Curriculum Vitae

Family name	**Kouzou قزو**
First Name	***Abdallah عبدالله***
Date of Birth	***03/06/1964***
Place of Birth	***Dar Chioukh, Djelfa, Algeria***
Actual occupation	***Full professo rat University of Djelfa***
Marital situation	***Married (7 children)***
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Employment Experience and Positions

- **Current:** Full Professor
- **2013-2017:** Associate Professor (Maitre de conférence "A")
- **2012-2013:** Associate Professor (Maitre de conférence "B")
- **2008-2012:** Lecturer, Assistant Professor. University of Djelfa (Maitre Assistant "A")
- **2005 - 2008:** Lecturer, Assistant Professor. University of Djelfa (Chargé de Cours)
- **2004 - 2005:** Assistant Professor. University Centre of Djelfa
- **1994 - 2004:** Assistant. University Centre of Djelfa
- **----------**
- **1997-1999:** Head of Technology Department, University Center of Djelfa.
- **1999-2010:** Head of Electrical Department.
- **2015-2017:** The Dean of the Faculty of Sciences and Technology, University of Djelfa.

Scientific Positions

1. Member of the CSP (Commission Sectroriel Permanent) since **2022**
2. **2008-2010** Member of scientific council of the Science and technology faculty, University of Djelfa.
3. **2015-2017**: President of the Scientific Consul of the Faculty of sciences and Technology, Djelfa University, Algeria with the period of (**2015-2017**)
4. **1997-1999**: Member of scientific council of the National Institute of Electronics.
5. **1999-2008**: Member of scientific council of the Technology Institute, University Center of Djelfa.
6. **2021 - up to date:** The head of the research group on Diagnostics of PV power plants and Power quality at the Excellence research laboratory of Applied Automation and Industrial Diagnosis.
7. **2013 - up to date:** The head of the research group on Power Electronics and Power Quality at the research laboratory of Applied Automation and Industrial Diagnosis.

Supervising of Graduation Students

1. From 1994 to 1998: **20** students supervised (superior technicians).
2. From 1997 to 2010: **30** Engineer students supervised. Especially in power electronics and machines control.
3. From 2012 to 2024: **30** Master student supervised
4. From 2012 to 2023: **26 PhD** thesis supervised and defended
5. Currently supervising: **2 PhD** students abroad.

Visiting Professor and International Collaborator researcher

1. Chair of the Africa Working Group on Decarbonisation of Transport in Africa, launched by IAP/NASAC **2022 up to date.**
2. Chair of the Sub-Committee on FACTS and HVDC of the Power Electronics Technical Committee in IES/IEEE. (**from 2014 up to date**) Elected in Novemebr 2014, during IECON 2014 in Vienna, Austria.
3. Member of the Sub-Committee on Motor and Drives of the Power Electronics Technical Committee in IES/IEEE. (**From 2013 up to date**).
4. External Examiner for Doctorate School at Gdansk Technical University in Poland on **2021-2023**.
5. Adjunct professor with Nisantasi University in Turkey **2021-2023**.
6. External experts in projects at Hail University, Kingdom of Saudi Arabia **2021.**
7. PHD external Examiner and member of Dissertation Jury at Gdansk Technical University in Poland on **2019-2024**.
8. Giving ESP lectures to Phd and Master Students at Gdansk Technical University in Poland on **2019-2023.**
9. Visiting professor to Gdansk Technical University in Poland on **2019-2023**.
10. Collaborator researcher with Texas A&M University,at Doha, Qatar on **2012-2023.**
11. Collaborator researcher with Technical University in Germany, on **2010-2023.**
12. Collaborator researcher with Technical University of Sofia/ Plovdiv Branch in Bulgaria, on **2016-2019**.
13. Member of the Smart Grid Center, Texas A&M University, Doha, Qatar.
14. A Researcher in the laboratory of "Lehrstuhl für Elektrische Antriebssysteme und Leistungselektronik", of TUM (the technique University of Munich), Allemagne, under a scholarship award funded by the Ministry of Higher Education and Scientific Research of Algeria for a period of **18** months (**from Sept 2010 to March 2012**).

Participation in International Dissertations PhD and Master

1. Participation as external examiner in (01) PhD dissertation at Technical University Of Munich, Germany.
2. Participation as external examiner in (01) PhD dissertation at Gdansk Technical University. Poland
3. Participation as external examiner in (01) PhD thesis at Melbourne University, Australia.
4. Participation as external examiner in (01) PhD thesis at Alighar Muslim University, India.
5. Participation as external examiner in (01) PhD thesis at Johannesburg University, South Africa.
6. Participation as invited in (01) PhD dissertation at Sfax National School of Engineering (ENIS), Tunisia.
7. Participation as external examiner in (01) Master dissertation at Qatar University, Qatar.

Research Projects National and International

1- **Head of a research projet PNR** (2021-2024) (Agreed in Janaury 2021),

2- **Head of a research projet PRFU** (2011-2024) (Agreed in Janaury 2001), « Contribution à la commande des moteurs électriques à enroulements statorique ouverts (open-end winding) basée sur des techniques avancées, ». **A01L07UN170120210003**

3- **Head of a research projet PRFU** (2017-2021) (Agreed in Janaury 2017), and achieved on December 2021), » Implémentation d'une commande tolérante aux défauts appliquée à une turbine à gaz: Prédiction et reconfiguration, ». **A01L08UN170120180005**

4- **Head of a research projet CNEPRU** (2015-5018) (Agreed on January 2015), and achieved on 2017 : « Contribution au diagnostic s des Défauts dans les machines multi-phases et les convertisseurs d'électronique de Puissance Multi-phases, ». **J0202820140002.**

5- **Head of a research projet CNEPRU** (2014-2017) (Agreed on 2014 and achieved on December 2017) ; « Conception et Réalisation d'un Convertisseur de Puissance à base d'Impédance de Source (Z-Source) pour Remplacer les Convertisseurs Classique dans un système Hybride (Photovoltaïque-Batterie) connecté au réseaux autonome, ». **J0202820130002**

6- **Membre of ERASMUS+** Project (**COFFEE**: Co-construction d'une offre de formation à finalité d'employabilité élevée). Ce projet est financé par l'Union Européenne dans le cadre du programme ERASMUS + « Capacity Building » for a duration of 03 year from 15 October 2015 to 15th Octobre 2018. Objective : English ESP teaching « Anglais professionnel dans les licences professionnalisantes ».

7- **Member of ERASMUS+ Project** (**MODCLIM** (1st edition and 2st edition - Modelling Clinic for Industrial Mathematics). Supported by the Erasmus + Programme of the European Union (EU), (2015)

8- **Member of research project funded by** "National Priorities Research Program (NPRP)" member du "Qatar Foundation" (Agreed on Avril 2012 and Achieved on March 2015), Advanced power electronics supply solution for variable multiphase ac motor drives. Code: **NPRP 04-152-2-053.**

9- **Member of research project funded by** "National Priorities Research Program (NPRP)" member du "Qatar Foundation" (Agreed on June 2013 for five years and achieved on 2018), 1-MW PV Power RD&D Using SiC-based qZS Cascade Multilevel Inverter and Battery Energy Storage. Code :**NPRP X 033-02-077.**

10- **Member of research project funded by** "National Priorities Research Program (NPRP)" member du "Qatar Foundation" (Agreed on Avril 2012 and achieved on 2015), Advanced Model Predictive Control application to Power Electronics and Drives. Code : **NPRP 04-077-2-028.**

11- **Memebr of a research projet CNEPRU** (Agreed on January 2010 and achieved), « Etude, conception et optimisation des systèmes énergétiques hybrides PV-Eoliènne-Diesel, ». Code: **J0202820090005**

Experts Activities

1. National Contact Points (NCP) at Horizon European Program **2022-2027**
2. Expert for the evaluation of the Doctorate program project (formation doctorale D-LMD) with Regional Conference of the Center Universities (CRUC) **2015**
3. Expert for the evaluation of the Doctorate program project (formation doctorale D-LMD) with Regional Conference of the Center Universities (CRUC) **2016**
4. Expert for the evaluation of the Socio-economics projects at DGRSDT.
5. Expert for the evaluation of the Socio-economics projects at ATRST.
6. Expert for the evaluation of the Research Laboratories at ATRST.
7. Expert within the Committee for University Habilitation **2021**.

Publications (Only during the last four years 2021-2024)

[1]. Abdesattar Mazouzi, Nadji Hadroug, Walaa Alayed, Ahmed Hafaifa, Abdelhamid Iratni, ***Abdellah Kouzou***, Comprehensive optimization of fuzzy logic-based energy management system for fuel-cell hybrid electric vehicle using genetic algorithm, International Journal of Hydrogen Energy, Volume 81, **2024**.

[2]. Mohammedi, R.D.; Kouzou, A.; Mosbah, M.; Souli, A.; Rodriguez, J.; Abdelrahem, M. Allocation and Sizing of DSTATCOM with Renewable Energy Systems and Load Uncertainty Using Enhanced Gray Wolf Optimization. Appl. S*ci.* **2024**, *14*, 556.

[3]. Tamersit, K.; Kouzou, A.; Rodriguez, J.; Abdelrahem, M. Electrostatically Doped Junctionless Graphene Nanoribbon Tunnel Field-Effect Transistor for High-Performance Gas Sensing Applications: Leveraging Doping Gates for Multi-Gas Detection. Nanomaterial*s* **2024**.

[4]. Tamersit, K.; Kouzou, A.; Rodriguez, J.; Abdelrahem, M. Performance Projection of Vacuum Gate Dielectric Doping-Free Carbon Nanoribbon/Nanotube Field-Effect Transistors for Radiation-Immune Nanoelectronics. Nanomaterials **2024**.

[5]. Amrani, Z.; Beladel, A.; Kouzou, A.; Rodriguez, J.; Abdelrahem, M. Four-Wire Three-Level NPC Shunt Active Power Filter Using Model Predictive Control Based on the Grid-Tied PV System for Power Quality Enhancement. Energies **2024**.

[6]. Saci, A.; Nadour, M.; Cherroun, L.; Hafaifa, A.; Kouzou, A.; Rodriguez, J.; Abdelrahem, M. Condition Monitoring Using Digital Fault-Detection Approach for Pitch System in Wind Turbines. Energies **2024**.

[7]. Boutheyna Hadmer, Said Drid, Abdallah Kouzou, Larbi Chrifi-Alaoui "Voltage Sensorless Control of Five-Level Packed U-Cell Inverter Based on Lyapunov Approach for Grid-Connected Photovoltaic System". (**2024**). Revue Roumanine des Sciences Techniques-Série Electrotechnique et Energetique, 69(2), 135-140.

[8]. Benalia, N.; Laroussi, K.; Benlaloui, I.; Kouzou, A.; Bensalah, A.-D.; Kennel, R.; Abdelrahem, M. Optimized Power Pads for Charging Electric Vehicles Based on a New Rectangular Spiral Shape Design. Sustainability **2023**, 15, 1230.

[9]. Khadar, S.; Kaddouri, A.M.; Kouzou, A.; Hafaifa, A.; Kennel, R.; Abdelrahem, M. Experimental Validation of Different Control Techniques Applied to a Five-Phase Open-End Winding Induction Motor. Energies **2023**, 16, 5288.

[10]. Fezzani, A.; Guermoui, M.; Kouzou, A.; Hafaifa, A.; Zaghba, L.; Drid, S.; Rodriguez, J.; Abdelrahem, M. Performances Analysis of Three Grid-Tied Large-Scale Solar PV Plants in Varied Climatic Conditions: A Case Study in Algeria. Sustainability **2023**, *15*, 14282.

[11]. Boulanouar, S.A.; Kaddouri, A.M.; Kouzou, A.; Benaissa, A.; Teta, A.; Hafaifa, A.; Kennel, R.; Abdelrahem, M. Multifunctional Control Technique for Grid-Tied Hybrid Distributed Generation System Taking into Account Power Quality Issues. Energies **2023**, 16, 6565.

[12]. Sellali, M.; Ravey, A.; Betka, A.; Kouzou, A.; Benbouzid, M.; Djerdir, A.; Kennel, R.; Abdelrahem, M. Multi-Objective Optimization-Based Health-Conscious Predictive Energy Management Strategy for Fuel Cell Hybrid Electric Vehicles. Energies **2022**, 15, 1318.

[13]. Fezzani, A.; Hadj-Mahammed, I.; Kouzou, A.; Zaghba, L.; Drid, S.; Khennane, M.; Kennel, R.; Abdelrahem, M. Energy Efficiency of Multi-Technology PV Modules under Real Outdoor Conditions—An Experimental Assessment in Ghardaïa, Algeria. Sustainability **2022**, 14, 1771.

[14]. Tamersit, K.; ***Kouzou, A***.; Bourouba, H.; Kennel, R.; Abdelrahem, M. Synergy of Electrostatic and Chemical Doping to Improve the Performance of Junctionless Carbon Nanotube Tunneling Field-Effect Transistors: Ultrascaling, Energy-Efficiency, and High Switching Performance. Nanomaterials **2022**, 12, 462.

[15]. Bensalem, Y., Abbassi, A., Abbassi, R., Houssem Jerbi, Mansoor Alturki, Abdullah Albaker, ***Abdallah Kouzou***, M. N. Abdelkrim et al. Speed tracking control design of a five-phase PMSM-based electric vehicle: a backstepping active fault-tolerant approach. Electr Eng (**2022**).

[16]. Wlas, M.; Galla, S.; ***Kouzou, A***.; Kolodziejek, P. Analysis of an Energy Management System of a Small Plant Connected to the Rural Power System. Energies **2022**, 15, 719.

[17]. Bensalem Y.,***Kouzou A***.; Abbassi R., Jerbi H., Kennel R., Abdelrahem M. "Sliding-Mode-Based Current and Speed Sensors Fault Diagnosis for Five-Phase PMSM." Energies **2022**, 15, 71.

[18]. Schofield, D.; Mohapatra, D.; Chamorro, H.R.; Roldan-Fernandez, J.M.; Abdellah, K.; Gonzalez-Longatt, F. Design and Implementation of Low-Cost Phasor Measurement Unit: PhasorsCatcher. Energies **2022**.

[19]. Tamersit, K.; Madan, J.; Kouzou, A.; Pandey, R.; Kennel, R.; Abdelrahem, M. Role of Junctionless Mode in Improving the Photosensitivity of Sub-10 nm Carbon Nanotube/Nanoribbon Field-Effect Phototransistors: Quantum Simulation, Performance Assessment, and Comparison. Nanomaterials **2022**, *12*, 1639.

[20]. Belboul, Z.; Toual, B.; Kouzou, A.; Mokrani, L.; Bensalem, A.; Kennel, R.; Abdelrahem, M. Multiobjective Optimization of a Hybrid PV/Wind/Battery/Diesel Generator System Integrated in Microgrid: A Case Study in Djelfa, Algeria. *Energies* **2022**, *15*, 3579.

[21]. Guesmi, Mohamed, Harzallah, Salaheddine, and ***Kouzou, Abdellah***. 'New Non-destructive Testing Approach Based on Eddy Current for Crack Orientation Detection and Parameter Estimation'. 1 Jan. **2021**.

[22]. Mourad Kchaou, Houssem Jerbi, Belgacem Toual & ***Abdallah Kouzou*** (**2021**) Non-fragile mixed H∞/passive-based asynchronous sliding mode control for nonlinear singular Markovian jump systems, International Journal of Systems Science.

[23]. Mourad kchaou, Houssem Jerbi, Rabeh Abassi, Jeyamani VijiPriya, Faical Hmidi, ***Abdallah Kouzou***, Passivity-based asynchronous fault-tolerant control for nonlinear discrete-time singular markovian jump systems: A sliding-mode approach, European Journal of Control, Volume 60, **2021**.

[24]. Fnaiech, M.A.; Guzinski, J.; Trabelsi, M.; ***Kouzou, A***.; Benbouzid, M.; Luksza, K. MRAS-Based Switching Linear Feedback Strategy for Sensorless Speed Control of Induction Motor Drives. Energies **2021**, 14, 3083.

[25]. Sellah, M.; ***Kouzou, A.;*** Mohamed-Seghir, M.; Rezaoui, M.M.; Kennel, R.; Abdelrahem, M. Improved DTC-SVM Based on Input-Output Feedback Linearization Technique Applied on DOEWIM Powered by Two Dual Indirect Matrix Converters. Energies **2021**, 14, 5625.

[26]. Mohamed-Seghir, M.; Kula, K.; ***Kouzou, A***. Artificial Intelligence-Based Methods for Decision Support to Avoid Collisions at Sea. Electronics **2021**, 10, 2360.

[27]. Fekkak B, Merzouk M, ***Kouzou A***, Kennel R, Abdelrahem M, Zakane A, Mohamed-Seghir M. Comparative Study of Experimentally Measured and Calculated Solar Radiations for Two Sites in Algeria. *Energies*. **2021.**

[28]. Mohamed Ben Rahmoune, Ahmed Hafaifa, ***Abdellah Kouzou***, XiaoQi Chen, Ahmed Chaibet, Gas turbine monitoring using neural network dynamic nonlinear autoregressive with external exogenous input modelling, Mathematics and Computers in Simulation, Volume 179, **2021**, 23-47.

S. Khadar, H. Abu-Rub, ***A. Kouzou***, "Sensorless Field-Oriented Control for Open-End Winding Five-Phase Induction Motor with Parameters Estimation," IEEE Open J. the Industrial Electronics Society., vol. 2, **2021**.

[29]. Fekkak B, Menaa M, Loukriz A, ***Kouzou A***. Control of grid-connected PMSG-basedwind turbine system with back-to-back converters topology using a new PIL integration method. Int Trans Electr Energ Syst. **2021**.

Book Chapters

[1]. Muhammad H. Rashid, Abdallah Kouzou, Chapter 15 - Power Factor Correction Circuits, Editor(s): Muhammad H. Rashid, Power Electronics Handbook (Fifth Edition), Butterworth-Heinemann, **2024**.

[2]. Cherroun, L., Nadour, M., Kouzou, A., Boumehraz, M. Type-1 and Type-2 Fuzzy Techniques: Application to Robotic Systems. In: Derbel, N., Nouri, A.S., Zhu, Q. (eds) Advances in Robust Control and Applications. Studies in Systems, Decision and Control, vol 474. Springer, Singapore. **2023**

[3]. B. Nail , ***A. Kouzou***, A. Hafaifa, Fault Detection and Localization of Centrifugal Gas Compressor System Using Fuzzy Logic and Hybrid Kernel-SVM Methods," Diagnosis, Fault Detection & Tolerant Control, Chapter: 07, Publisher: Springer, Singapore, 2020

[4]. Teta Ali, ***A. Kouzou***, M.M Rezaoui, A. Djalab, "Fuzzy Logic Based MPPT for Grid-Connected PV System with Z-Source Inverter: Artificial Intelligence in Renewable Energetic Systems," Chapter in book Renewable

[5]. B. Nail , ***A. Kouzou***, A. Hafaifa, "Digital Stabilizing and Control for Two-Wheeled Robot," Chapter 11 in book New Developments and Advances in Robot Control. DOI: 10.1007/978-981-13-2212-9_11, January, **2019**.

[6]. L. Cherroun, M. Boumehras, ***A. Kouzou***, "Mobile Robot Path Planning Based on Optimized Fuzzy Logic Controllers," Chapter 12 in book New Developments and Advances in Robot Control., January, **2019**.

[7]. Saadat Boulanouar, Ahmed Hafaifa and ***Abdallah Kouzou***, " Gas Turbine Supervision Based on Vibration Analysis and Measurement: Gas Compression Station," Advances in Technical Diagnostics, Applied Condition Monitoring, **2018**.

[8]. Hadroug Nadji, Ahmed Hafaifa and ***Abdallah Kouzou***, " Improvement of Gas Turbine Availability Using Reliability Modeling Based on Fuzzy System," Advances in Technical Diagnostics, Applied Condition Monitoring, **2018.**

[9]. ***A. Kouzou***, "Power Factor Correction Circuits," Power Electronics Handbook, 4th Edition, Chaper 16. ISBN: Imprint**:** Butterworth-Heinemann, Published Date: 1st September **2017**

[10]. Benrabeh Djaidir, Ahmed Hafaifa and ***Abdallah Kouzou,*** "Vibration Detectionin Gas Turbine Rotor Using Artificial Neural Network Combined with Continuous Wavelet," Advances in Acoustics and Vibration, Applied Condition Monitoring, Springer International Publishing Switzerland **2017**, pp:101-113.

[11]. ***A. Kouzou***, Mahmoudi M:O, Boucherit M.S, "The Space Vector Modulation PWM Control Methods Applied on Four Leg Inverters," Chapter 12, Electric Machines and Drives, InTech, Edition February **2011**.

Plenaries presented:National and International Conferences

[1]. Plenary conference on "***An overview on Multi-phase Induction Machines Their Control and Applications***" delivered in the 1st International Conference on Electrical-Electronics and Computer Engineering (ICEECE **2021**), July 24-25, Avrasya University, **Trabzon, Turkey**.

[2]. Plenary conference on "***Energy Word Actual Situation and Space-Based Solar Power Plants Exploitation Challenges***" delivered in the 1st Algerian Symposium on Renewable Energy and Materials December 16-17, **2020** , **Médéa – ALGERIA** (ASREM 2020)

[3]. Plenary conference on " ***An overview on the roadmap for the transition to the smart grid and the challenges of renewable energy sources integration*** " delivered in the First International Conference on Smart grid organized by the department Electrical Engineering at « Ecole Nationale Polytechnique d'Oran (ENPO) – Maurice Audin" in collaboration with IUT Montreuil (Université Paris 8-France) and the SCAMFRE and LAAS laboratories of ENPO, 16-17 March **2019**. **Oran, Algeria**

[4]. Plenary conference on " ***The Transition to Smart Grid and the Challenges of Renewable Energy Integration with Conventional Energy Sources***" delivered in the International Conference on Applied Smart Systems Medea University, **Medea, ALGERIA** (ICASS'2018) 24-25 November **2018**.

[5]. Plenary conference on "***Transition to Smart Grid and the Challenges of Power Electronics Devices Integration***", delivered in the AUS Faculty Workshop on Renewable Energy, Education and Research FW-REER'18 November 7-8, **2018, Sharjah, UAE**

[6]. Plenary conference on **" *Smart Grid and Power Electronics Integration Challenges*",** delivered in the Sixth Inational Scientific Conference on Engineering , Technology and Systems, TECHSYS **2017**, Technical University of Sofia, Plovdiv Branch, 18-20 May 2017, **Plovdiv, Bulgaria**.

[7]. Plenary conference on " ***An Overview and Perspectives on Smart Building and their Integration in Smart Cities***", delivered in the International Conference on Advances and Innovations in Engineering (ICAIE), Firat University, Faculty of Engineering, **Elazığ, Turkey** May 10-12, **2017**

[8]. Plenary conference on " ***The Smart Building and The Smart Grid***", delivered in the 5th Colloque de Recherche Applique et de Transfert de Technologie (CRATT **2015**), 30-31 Octobre & 1 Novembre, **Hammamet, Tunisia.**

Languages

- **Arabic:** Mother tongue
- **English:** Very Good level
- **French:** Very good level
- **German.** A1/A2 level.