

Personal Information



Title and Full Name : Dr. TIR Zoheir
Nationality : Algerian
Date of birth : 16 April 1983
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Curriculum Vitae

Current Position

Since Nov. 2011 Associate Professor at University of El Oued, Algeria.
Since Abr. 2013 Researcher member at LEVRES Laboratory, University of El Oued, Algeria.

Academic Qualifications

2010/2014 Doctor of Sciences in control of electrical machines University of BATNA, Algeria, Title of the doctorate thesis is "Contribution to the Study of BDFM for its Application in the Field of Wind Energy".
Supervisor: Pr. Rachid Abdessemed
2007/2010 Master of Sciences in control of electrical machines, University of SETIF, Algeria, M.Sc thesis is "Contribution to the Study of Cascaded Doubly Fed Induction Generator".
Supervisors: Pr. Hammoud Radjeai and Pr. Rachid Abdessemed
2002/2007 BAC+5 degree with First Class Honors in Electrical engineering, University of BATNA, Algeria. Project is "Design a Power Alternator 'Comparative Study with that of the Central HMO Sonelgaz in Algeria".
Supervisors: Pr. Azzeddine Benoudjit and Pr. Abdelhadi Bachir
2002 BAC in Electrical Engineering, technical school, El Oued, Algeria.

Professional Experience

2015/2016 Head of Department of Electrical Engineering, University of El Oued, Algeria.
2012/2013 Head of SIO Service at Faculty of Science and Technology, University of El Oued, Algeria.

Research Experience

March. 2016 **Research training in the University of Cassino, Spain. (Scholarship: 10 Days)**
Under the direction of the Professor: Fabrizio Marignetti
Project Objective:
Control of the New Tubular PM motor drive.
Since 2013 Member of the LEVRES research laboratory, University of El Oued, Algeria.
Oct. 2014 **Research training in the University of Mondragone, Spain. (Scholarship: one month)**
Under the direction of the Professor: Francisco Javier Poza
Project Objectives:
Simulations; Analysis of the new PID control (NPID) and experimental validation on the PMSM.
2014 **Sc.D thesis In Control of electrical machines, University of BATNA, Algeria**
The main field of my research is to investigate a new control strategy (NPID) for the wind energy system based on a BDFM. The whole system is simulated using MATLAB software and results are provided in order to demonstrate the effectiveness and the robustness of the NPID controller. Many papers are published in international journals to validate the proposed approach.
2012 **Training on renewable energy at the Polytechnic military school, Algiers, Algeria.**

Under the direction of the Professor: Khoudir Marouani

M.Sc thesis In Control of electrical machines, University of SETIF, Algeria.

The main goal of the research carried out in this thesis is the modelling of wind turbines integrated into Medium voltage electrical networks. The considered technology is based on cascaded doubly fed induction generator (CDFIG). The control strategy for flexible power flow control is developed. The independent control of the active and reactive power flows is achieved by means of inverter, well attended a linear regulating by regulators PI. We are used the MATLAB software for a simulation of CDFIG investigation.

Areas of Interest

- **Power Electronics Application** to Renewable Energy System and Control Scheme.
- **Investigation for novel topologies** of multiphase electric machines, multiphase inverter for dynamic control.
- **Controlling aspect of AC drives**, synchronous reference frame, stationary reference frame and direct torque controlling techniques.
- **Design and analysis of AC/DC/AC converter topologies.** Power factor correction techniques for AC-DC converters, Alternative topologies for matrix converter.
- **Analysis of PI, Fuzzy controlling techniques** for converters. Power Electronics applications towards AC and DC drives, Renewable energy systems (Photo-Voltaic/Wind generation systems).

Teaching experience

Since 2009 Associate professor at university of El Oued, El Oued, Algeria

Taught subjects:

Course and Laboratories:

- | | |
|-----------------------------------|---------------------------------|
| - Power System Analysis; | - Informatics; |
| - Electrical Machines I; | - Industrial Informatics; |
| - Programmable Logic Controllers; | - Electrical machines modeling; |
| - Matlab/Simulink/SimPowSys; | - Microprocessor. |
| | - Industrial regulation |

Computer skills

Languages/Packages: ASSEMBLY, FORTRAN, C, MATLAB.

Operating Systems: DOS, WINDOWS 7.

Computer Operations and Concepts: Word Processing, Graphics, Multi-media, Internet, Email, Spreadsheets, Databases, Downloadable copy of document with a full list of links to syllabus outcomes, using computer-based technologies to manipulate, create, store and retrieve information to express ideas and communicate with others ...

Supervisions

Since 2011 Supervisor for the completion of a great number of dissertations such as :

Master's thesis:

- Fuzzy logic controller of an asynchronous motor
- Study of doubly stator induction machine (DSIM) (modeling, supply and control)
- Control of doubly fed induction reluctance machine.
- Control of DC Machine by Arduino/Dspace

BAC+3's thesis:

- Modeling and simulation of electric actuators
- Contribution to the study of doubly fed induction machine
- MPPT of a variable speed wind turbine

Since 2011 Member of the examination board, responsible for the assessment of a large number of projects and dissertations.

Publications

I. Journals:

ISI-Indexed

- 1) G. Rigatos, P. Siano, **Z. Tir**, and M. A. Hamida, "[Flatness-based adaptive neurofuzzy control of Induction Generators using output feedback](#)," Neurocomputing, 2016.
- 2) **Z. Tir**, O. P. Malik, and A. M. Eltamaly, "[Fuzzy logic based speed control of indirect field oriented controlled Double Star Induction Motors connected in parallel to a single six-phase inverter supply](#)," Electric Power Systems Research, vol. 134, pp. 126-133, 2016.
- 3) **Z. Tir**, Y. Soufi, M. N. Hashemnia, O. P. Malik, and K. Marouani, "[Fuzzy logic field oriented control of double star induction motor drive](#)," Electrical Engineering, pp. 1-9, 2016.

SCOPUS-Indexed

- 4) **Tir Z.**, and Abdessemed R. "[Hybrid Fuzzy Logic Proportional Plus Conventional Integrator-Derivation Controller of A Novel BDFIG For Wind Energy Conversion](#)" JEE, Vol. 14, 2014.

Indexed in other database

- 5) **Tir Z.**, and Abdessemed R. "[Control of a wind energy conversion system based on brushless doubly fed induction generator](#)," Revue des Ener. Ren., Vol. 17, N°1, pp 55 – 69, 2014.
- 6) **Tir Z.**, and Abdessemed R. "[A New Self-Tuning Fuzzy PD Controller of a BDFIG for Wind Energy Conversion](#)," WASET, Vol. 7, N°:11, pp. 941-953, 2013.
- 7) **Tir Z.**, and Abdessemed R. "[Hybrid Fuzzy Proportional Plus Integrator Conventional Controller of A Novel BDFIG For Wind Energy Conversion Systems](#)", Acta Electrotechnica et Informatica, Vol. 13, No. 2, 2013.
- 8) **Tir Z.**, Radjeai H., and Abdessemed R. "[Analysis and Vector Control of a Cascaded Doubly Fed Induction Generator in Wind Energy Applications](#)" Revue des Ener. Ren., SMEE'10, pp. 347 – 358, 2010.

II. Conferences:

- 1) **Tir Z.** and Soufi Y, "Dynamic Response Improvement of Brushless Doubly Fed Induction Generator–Based Wind Farm Using Fuzzy PID Controller", 3rd ICIPEE, Tebessa, Nov. 2014.
- 2) **Tir Z.**, R. Khoudir MAROUANI and Abdessemed, "Fuzzy logic control of brushless doubly fed induction generator for wind energy conversion", CGE'08, Ecole Militaire Poly. Avril 2013.
- 3) **Tir Z.** and Abdessemed R. "Performance Enhancement of a wind energy conversion System based on Brushless doubly fed induction machine Using PI Controller", ICEO'13, Univ. Ouergla, Mars 2013.
- 4) **Tir Z.**, Radjeai H., and Abdessemed R." Modelling and Control of Wind Energy Conversion System Equipped with BDFIG" 10 ICEEA 10 Bejaia, Nov. 2010, 2-3 November 2010.
- 5) **Tir Z.**, Radjeai H., and Abdessemed R." Analysis, Modeling and Control of Cascaded Doubly-Fed Induction Generators for Wind Turbines" 6th International conference on electrical engineering. CEE'10, Univ. Batna, Oct 2010.
- 6) **Tir Z.**, Radjeai H., and Abdessemed R." Performances Study of the CDFIG Associated to the Variable Speed Wind Turbine Connected to the Grid "6th International conference on electrical engineering. CEE'10, Univ. Batna, Oct 2010.
- 7) **Tir Z.**, Radjeai H., and Abdessemed R. "Analysis and Vector Control of a Cascaded Doubly Fed Induction Generator in Wind Energy Applications" Workshop International en physique INWOP'10, Centre. Univ, Mar 2010.
- 8) **Tir Z.**, Radjeai H., and Abdessemed R. "Modeling and control of doubly fed twin stator induction Generators in wind energy applications" WIERA'2, Univ. A. Mira de Bejaia, Nov 2009.
- 9) **Tir Z.**, Radjeai H., and Abdessemed R. "On the Dynamic and Steady State Performances of A Vector Controlled DFTSIG In Wind Energy Applications", CIEME'09, Univ. Khemis Miliana, Nov 2009.

III Books:

- 1) **TIR Z.**, "[Nouvelle Approche de Commande PID "Application sur un Système Éolien à Base d'une Machine Asynchrone à Double Alimentation sans Balais \(BDFM\)](#)" Presses Académiques Francophones, ISBN: 978-3-8381-4338-5, Oct. 2014
- 2) **TIR Z.**, "[Conception d'un Alternateur de Grande Puissance "Etude Comparative avec celui de la Centrale de Sonelgaz HMO en Algérie"](#)", Presses Académiques Francophones, ISBN: 978-3-8381-4880-9, Oct. 2014.

IV Lecture Notes

Prepared lecture notes for the students of the 1st semester of the Academic Year of the Department of Electrical Engineering, Faculty of Sciences and Technology, Topic: 'Modeling and Simulation of the Electric Machines and Electrical Transformer'.

Languages

Arabic: currant;

Technical French: Good;

Technical English: Writing and reading

Leisure

Sports: Football,

Travelling: Saudi Arabia United, Spain and Italy.

References

- 1) Rachid Abdessemed: Professor at the University of BATNA, Algeria.
E-mail: rachid.abdessemed@gmail.com
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- 2) Francisco Javier Poza: Professor at the University of Mondragon, Spain.
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Website: https://www.researchgate.net/profile/Javi_Poza
- 3) Khoudir Marouani : Professor at the Polytechnic military school, Algiers, Algeria
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https://www.researchgate.net/profile/Khoudir_Marouani
- 4) Om P. MALIK : Professor at the University of Calgary, Calgary, Canada
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Website: https://www.researchgate.net/profile/OP_Malik
- 5) Fabrizio Marignetti : Professor at the University of Cassino, Cassino, Italy
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Declaration

I declare that the details furnished above are true to the best of my knowledge and belief.

PLACE : El Oued, Algeria.

DATE: 29-09-2016.

A handwritten signature in blue ink, appearing to read 'Zoheir TIR'.

Zoheir TIR