Ratio Impact on Performance, Combustion, and Emissions Behavior of a Hydrogen-Powered Internal Combustion Engine</i> , pp. 178-183.	
Ghodbane, Hassina	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria

khaldi, Fouad	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
Bahloul, Deraadji	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
14:50-15:10	SuCB.2
<i>Design and Control of an Energy Storage System for Hybrid Renewable Energy Systems</i> , pp. 184-189.	
Triki, Yacine	M'Hamed Bougara University of Boumerdès
Bechouche, Ali	Université Mouloud Mammeri De Tizi Ouzou
Seddiki, Hamid	Université Mouloud Mammeri De Tizi Ouzou
Ould Abdeslam, Djaffar	University of Haute Alsace
15:10-15:30	SuCB.3
<i>Double Pulse Test Bench Design Methodology for Power Electronics Applications</i> , pp. 190-196.	
Mohammed cherif, okba	University M'hamed BOUGARA of Boumerdes (UMBB), Research Laborato
NADJI, Bouchra	Université De Boumerdes; Faculté Des Hydrocarbures Et De La Chim
tadger, sid ahmed	Université De Boumerdes; Faculté Des Hydrocarbures Et De La Chim
bencherif, hichem	Higher National School of Renewable Energy, Environment and Sust
15:30-15:50	SuCB.4
<i>Real Time Implementation Smart Home to Improve the Energy Efficiency of a Smart Home</i> , pp. 197-202.	
Chabane, Lazhar	University of Geulma, Algeria
CHRIFI-ALAOUI, Larbi	Université De Picardie Jules Verne
Drid, Mohamed Dhia Eddine	Usthb
Mechnane, Farouk	University of Batna 2
DRID, Said	Higher National School of Renewable Energy, Environment and Sust
15:50-16:10	SuCB.5
<i>Implementation of Global Control and Energy Management in a Hybrid AC-DC Microgrid for Residential Areas</i> , pp. 203-208.	
Drid, Mohamed Dhia Eddine	Usthb
hamdani, samir	Usthb
Nait Seghir, Amirouche	USTHB
CHRIFI-ALAOUI, Larbi	Université De Picardie Jules Verne
DRID, Said	Higher National School of Renewable Energy, Environment and Sust
Â	
SuCC	Room 3
Control Applications II (Interactive Session)	
Chair: bencherif, hichem	Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria
Co-Chair: Chaabane, Mohamed	National Engineering School of Sfax, Tunisia
14:30-14:50	SuCC.1
<i>Optimized Super Twisting Sliding Mode Controller for Robot Manipulators</i> , pp. 209-214.	
Saoudi, Khadidja	Djelfa University
Guesmi, Kamel	University of Reims Champagne Ardenne
Bdirina, Khansa	Djelfa University
14:50-15:10	SuCC.2
<i>Nonlinear Integral Backstepping Control of Machine Side Converter PMSG Wind Turbine Conversion System During Grid Faults</i> , pp. 215-220.	
SAIDI, Youcef	Electro-Technical Engineering Lab (LGE), Faculty of Technology,
Brahim, BRAHMI	Institute of Mining and Technology New Mexico, USA
Abdelkader, MEZOUAR	Université Dr. Moulay Tahar - SAIDA
Meddah, ATALLAH	Université Dr. Moulay Tahar - SAIDA
Mohammed amin, BENMAHDJOUB	Université Dr. Moulay Tahar - SAIDA
15:10-15:30	SuCC.3
<i>Robust Combined FOMRAC/PD Adaptive Control Design for Veloce Parallel Robot Using DE Optimization and a Fractional-Order Integrator</i> , pp. 221-226.	
Ladaci, Samir	National Polytechnic School of Constantine
Bouchra, Khoumeri	Ecole Nationale Polytechnique
15:30-15:50	SuCC.4
<i>Broadband and High-Gain SIW-Fed Cavity-Backed Patch Antenna for the 60 GHz Spectrum</i> , pp. 227-230.	

Boubaker, kerboub	Laboratoire d'Hyperfréquences Et De Semi Conducteurs, Départemen
Siham, Ben Kouda	Laboratoire d'Analyse Des Signaux Et Systèmes, Département D'Ele
Djamel, Khezzar	Mohamed Boudiaf University, M'sila, Algeria
Salim, Ghoggali	The Higher National School of Renewable Energy, Environment, And
15:50-16:10	SuCC.5
<i>Eddy Currents and Magnetic Field Calculation in a Conductive Rod of Finite and Infinite Length Wrapped by a Cylindrical Coil</i> , pp. 231-236.	
Sari, Moussa	USTHB
Ouazir, Youcef	USTHB
16:10-16:30	SuCC.6
<i>Robust Control Using Adaptive Fuzzy Terminal Sliding Mode for Mobile Robot</i> , pp. 237-242.	
benaziza, walid	University of Batna2
Slimane, Noureddine	University of Batna 2
Mallem, Ali	University of Batna 2
bendib, Hafed-eddine	University of Biskra

Technical Program for Monday November 4, 2024

MoAA	Room 1
Estimations and Identification (Interactive Session)	
Chair: Benoudjit, DJAMEL	University of CONSTANTINE
Co-Chair: Athmani, Samir	Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria
10:30-10:50	MoAA.1
<i>State of Charge Estimation of Lithium-Ion Batteries Based on Fractional-Order Modulating Functions</i> , pp. 243-248.	
LIU, Da-Yan	INSA Centre Val De Loire, Campus De Bourges
Chen, Wen	Wayne State University
Boutat, Driss	INSA Centre Val De Loire
10:50-11:10	MoAA.2
<i>Identification of Multi-Sinusoidal Signal Models : Application to Non-Intrusive Industrial Load Monitoring</i> , pp. 249-254.	
Rivier, Antonin	Université De Poitiers
Chamroo, Afzal	University of Poitiers
Cauet, Sebastien	University of Poitiers
11:10-11:30	MoAA.3
<i>Equivalent Circuit Parameters Identification of High-Power Synchronous Generators Via SSFR Tests</i> , pp. 255-259.	
Leguebedj, Farid	Ecole Nationale Polytechnique, 10 Rue Des Frères OUDEK, El-Harra
Teguar, Madjid	Ecole Nationale Polytechnique, 10 Rue Des Frères OUDEK, El-Harra
Benmahamed, Youcef	Ecole Nationale Polytechnique, 10 Rue Des Frères OUDEK, El-Harra
11:30-11:50	MoAA.4
<i>A Set-Membership Identification Algorithm for Time-Series Modeling Using ARMA Process</i> , pp. 260-266.	
EL MAIZI, HASNA	Laboratoire d'Ingenierie Des Systemes - UR 7478 Normandie Univ,
Pouliquen, Mathieu	University of Caen
SAFI, SAID	Sultan Moulay Slimane University
FRIKEL, Miloud	Normandie Univ, UNICAEN, ENSICAEN
11:50-12:10	MoAA.5
<i>Recurrence Plot and Quantification of Glottal Signal for Pathological Voice Analysis</i> , pp. 267-272.	
DAHMANI, mohammed	University of Science and Technology Houari Boumedien
bettayeb, nadjla	Université Kasdi Merbah Ouargla, Algeria
12:10-12:30	MoAA.6
<i>Fault Detection and Estimation of Battery Strings without Voltage Measurements to Individual Battery Cells Using a Fractional-Order Learning Observer</i> , pp. 273-277.	
Chen, Wen	Wayne State University
LIU, Da-Yan	INSA Centre Val De Loire, Campus De Bourges
Boutat, Driss	INSA Centre Val De Loire

À

MoAB	Room 2
Renewable Energy III (Regular Session)	
Chair: Zerek, Amer	Aziwa University
Co-Chair: chebaki, elasaad	University of BATNA-2
10:30-10:50	MoAB.1
<i>Green Hydrogen Facilities Based on Carbon Pricing Consideration of Introduction Possibility</i> , pp. 278-283.	
Takayama, Daiki	Tokyo City University
Amau, Toru	Tokyo City University
Maeda, Takao	Nihon Kensetsu Kogyo Co., Ltd
Miyake, Satoshi	Nihon Kensetsu Kogyo Co., Ltd
Kawakami, Itaru	Nihon Kensetsu Kogyo Co., Ltd
10:50-11:10	MoAB.2
<i>Performance Analysis of a Novel PbS Quantum Dot Solar Cell with FASnI3 Perovskite Interfacial Layer</i> , pp. 284-288.	
Aouni, Qoteyba	Batna 2 University
Kouda, Souhil	LEREESI, HNS-RE2SD, Batna, Algeria
bencherif, hichem	Higher National School of Renewable Energy, Environment and Sust

Mohammed cherif, okba	University M'hamed BOUGARA of Boumerdes (UMBB), Research Laborato
Sasikumar, P	Saveetha School of Engineering
Younsi, Ziyad	HNS RE2SD
Mokrani, Sabrina	Batna 2 University
Belferdi, Souad	HNS RE2SD
11:10-11:30	MoAB.3
<i>Artificial Intelligent-Based Parameter Tuning of an Active Disturbance Rejection Controller for Electrode Wire Feeding Mechanism</i> , pp. 289-294.	
Haddad, Mohammed	Research Center in Industrial Technologies (CRTI)
Hamouda, Noureddine	Research Center in Industrial Technologies (CRTI)
Babes, Badreddine	Research Center in Industrial Technologies (CRTI)
Lekouaghet, Badis	Research Center in Industrial Technologies (CRTI)
11:30-11:50	MoAB.4
<i>Green Energy Integration: Modeling Photovoltaic, Hydrogen, and Battery Systems for Cost and Carbon Emission Reduction in Micro-Grids</i> , pp. 295-300.	
Khan, Aqib	UMR 9189, CRISTAL, Université De Lille
Bressel, Mathieu	Junia High Engineering School of Lille (Junia-HEI-Lille)
Abbes, Dhaker	Univ. Lille, Arts Et Metiers Institute of Technology, Centrale L
Davigny, Arnaud	Junia High Engineering School of Lille (Junia-HEI-Lille)
Ould Bouamama, Belkacem	Polytech Lille
11:50-12:10	MoAB.5
<i>Numerical Analysis and Optimal Design of 2D Dion–Jacobson Perovskite Solar Cells</i> , pp. 301-305.	
Mokrani, Sabrina	Batna 2 University
Kouda, Souhil	LEREESI, HNS-RE2SD, Batna, Algeria
Bendib, Toufik	Higher National School of Renewable Energy, Environment and Sust
bencherif, hichem	Higher National School of Renewable Energy, Environment and Sust
Aouni, Qoteyba	Batna 2 University
Mohammed cherif, okba	University M'hamed BOUGARA of Boumerdes (UMBB), Research Laborato
Sasikumar, P	Saveetha School of Engineering
Belferdi, Souad	HNS RE2SD
Younsi, Ziyad	HNS RE2SD
Â	
MoAC	Room 3
Modeling and Simulation (Regular Session)	
Chair: Ladaci, Samir	Ecole Nationale Polytechnique
Co-Chair: Saadi, Yahia	Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria
10:30-10:50	MoAC.1
<i>Hybrid Timed Petri Net Framework for Switched Dynamical System Modelling</i> , pp. 306-311.	
Hamdi, Fatiha	Universite of Batna2 Algeria
ZEROUAL, Abdelhafid	University of Skikda, Algeria
10:50-11:10	MoAC.2
<i>Optimal Design and Tuning of Fractional Order Fuzzy PID Power System Stabilizer for SMIB Power System Using Africain Vulture Optimization Algorithm</i> , pp. 312-316.	
HATTABI, Intissar	Blida 1 University, Faculty of Technology, Electrical and Contro
KHELDOUN, Aissa	Signals and Systems Laboratory LSS, Institute of Electrical And
BRADAI, Rafik	LATSI, Blida 1 University, Faculty of Technology, Electronics D
khettab, soufian	Blida 1 University, Faculty of Technology, Electrical and Contro
11:10-11:30	MoAC.3
<i>Distributed Output Bounded Bilinear Tracking Control of a Parabolic Trough Solar Collector</i> , pp. 317-322.	
Mechhoud, Sarah	University 20 August 1955
Belkhatir, Zehor	University of Southampton
11:30-11:50	MoAC.4

Improved TSR Based MPPT Control Using Advanced Higher Order Sliding Mode Approach for Wind Turbine, pp. 323-328.

Kadri, Rania

Sidi Bel Abbes University

Mohamed, ABID

Djillali Liabes University of Sidi Bel Abbes

Azzeddine, Yasser Nadhir

IRECOM Laboratory Sidi Bel Abbes Algeria

11:50-12:10

MoAC.5

Towards Resilience: Transforming Conventional Control Systems, pp. 329-334.

Faizan, Mohd

Universite De Lille UMR 9189, CRISTAL

Boukerdja, Mahdi

CRISTAL UMR CNRS 9189, Université De Lille, Villeneuve d'Ascq, F

Gehin, Anne-Lise

CRISTAL UMR CNRS 9189, Université De Lille, Villeneuve d'Ascq, F

Ould Bouamama, Belkacem

Polytech Lille

12:10-12:30

MoAC.6

Investigating Quantum Artificial Neural Networks for Singularity Avoidance in Robotic Manipulators, pp. 335-340.

Fazilat, Mehdi

University

zioui, nadjat

Ecole Nationale Supérieure De Technologie

Â

MoAD

Room 4

Optimization (Regular Session)

Chair: Hadj, A.

Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria

Co-Chair: Hamizi, Saad-eddine

Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria

10:30-10:50

MoAD.1

Optimization of Coupled ARX-Laguerre Multimodel Parameters Using Genetic Algorithm, pp. 341-347.

Benamor, Hajer

Laboratory of Automatic Signal and Image Processing (LARATSI),

Yousfi, Marwa

Laboratory of Automatic Signal and Image Processing (LARATSI),

CHRIFI-ALAOUI, Larbi

Université De Picardie Jules Verne

Garna, Tarek

ISSAT Sousse

10:50-11:10

MoAD.2

Development and Optimization of Eddy Currents in Conductive Particles within the Magnetic Drum Separator Using Response Surface Modeling (RSM), pp. 348-353.

BETTACHE, abderrahmane

Djillali Liabes University of Sidi Bel Abbes

BENDIMERAD, Salah-Eddine

Djillali Liabes University of Sidi Bel Abbes

KRIKA, Wafa

Djillali Liabes University of Sidi Bel Abbes

AYAD, Abdelghani

Djillali Liabes University of Sidi Bel Abbes

AYAD, Ahmed Nour El Islam

Kasdi Merbah University of Ouargla

KHELLAF, Kadda

Djillali Liabes University of Sidi Bel Abbes

11:10-11:30

MoAD.3

A PSO-Based Global Path Planning Approach for Mobile Robots, pp. 354-359.

Boutalbi, Oussama

Intelligent System Laboratory, Setif-1 University, Setif, Alger

SEGHIR, Fateh

Intelligent Systems Laboratory, Ferhat Abbas University –Setif

BOUTALBI, ASMA

Informatic's Departement, Ferhat Abbas Setif-1 University

GUERRA, LATIFA

Informatic's Departement, Ferhat Abbas Setif-1 University

11:30-11:50

MoAD.4

Soft Computing Using an HPSOGWO Variant for Functions Optimization and PMSM Drive Control, pp. 360-366.

Bazi, Smail

Industrial Security Department, Hygiene and Security Institute,

benzid, redha

Batna2 University

NAIT SAID, MOHAMED SAID

University of Batna 2

11:50-12:10

MoAD.5

Enhancing Graph-SLAM 2D Maps Accuracy and Data Efficiency Via Loop Closure through PGO and Map-Based Navigation, pp. 367-372.

Chettih, Istighfar

Laboratory of Telecommunications, Signals and Systems, Universit

Chouireb, Fatima

Amar Thélidji of Laghouat, Algeria, Department of Electronic, L

Achour, Saadi

University Amar Telidji of Laghouat

Khalil, Mokhtari

University Abbes Laghrour of Khenchela

12:10-12:30

MoAD.6

Modulation of Threshold Voltage and Factors That Influence It in NMOS Transistors, pp. 373-376.

chebabhi, Younes

Dendouga, Abdelghani

Kouda, Souhil

University of Batna 2

University of Batna 2

LEREESI, HNS-RE2SD, Batna, Algeria

Â

Technical Program for Tuesday November 5, 2024

TuAA	Room 1
Renewable Energy and Power Systems I (Regular Session)	
Chair: Azoui, Boubekeur	University of Batna
Co-Chair: Bendjerad, Adel	Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria
10:30-10:50	TuAA.1
<i>Control of DFIG Power Dedicated for Wind Turbine</i> , pp. 377-382.	
Mehdi, Amine	University of Ghardaia
GUERBOUZ, abdessalam	Djelfa University , LAADI Laboratory ,
10:50-11:10	TuAA.2
<i>Fractional Exponential Reaching Law Sliding Mode Control for a Robot Manipulator Tracking Application</i> , pp. 383-388.	
stih, sana	ENP : National Polytechnic Institution
Aouaichia, Abdelhadi	University of Blida 1
Mohamad Gad, Omar	Electrical Engineering Department, University of Sharjah
Raouf, Fareh	University of Sharjah
Khadraoui, Sofiane	University of Sharjah
Bettayeb, Maamar	University of Sharjah, King Abdulaziz University,
11:10-11:30	TuAA.3
<i>Fractional-Order PI Control of a TITO System Using Particle Swarm Optimization Algorithm</i> , pp. 389-394.	
Bettou, Khalfa	Signal Processing Laboratory, Department of Electronics, Universi
Bekkouche, Hanene	Laboratoire De Traitement Du Signal, Département D'Electronique,
ASSABAA, Mohamed	Laboratoire De Traitement De Signal, Département Electronique, U
11:30-11:50	TuAA.4
<i>Enhanced Energy Efficiency in Visual Sensor Networks through ROI-Based Compression Techniques in Wildlife Surveillance</i> , pp. 395-400.	
HADJI, Oussama	LASTIC Laboratory, Dept. Computer Science, University of Batna 2
MAIMOUR, Moufida	Université De Lorraine, CNRS, CRAN, F-54000 Nancy, France
KADRI, Ouahab	LASTIC Laboratory, Dept. Computer Science, University of Batna 2
BENYAHIA, Abderrezak	LASTIC Laboratory, Dept. Computer Science, University of Batna 2
Rondeau, Eric	Cran-Cnrs Umr 7039
11:50-12:10	TuAA.5
<i>3D Computational Analysis of Single Channel HT PEMFCs: Enhancing Efficiency and Durability</i> , pp. 401-405.	
GUERBAZI, Mohamed El Amine	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
CHINE, Adel	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
khaldi, Fouad	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
Boutaghane, Ayoub	LEREESI Laboratory, HNS-RE2SD, Batna, Algeria
Mohammedi, Abdallah	Ecole Nationale Polytechnique De Constantine, BP 75, Nouvelle Vi
Zereg, Alaeddine	LPEA, University of Batna 1, Batna, Algeria
12:10-12:30	TuAA.6
<i>Fast Approach to Predict the Airgap Magnetic Field of a Permanent Magnet Vernier Machine</i> , pp. 406-411.	
TOUIMI, Khalil	Military Polytechnic School
OULDHAMRANE, Hichem	Military Polytechnic School
STATRA, Yazid	Military Polytechnic School
Benbouzid, Mohamed El Hachemi	University of Brest, Brest, France. EA 4325 - Laboratoire Brest

Â

TuAB	Room 2
Fuzzy and Neural Systems (Interactive Session)	
Chair: Boubiche, Djellal	Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria
Co-Chair: betka, achour	University of Biskra
10:30-10:50	TuAB.1
<i>Traffic Signal Control for Large-Scale Scenario: A Deep Reinforcement Learning-Based Cooperative Approach</i> , pp. 412-417.	
Haddad, Tarek Amine	University of Batna 2
10:50-11:10	TuAB.2

Real-Time FPGA Implementation of FFT Architecture Utilizing a Single Butterfly Calculator: Application on Rotor Bars Fault Detection in Induction Motor, pp. 418-423.

hamouda, salim	Usthb
hamdani, samir	Usthb
khelfi, hamid	Usthb
Boudjit, Kamel	Usthb
Drid, Mohamed Dhia Eddine	Usthb
Kassa Baghdouche, Kamel	Usthb

11:10-11:30 TuAB.3

Advanced Intrusion Detection Systems Leveraging Knowledge Graph-Based Techniques, pp. 424-428.

DAOUD, Mohamed Amine	University of Tiaret
Mostefaoui, Sid ahmed mokhtar	University of Tiaret
MEGHAZI, HADJ MADANI	University of Tiaret
Labbadi, Ourida	University of Tiaret
zenina, chaimaa	University of Tiaret
Bouguessa, Abdelkader	Ibn Khaldoun University

11:30-11:50 TuAB.4

Intelligent Physicochemical Analysis Laboratory for Coagulant Dosing in a Potable Water Treatment, pp. 429-434.

MEGUETTA, Zine Eddine	Lille University
Mohamed Ilyas, Rahal	University of Tlemcen -Algeria
CHAABNA, Ameer	University of Science and Technology Houari Boumediene USTHB Al
BABOURI, Abdesselam	LGEF Laboratory , Department of Electrical and Automatic Enginee
CHOUABIA, Halim	Laboratoire Des Télécommunications-LT, Département D'Electroniqu

11:50-12:10 TuAB.5

Iterative Learning Control of a Discrete System with Input Backlash Using the Measurable Output, pp. 435-440.

Emelianova, Julia	Arzamas Polytechnic Institute of R.E. Alekseev Nizhny Novgorod S
-------------------	--

À

TuAC	Room 3
Fault Detection and Diagnostics (Regular Session)	

Chair: KHARRAT, Maher	LabSAT, National School of Electronics and Telecommunications of Sfax
Co-Chair: nait said, Mohamed Said	High National School of Renewables Energies, Environment and Sustainable Development, Batna

10:30-10:50 TuAC.1

Mobile Robot Path Planning Based on A-Star Algorithm and Artificial Potential Field Method for Autonomous Navigation, pp. 441-446.

Louda, Souhaib	Ferhat Abbas University of Setif 1
NORA, KARKAR	University Ferhat Abbas Setif1
SEGHIR, Fateh	Intelligent Systems Laboratory , Ferhat Abbas University –Setif
Refoufi, Salim	Ferhat Abbas University of Setif 1

10:50-11:10 TuAC.2

A Comparative Study between Classic and Intelligent MPPT Techniques for a Photovoltaic System, pp. 447-451.

Mechnane, Farouk	University of Batna 2
DRID, Said	Higher National School of Renewable Energy, Environment and Sust
Drid, Mohamed Dhia Eddine	Usthb
CHRIFI ALAOUI, Larbi	UPJV - IUT De L'Aisne

11:10-11:30 TuAC.3

A Short Review on Industrial Prognostic Hybrid Approaches: Concepts, Techniques and Applications, pp. 452-457.

Bouzenita, Mohammed	Laboratory of Automation and Manufacturing Engineering (LAP) Uni
Mouss, Leila-Hayet	Laboratory of Automation and Manufacturing Engineering (LAP) Uni
Melgani, Farid	Laboratory of Signal Processing and Recognition University of Tr
bentrcia, toufik	University of Batna

11:30-11:50 TuAC.4

Study of the Influence of Temperature and Geometric Modifications of an NMOS in CMOS Inverters, pp. 458-462.

chebabhi, Younes	University of Batna 2
Dendouga, Abdelghani	University of Batna 2

Kouda, Souhil	LEREESI, HNS-RE2SD, Batna, Algeria
11:50-12:10	TuAC.5
<i>Disturbance Observer-Based Fast Finite-Time Adaptive Fuzzy Control for Uncertain Nonlinear Systems</i> , pp. 463-468.	
BOUSBIA, HOUSSEM	University of Jijel
Boulkroune, Abdesselem	LAJ, University of Jijel
Bounar, Naamane	University of Jijel
Labdai, Sami	National Polytechnic School of Algeria
CHRIFI-ALAOUI, Larbi	Université De Picardie Jules Verne
Ä	
TuAD	Room 4
Renewable Energy IV (Interactive Session)	
Chair: Benyoucef, Ahmed	Higher National School of Renewable Energy, Environment and Sustainable Development, Batna, Algeria
Co-Chair: BOUSLIMANI, Samir	University of Batna 2
10:30-10:50	TuAD.1
<i>Nonlinear Integral Backstepping Control of DFIGs-Based Wind Farm under Unbalanced Electrical Grid Voltage</i> , pp. 469-475.	
Meddah, ATALLAH	Université Dr. Moulay Tahar - SAIDA
Abdelkader, MEZOUAR	Université Dr. Moulay Tahar - SAIDA
Brahim, BRAHMI	Institute of Mining and Technology New Mexico, USA
SALHI, Issam	UTBM, FEMTO-ST
Mohammed amin, BENMAHDJOUB	Université Dr. Moulay Tahar - SAIDA
Youcef, SAIDI	Université Dr. Moulay Tahar - SAIDA
10:50-11:10	TuAD.2
<i>Predicting Future Power Generation and Diagnosing Failure Rate at a Solar Power Plant in India Using Machine Learning Algorithms</i> , pp. 476-481.	
Rahmouni, djemaa	University of Batna 2, Laboratory of Automation and Manufacturin
Mohamed Djamel Mouss, Mouss	University of Batna 2, Laboratory of Automation and Manufacturin
Mouss, Leila-Hayet	Laboratory of Automation and Manufacturing Engineering (LAP) Uni
Benbouzid, Mohamed	University of Brest
11:10-11:30	TuAD.3
<i>Non-Intrusive Load Monitoring Using High-Frequency Measurements and Machine Learning</i> , pp. 482-488.	
dinar, farid	Université De Toulon
Harhoura, Anis	Université De Toulon
Paris, sebastien	Université Paul Cézane
Busvelle, Eric	Université De Toulon
Chayla, Romain	Indewatt
11:30-11:50	TuAD.4
<i>Enhanced Energy Management Algorithm of Hybrid PV-Fuel Cell-Battery System for Isolated DC Load Applications</i> , pp. 489-495.	
Otman, Gahgouhi	University of Laghouat
gahgouhi, soufiane	University of Laghouat
HADJAISSA, Aboubakeur	University of Laghouat
Bendjedja, Bachir	UATL
AMEUR, Khaled	University of Laghouat
RABHI, ABDELHAMID	MIS
11:50-12:10	TuAD.5
<i>Enhanced Perturb and Observe MPPT Algorithm Using Ultra-Local Model Control for Improved Photovoltaic System Efficiency</i> , pp. 496-501.	
Lakhdari, Abdelkader	Unité De Recherche Appliquée En Energies Renouvelables, U
Bouarroudj, Nouredine	Unité De Recherche Appliquée En Energies Renouvelables, URAER, C
BENLAHBIB, BOUALAM	URAER
Abdelkrim, Tameur	Applied Research Unit on Renewable Energies
12:10-12:30	TuAD.6
<i>Fuzzy Super-Twisting Sliding Mode Applied to Dc-Bus Voltage Regulator</i> , pp. 502-507.	
GUERBOUZ, abdesselam	Djelfa University , LAADI Laboratory ,
merzouk, Imad	Djelfa University , LAADI Laboratory ,

FIHAKHIR, Amine Mehdi
Hafaifa, Ahmed

Ghardaia University
Applied Automation and Industrial Diagnostic Laboratory, Univers

Â