

# Curriculum vitae

## **Dr. Boutabba Tarek**

**Lecturer “A”**, Abbès Laghrour Khenchela

University, Algeria.

**Research laboratory:** Electromagnetic Induction Propulsion Systems Laboratory LSPIE-Batna'2000.

**Born:** 03/10/1980 in BATNA

**Family situation:** Married, 2 children.

**e-mail:** boutabba.tarek@univ-khenchela.dz,

**Tel:** +213 676155602



## **I. TRAINING AND DIPLOMAS**

- **3<sup>rd</sup> Post graduation:** University habilitation,, Univ. BATNA 2, **October 2021.**
- **2<sup>nd</sup> Post graduation:** Doctorate in science in Electrical engineering, Univ. BATNA 2, **October 2018.**
- **1<sup>st</sup> Post graduation:** Magister in Electrotechnics, Univ. BATNA, **July 2008.**
- **Graduation:** State Engineer in Electrotechnics, Univ. BATNA, **July 2004.**

## **II. PROFESSIONAL EXPERIENCE:**

- **2006/2012** Part-time teacher, Common Core LMD (Science and Technology), **University of Batna**
- **2013/14, Assistant** professor, science and technology department, **University of Khenchela.**
- **2013/18, Lecturer**, Department of Industrial Engineering, **University of Khenchela.**
- **October 18, 2018, Lecturer**, department of industrial engineering, **University of Abbès Laghrour Khenchela.**

### **III. PROFESSIONAL EXPERIENCE OUTSIDE UNIVERSITY:**

2008/2012 Permanent teacher at the professional education institute IEP Batna: Degree 2 Specialty “Electrotechnics”.

### **IV. SCIENTIFIC ACTIVITIES:**

- ✚ Member of the LSPIE laboratory “Laboratory of Electromagnetic Induction and Propulsion Systems”, under the direction of Dr. Makouf Abdeslam, University of Batna 2000.
- ✚ Member of the PNR research project: "Study of a medium-power wind turbine based on a synchronous machine with permanent magnets with a view to supplying electrical energy to the Biskra recycling center.
- ✚ Member in the Research project entitled “Contribution to improving the performance of hybrid systems”. CNEPRU project University of Batna 2014, Project manager: Pr. Abdessemed Rachid code: A01L07UN050120140015. Member of the Conference Organizing Committee: 5th Conference on Electrical Engineering CEE’08, 27-29 October 2008, BATNA 2008.
- ✚ Member of the Conference Organizing Committee: 6th international Conference on systems and control, ICSC’17, May 7-9, 2017, BATNA. PRFU project leader in the Research project entitled “Contribution to the control and optimal management in real time of a photovoltaic pumping system for the sustainable development of arid areas”. Project at the University of Khenchela 2021/2022, Code N°A01L07UN400120220001.
- ✚ Co-Chairman of the first international conference on electrical engineering and advanced technologies ICEEAT'23, held at the University of Batna 2, Algeria (November 5-7th, 2023, Batna, Algeria, First International Conference on Electrical Engineering and Advanced Technologies, ICEEAT23).

## **V. COMMUNICATION & PUBLICATIONS**

### **A. Conferences:**

1. **T. Boutabba**, A. Makouf and S. Drid " Implementation of Digitized Vector Control of Induction Machine drive with DSpace 1103": **2008**, the 5th International Conference on Electrical Engineering, CEE'08, Oct., Batna, Algeria,
2. **Tarek BOUTABBA**, Said DRID and Abdessalam MAKOUF, "Robust Discrete-Time Field-Oriented Control of a Permanent Magnet Synchronous Machine Fed by a Three-Level Inverter," **5-7 December 2009**, Proceedings of the 3rd International conference of Electrical Engineering ICEE2009, Boumerdes, Alger .
3. **T. BOUTABBA**, S. DRID and A. MAAKOUF, "Robust Controller Design for Speed Control of an Indirect Field Oriented Control "IFOC" Induction Machine Drive with Implementation in Software Dspace 1103," **May, 9-10-2010**, Proceedings of the International Conference On Industrial Engineering and Manufacturing ICIEM'10, , Batna, Algeria
4. **T. Boutabba**, S. Drid and S. Ameziane, " EKF Based on Sensorless Discrete Time Field Oriented Control "DTFOC" of PMSM Drive Fed by Three Level Inverter," **25, 26 & 27 mai 2010**, 2èmes Journées d'Electrotechnique, de Maintenance, et de Compatibilité Electromagnétique, , JIEMCEM'10, ENSET d'Oran.
5. Sadek AMEZIANE, Said DRID, **Tarek BOUTABBA**, "IMPLANTATION EXPERIMENTALE D'UN M.P.P.T POUR UN SYSTEME DE GENERATION EOLIENNE A AXE HORIZONTAL," **11 & 12 avril 2010**, la 1er Séminaire Méditerranéen sur L'Energie Eolienne, SMEE'2010, Tipaza, Algérie.
6. S, AMEZIANE N, Nait said S, Drid **T, Boutabba**, "Implantation experiential d'un MPPT pour un système de generation Photovoltaïque " **11 -13 October 2010**, the 6<sup>th</sup> International Conference on Electrical Engineering
7. **T. BOUTABBA**, S. DRID and A. MAAKOUF, "Implementation of RST controller for Speed Control of an Indirect Field Oriented Control "IFOC" Induction Machine Drive using Dspace 1103 Software" **May, 7-9, 2012**, ICEE'12 – the 4th INTERNATIONAL CONFERENCE ON ELECTRICAL ENGINEERING, Algeria .
8. **T. Boutabba, H. Benbouzid and S. Drid** " Discrete-time Power Control of a Variable Speed Wind Turbine Driving an DFIG fed by a three levels inverter " : Oct 2012 the 7th International Conference on Electrical Engineering, **CEE'12, Batna, Algeria**,
9. **Boutabba Tarek**, Drid said and M.E.H. Benbouzid, "Maximum Power Point Tracking Control for Photovoltaic System Using Adaptive Neuro- Fuzzy "ANFIS"" **2013 Ecological Vehicles and Renewable Energies (EVER)**, 8th International Conference and Exhibition on Ecological Vehicles and Renewable Energies (EVER), Monaco and IEEE.
10. **Boutabba Tarek**, Drid said and M.E.H. Benbouzid, "A Multi-output Boost Converter (MOB) controlled by Fuzzy Logic Technique supplied by a Photovoltaic System with Grid-Connected and fed by three level inverter" **November, 10-11, 2014**, International Conference on Electro-Energy ICEE'14, Skikda, Algeria.
11. **Tarek Boutabba**, Said Drid and M.H. Benbouzid, "A Hybrid Power Generations System (Wind Turbine/Photovoltaic) to Driving a DFIG fed by a Three inverter" **STA'2014**, the 15th international Conference on Sciences and Techniques of Automatic control & computer engineering, Hammamat Tunisia.
12. **T. Boutabba**, S. Drid, L. Chrifi-Alaoui, M. Ouriagli and M.E.H. Benbouzid, « dSPACE real-time implementation of maximum power point tracking based on ripple correlation control (RCC) structure for photovoltaic system" **2016 IEEE ICSC At: Marrakesh (Morocco) Volume: pp. 371–376**.
13. **Tarek boutabba**, Said DRID, Larbi CHRIFI-ALAOUI, Driss Mehdi, Mohamed Benbouzid, Abdelaali Alibi, mohammed ouriagli, «dSPACE Real-Time Implementation of Sliding Mode Maximum Power Point Tracker for Photovoltaic System" 7th International Conference on Systems and Control ICSC 2018, València, **Spain during October 24-26, 2018**.
14. **BOUTABBA Tarek**, DRID Said, CHRIFI-ALAOUI Larbi, Ouriagli Mohammed, "MPPT Technique for Standalone Hybrid PV-Wind system Using Fuzzy Controller with Power Management" 8th International Conference on Systems and Control **October 23-25, 2019, Marrakesh, Morocco**.

15. **Tarek BOUTABBA**, Hamza SAHRAOUI , mouhamed lamine BECHKA, Said DRID, Larbi Chrifi-Alaoui, “A comparative study of MPPT Techniques for Standalone Hybrid PV-Wind with Power Management”, Fourth International Conference on Electrical Engineering and Control Applications, ICEECA'2019, November, 19-21, 2019, **Constantine, Algeria**.
16. Fatima Menzri, **Tarek Boutabba**, Rachid CHENNI ,”Energy Management System Using a Fuzzy Logic Controller for Grid-Connected Hybrid Renewable Energy Sources”, International Pluridisciplinary PhD Meeting (IPPM'20) 1st Edition, **February 23-26, 2020, Echahid Hamma Lakhdar University - El-Oued, Algeria**.
17. Menzri F, BECHKA M L, **Boutabba T**, Rachid CHENNI ,”Comparative study of an intelligent energy management of standulone hybrid generation powers system” , IC-AIRES2020 4th International Conference on Artificial Intelligence in Renewable Energetic Systems, **Held on December 22-24,2020 in ESC-Koléa-Tipasa, Algeria**.
18. **Boutabba T**, BECHKA M L, Menzri F, DRID S ,”Energy Saving Analysis of Municipal Pool fed from hybrid renewable energy in Batna Algeria”, IC-AIRES2020 4th International Conference on Artificial Intelligence in Renewable Energetic Systems, **Held on December 22-24,2020 in ESC-Koléa-Tipasa, Algeria**.
19. KHEMIS Abd Rahmane, **Boutabba T**, DRID S ,”Discrete time Sensorless PMSM Control using an Extended Kalman tilter for Electric Vehicle Traction Systems Fed by Multi Level Inverte” , IC-AIRES2020 4th International Conference on Artificial Intelligence in Renewable Energetic Systems, **Held on December 22-24,2020 in ESC-Koléa-Tipasa, Algeria**.
20. Dalila Khamari, Courouk Bouchareb, Idriss Benlaloui, Fouzia Benmessaoud, **Tarek Boutabba** and Larbi Chrifi-Alaoui, “A New Approach for Online Stator Fault Diagnosis in PMSM based on Robust Gain Scheduled  $H_{\infty}$  LPV Current Observer”. **5th International Conference on Control, Automation and Diagnosis (ICCAD'21) being held at “ Polygone Scientifique ”, in Grenoble - France on November 3-5, 2021**.
21. Idriss Benlaloui, Farouk Mechnane, Mebrouk Bensmaïne, **Tarek Boutabba**, Dalila Khamari, Said Drid and Larbi Chrifi-Alaoui, “Linear Parameters Varying Torque Control for Singularly Perturbed Induction Motor.” **5th International Conference on Control, Automation and Diagnosis (ICCAD'21) being held at “ Polygone Scientifique ”, in Grenoble - France on November 3-5, 2021**.
22. **Tarek Boutabba**, Amir Fatah, Hamza Sahraoui, Dalila Khamari, Idriss Benlaloui, Said Drid and Larbi Chrifi-Alaoui, “ dSPACE Real-Time Implementation of Maximum Power Point Tracking Based on Kalman Filter Structure using Photovoltaic System Emulator”. **5th International Conference on Control, Automation and Diagnosis (ICCAD'21) being held at “ Polygone Scientifique ”, in Grenoble - France on November 3-5, 2021**.
23. Fouzia Benmessaoud, Mebrouk Bensmaïne, Dalila Khamari, Idriss Benlaloui, **Tarek Boutabba** and Abdesslem Makou, “ $H_{\infty}$  Linear parameter varying Induction Motor Flux Observer Synthesis” **5th International Conference on Control, Automation and Diagnosis (ICCAD'21) being held at “ Polygone Scientifique ”, in Grenoble - France on November 3-5, 2021**.
24. Mebrouk Bensmaïne, Fouzia Benmessaoud, Amir Fatah, Dalila Khamari, Idriss Benlaloui and **Tarek Boutabba**, “Impacts Analysis of Decentralized Production on Distribution Electric Grid Protection” **5th International Conference on Control, Automation and Diagnosis (ICCAD'21) being held at “ Polygone Scientifique ”, in Grenoble - France on November 3-5, 2021**.
25. Amir Fatah, Farouk Mechnane, Idriss Benlaloui, **Tarek Boutabba**, Dalila Khamari, Said Drid and Larbi Chrifi-Alaoui “A Modified Perturbe and Observe MPPT Technique for Standalone Hybrid PV-Wind with Power Management” **5th International Conference on Control, Automation and Diagnosis (ICCAD'21) being held at “ Polygone Scientifique ”, in Grenoble - France on November 3-5, 2021**.
26. Farouk Mechnane, Said Drid, Hamza Sahraoui, Idriss Benlaloui, **Tarek Boutabba**, Nasreddine Nait Said and Larbi Chrifi-Alaoui, “Implementation of Super-twisting control with Photovoltaic System Emulator” **5th International Conference on Control, Automation and Diagnosis (ICCAD'21) being held at “ Polygone Scientifique ”, in Grenoble - France on November 3-5, 2021**.
27. Amir Fatah; **Tarek Boutabba**; Idriss Benlaloui; Dalila Khamari; Said Drid, ” THD Analysis of Maximum Power Point Tracking Based on Kalman Filter Structure using Photovoltaic System Emulator”, **5th International Conference on Power Electronics and their Applications (ICPEA) ,2022**.

28. Sabir Ouchen; Idriss Benlaloui; Dalila Khamari; **Tarek Boutabba**; Fouzia Benmessaoud; Achour Betka, "Comparative Study between DPC and PDPC Controls Applied on Shunt Active Power Filter", **5th International Conference on Power Electronics and their Applications (ICPEA) ,2022.**
29. Dalila Khamari; Idriss Benlaloui; **Tarek Boutabba**; Fouzia Benmessaoud, "Synthesis of Induction Motor Rotor Flux Observer based on linear parameter varying systems theory", **5th International Conference on Power Electronics and their Applications (ICPEA) ,2022.**
30. Fatima Menzri, **Boutabba Tarek**, Idriss Benlaloui, Dalila Khamari, "Optimization of Energy management using a particle swarm optimization for hybrid renewable energy sources", **2nd International Conference on Advanced Electrical Engineering (ICAEE), 2022.**
31. Fatah Amir, **Boutabba Tarek**, Said Drid, Dalila Khamari, "Modeling And Simulation of the Photovoltaic Pumping System with Optimum Operation", **2nd International Conference on Advanced Electrical Engineering (ICAEE), 2022.**
32. Dalila Khamari; Idriss Benlaloui; **Tarek Boutabba** , "Robust induction motor control using Polytopic Models" **,Fifth International Conference on Electrical Engineering And Control Applications,ICEECA'22.**
33. A. Khemis ,**T. Boutabba**, L. Laggoun, and B. Ghoulem , "A New approach of Sensorless Control Of Induction Motor Using Type-2 Fuzzy Logic Observer", **Fifth International Conference on Electrical Engineering And Control Applications,ICEECA'22.**
34. Nadir Benalia and Kouider Laroussi ; Idriss Benlaloui; **Tarek Boutabba** "Optimization of Mutual Inductance in a Wireless Energy Transfer System for Electric Vehicles", **Graduate Students Research Conference" On 24th March 2022.**
35. Nadir Benalia ; Kouider Laroussi ; Idriss Benlaloui ; **Tarek Boutabba** ; Rachad Moumni ; Amor Fezzani, "Improving Efficiency and Reliability in Wireless Energy Transfer Systems via Electromagnetic Analysis", **November 14-15, 2023, Boumerdes, Algeria · The 1st National Conference on Green Energy (NCGE'2023).**
36. FAROUK MECHNANE; Mohamed Dhiaeddine Drid; Said Drid; **Tarek Boutabba**; Nait-Said Nasreddine; Larbi Chrifi-Alaoui, " A Comparative Analysis of Classic and Intelligent MPPT Techniques for a Photovoltaic System", **November 5-7th, 2023, Batna, Algeria, First International Conference on Electrical Engineering and Advanced Technologies, ICEEAT23.**
37. Lekmine Anfal; Amir Fatah; Fatima Menzri; **Tarek Boutabba**; Idriss Benlaloui; Dalila Khamari, " Investigation of a Photovoltaic Immersed Water Pumping System: Theoretical and Experimental Analysis", **November 5-7th, 2023, Batna, Algeria, First International Conference on Electrical Engineering and Advanced Technologies, ICEEAT23.**
38. A Fatima Menzri; Anfal Lekmine ; Amir Fatah ; **Tarek Boutabba**; Idriss Benlaloui; Dalila Khamari, " improvement of energy management of standalone hybrid generation power system using Adaptive neuro fuzzy system", **November 5-7th, 2023, Batna, Algeria, First International Conference on Electrical Engineering and Advanced Technologies, ICEEAT23.**
39. Amir FATAH; Fatima Menzri Menzri; Anfal Lekmine; Idriss Benlaloui; **Tarek Boutabba**; Fezzani Amor; Dalila Khamari, "Control of Water Pumping System Based On Floating Photovoltaic System with a Solar Tracking Control", **November 5-7th, 2023, Batna, Algeria, First International Conference on Electrical Engineering and Advanced Technologies, ICEEAT23.**
40. Fatima Menzri, **Tarek Boutabba**, Mustafa.Ergin Şahin , "Optimal Energy Management System In A Grid-Connected Renewable Hybrid System With Direct Power Control", **October 13-16,2023, Trabzon, Turkey, 5th International Conference of Materials and Engineering Technology (TICMET'23).**
41. Loubna Belbedj , Anfal Lekmine ,Idriss Benlaloui , Amor Fezzani, **Tarek Boutabba**, "MODELING AND SIMULATION OF ENERGY CONVERSION FOR RENEWABLE ENERGY SOURCES" , **February 13, 14 , 2024, 2nd NATIONAL CONFERENCE ON MATERIALS, ENERGY& ENVIRONMENT (NCMEE'24), BISKRA – ALGERIA.**

## **A. Publications**

1. **T. Boutabba**, S. Drid , L. Chrifi-Alaouic , M. E. Benbouzid, "A New Implementation of Maximum Power Point Tracking based on Fuzzy Logic Algorithm for Solar Photovoltaic System", ***IJE TRANSACTIONS A: Basics Vol. 31, No. 4, (April 2018) 184-191 .***
2. **Tarek BOUTABBA**, Said DRID, Larbi CHRIFI-ALAOUI, «Experimental Control of Photovoltaic System Using Neuro- Kalman filter MPPT Technique», ***Int. J. Emerg. Electr. Power Syst. IJEPS 2020***, <http://doi.org/10.1515/ijeeps-2019-0210>.
3. Farid Boumaraf, **Tarek Boutabba**, Sebti Belkacem, "Dual direct torque control of doubly fed induction machine using second order sliding mode control ", ***JOURNAL OF MEASUREMENTS IN ENGINEERING, DOI https://doi.org/10.21595/jme.2021.21432 .***
4. Boumaraf farid, **Boutabba Tarek**, Belkacem Sebti, "Fuzzy supertwisting algorithm dual direct torque control of doubly fed induction machine" ***International Journal of Electrical and Computer Engineering (IJECE) Vol. 11, No. 5, October 2021, pp. 3782-3790 ISSN: 2088-8708, http://doi.org/10.11591/ijece.v11i5.pp3782-3790.***
5. Abderrahmane Khemis, **Boutabba Tarek**, Said Drid "Model reference adaptive system speed estimator based on type-1 and type-2 fuzzy logic sensorless control of electrical vehicle with electrical differential" ,*Electrical Engineering & Electromechanics journal* , 2023(4):19-25. <https://doi.org/10.20998/2074-272X.2023.4.03>