

# Dr. Ezzeddine Salah Touti

## Associate Professor In Electrical Engineering



### • Personal data

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### • Education

1. **Ph.D.** Electrical Engineering, University of Monastir, **TUNISIA** and Artois University in **FRANCE**, 2013.  
**Theme:** *on the definition of a voltage and frequency control strategy for an induction generator equipping a wind turbine operating in stand-alone mode.*
2. **M. Sc.** Electrical Engineering, College of Engineering of Tunis, University of Tunis, **Tunisia**, 2005.  
**Theme:** *Dynamic compensation of a Grid Including Wind Power Plant using Static VAR Compensator (SVC). Real Studied Case: Plant of Sidi-Daoud*
3. **Aggregation in Electrical Engineering**, College of Engineering of Tunis, University of Tunis, **Tunisia**, 2002.
4. **B. Sc. Electrical Engineering**, College of Engineering of Tunis, University of Tunis, **Tunisia**, 1997.

### • Affiliation

1. Electrical Engineering Department, Northern Boarder University, Arar, Kingdom of Saudi Arabia.
2. Electrical Engineering Department, University of Tunis, MontFleury, Tunisia.

### • Biography

He received the B.S. and Master's degrees in electrical engineering in 1997 and 2005 from the Higher National College of Engineers of Tunis (Tunisia) and the National College of Engineers of Tunis (Tunisia) respectively, all in electrical engineering. He received the Ph.D. Degree in induction generators wind turbine, power quality and electric drives from the National College of Engineers of Monastir (Tunisia) and Artois University (France) in 2013. In 2005, he joined the Laboratory of Industrial Systems Engineering and Renewable Energies (LISIER), University of Tunis, Tunisia, as a Researcher faculty member. His research interests are renewable energy, Power Electronic Engineering and control of electrical drive systems.

## • Professional qualifications

### ➤ Academic Position:

- **Associate Professor**, Electrical Engineering department at Northern Border University, Kingdom of Saudi Arabia, 2021-Till now.
- **Assistant Professor**, Electrical Engineering department at Northern Border University, Kingdom of Saudi Arabia, 2015-2020
- **Assistant Professor**, Electrical Engineering department, ISSAT Kasserine University of Kairouan, Tunisia; 2013 - 2015.
- **Aggregated Lecturer** in Electrical Engineering Department, Higher Institute of Technological Studies at Rades, Tunis, Tunisia; 2003 - 2013.

### ➤ Certifications or Professional registrations

- Electrical Safety Trainer
- Electrical Systems Drive Trainer

### ➤ Membership of Professional Societies

- **Reviewer** in International Journal of Ambient Energy
- **Member of Editing Committee** of the Engineering Research Journal (CODIT), TUNISIA

### ➤ University and Academic Committees (at Northern Border University)

- **Coordinator of Accreditation Board for Engineering and Technology (ABET)** Commission in the Electrical Engineering Department, College of Engineering, Northern Border University.
- **Head of National Commission for Academic Accreditation and Assessment (NCAAA)** in the Electrical Engineering Department, College of Engineering, Northern Border University.
- **Member of Industrial Advisory Board (IAB)** in the Electrical Engineering Department, College of Engineering, Northern Border University.
- **Member of the Committee for Organizing Conferences and Seminars** at the University, Northern Border University (NBU).
- **Member of facilities committee**, College of Engineering, NBU
- **Member of committee of reviewing and updating plans** at the University NBU

## • Seminars/ Invited Talks/ Workshops

- Renewable Energy & Solar PV Seminars
- Wind Power Energy
- Water desalination
- Power Protection & Control Seminar

## • TEACHING ACTIVITIES

List of courses taught

- Electrical power systems
- Electrical drive systems
- Electromechanical energy conversion
- High voltage
- Power Systems Lab
- Special topics in electrical machines
- Advanced control systems
- principles of Control
- switchgear of power systems protection
- Electrical circuits and systems

## • Expertize Areas

- Renewable energy
- Sustainable Energy
  - Hybrid vehicle and smart grid
- Electrical machines & drives
- Power electronics
- Power protection
- Safety

## • Engineering software

- MATLAB
- LAB VIEW
- PVsyst
- ISIS
- PSIM
- DSPACE
- Ardwino

## • Accomplished Scientific Research Projects:

No	Project & Date	Institution	Investigator(s)
1	Dynamic modeling and stability enhancement of flexible electrical grids including wind and photovoltaic resources <b>Fall 2018</b>	Northern Border University Deanship of Scientific Research	<b>1-Ezzeddine Touti (PI)</b> <b>2-Hossem Zayed</b> 3-Remus Pusca 4-Rafael Romary

2	Design a reference model for robust control for complex, large-scale systems: an application to interconnected generators in renewable energy systems <b>Fall 2018</b>	Northern Border University Deanship of Scientific Research	<b>1-Ezzeddine Touti (PI)</b> 2-Ali Tlili 3-Muhanned Almutiry
3	Renewable energies in remote areas equipped with self-excitation induction generators: Frequency analysis and reactive power control <b>Fall 2017</b>	Northern Border University Deanship of Scientific Research	<b>-Ezzeddine Touti (PI)</b>
4	Renewable energies: Methodology for controlling wind turbines and diagnosing their faults <b>Fall 2016</b>	Northern Border University Deanship of Scientific Research	<b>1-Ezzeddine Touti (PI)</b> 2-Habib Kraiem 3-Remus Pusca 4-Rafael Romary
5	<b>Photovoltaic systems: a study of optimization and efficiency</b> Fall 2016	<b>Northern Border University Deanship of Scientific Research</b>	1- Habib Kraiem <b>2- Ezzeddine Touti</b> 3-Remus Pusca 4-Rafael Romary

## • SCIENTIFIC CONTRIBUTIONS

### ➤ Papers Published in Refereed Scientific Journals

No	Author(s)	Research Title	Publisher & Date
1	<b>Ezzeddine Touti</b>	Relevant decentralized observer-based control procedure for complex interrelated systems	Journal of the North for Basic & Applied Sciences, Vol. 7, N.1, P-ISSN: 1658-7022, E-ISSN: 1658-7014, May 2022, pp. 39-54, Saudi Arabia.
2	Abdelkader Abbassi Rached Ben Mehrez , Bilel Touaiti, Laith Abualigah, <b>Ezzeddine Touti</b>	Parameterization of photovoltaic solar cell double-diode model based on improved arithmetic optimization algorithm	Optik-International Journal for Light and Electron Optics, 253 (2022) 168600, 13 January 2022 ELSEVIER
3	R. Romary, R. Pusca, <b>E. Touti</b> , V. Cazac, P. Livinti, I. Nuca,	Procedure for detection of stator inter-turn short circuit in AC machines measuring external magnetic field	Energies 2021, 14(4), 1132. Published on 20/02/2021

4	<b>Touti, E.</b> ; Zayed, H.; Pusca, R.; Romary, R	Dynamic Stability Enhancement of a Hybrid Renewable Energy System in Stand-alone Applications	Computation 2021, 9(2), 14. Published on 01/02/2021
5	<b>Ezzeddine Touti</b>	Reactive power analysis and frequency control of autonomous wind induction generator using PSO and Fuzzy Logic	Energy Exploration & Exploitation, 38(3), pp.755, 2020 Published on 16/04/2020
6	<b>Ezzeddine Touti</b> , Ali Sghaier Tlili, Muhannad Almutiry	Dynamic output feedback control for nonlinear large-scale interconnected systems	COMPEL - The international journal for computation and mathematics in electrical and electronic engineering, Vol. 39, N. 4, 18 May 2020. Published on 18/05/2020
7	Habib kraiem, <b>Ezzeddine Touti</b> , Tamer Fetouh	The efficiency of PSO-based MPPT technique of an electric vehicle within the city	Measurement and control, 2020, Vol. 53(3-4) 461-473. Published on 07/01/2020
8	<b>Ezzeddine Touti</b> , Habib kraiem, Remus pusca, Raphael romary	Modeling of an isolated induction generator considering saturation effect	archives of electrical engineering, Vol. 67(4), pp. 755-772, 2018. Published on 18/10/2018
9	Mohamed Zaky, <b>Ezzeddine Touti</b> , Haithem Azazi	Two-degrees of freedom and variable structure controllers for induction motor drives	Advances in Electrical and Computer Engineering, Volume 18, Number 1, pp. 71-80, 2018. Published on 28/02/2018
10	Mohamed Zaky, Haithem Azazi, <b>Ezzeddine Touti</b> ,	PFC Control for LED Lamp Driver Using Sensorless Predictive Current Controller	Engineering, Technology & Applied Science Research, Vol. 8, No. 5, pp. 3373-3379, 2018. Published on 15/10/2018
11	<b>Ezzeddine Touti</b> , Remus pusca, J. F. Brudny,	Reactive Power Control in AC Power Systems: self-excited induction generator in remote site.	eBook, ISBN 978-3-319-51118-4, ISSN 1860-4676, 2017, Springer. Published on 2017

	Abdelkader Châari.		
12	<b>Ezzeddine Touti</b> , Remus pusca, J.P. Manata, J.F. Brudny, Abdelkader Châari	On the use of a dimmer for a robust frequency control of a self-excited three-phase induction wind generator	Journal of Power Electronics, Vol. 12, No. 4, pp. 580-591, 2014. Published on May 2014
13	<b>Ezzeddine Touti</b>	Dynamic Behavior of the Static VAR Compensator during Faults of a Grid Including Wind Power Plant	Journal of the North for Basic & Applied Sciences, Vol. 5, N. 2, P-ISSN: 1658-7022, E-ISSN: 1658-7014, Nov 2020, Saudi Arabia. Published on: November 2020
14	<b>E. Touti</b> , R. Pusca and A. Châari,	“Dimmer control for voltage transient performance improvement in isolated wind turbine”,	Wulfenia Journal, Vol. 20, No. 4, Apr 2013, Klagenfurt, Austria, pp.108-117. Published on: April 2013

### • Conferences and Scientific Symposia:

No	Conference	Date &Place
1	Vision of Solar Energy in the Kingdom of Saudi Arabia: Applications and Challenges. (VSESA 2020)	College of Engineering, Qassim University, Saudi Arabia 9 - 10 December 2020
2	International webinar on “ <b>Perovskite Solar Cells</b> ”	Department of Engineering Physics, K.L.E. Institute of Technology, Hubballi on 12th December 2020
3	XXIIIrd International Conference Proceedings- 23rd International Conference on Electrical Machines,	September 3-6, 2018 Alexandroupoli, Greece.
4	International conference on information and communication Technologies innovations and applications, ICTIA 2014	Sousse - Tunisia 6-8 March 2014
5	9th International Conference on industrial power engineering – 5th Edition, Electronics, Computers and Artificial Intelligence	22-24 May, 2014 Bacau, Romania

6	International Conference – 5th Edition, Electronics, Computers and Artificial Intelligence (ECAI 2013)	June 27-29, 2013, Pitesti, Romania.
7	International Conference on Control Decision and Information Technologies (CoDIT 2013)	May 6-8, 2013 Hammamet, Tunisia.
8	12th International Conference on Science and Techniques of Automatic Control and Computer Engineering(STA'2011)	December 18-20, 2011 Sousse, Tunisia.

- **Books and chapter books**

**Ezzeddine Touti**, Remus pusca, J. F. Brudny, Abdelkader Châari. "Reactive Power Control in AC Power Systems: self-excited induction generator in remote site", eBook, ISBN 978-3-319-51118-4, ISSN 1860-4676, 2017, Springer.

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