M. HOSEINTABAR-MARZEBALI

Assistant Professor at Shahrood University of Technology

Personal Information

Name: **Mohammad Hoseintabar Marzebali**

Email: Mohammad.hoseintabar@gmail.com ,M.hoseintabar@shahroodut.ac.ir,

Mohammad.hoseintabar@etud.u-picardie.fr ,

Education History

2017- Post doc University of Tehran

- **Location:** University of Tehran
- **Title of the thesis** **"**Design and Implementation of a Reduce-scale Medium-Power Wind Turbine Prototype for On-line DSP-Based Condition Monitoring Purpose**" (5 months)**
- **Under the supervision of NODET (National Organization for Developing Exceptional Talents)**
- **Field:** "Power Electronic and Electrical Machine"
- **Supervisors:** Prof. Jawad Faiz, *Sineor Member IEEE*

2012-2016 **Ph.D. Student as Exceptional Talent Student in Electrical Machines and Power electronic Engineering (Finished)**

- **Location:** University of Tehran, Tehran, Iran.
- **Title of the thesis:** "Condition Monitoring of Gearbox in Wound Rotor Induction Generator" (DFIG)
- **Supervisors:** Prof. Jawad Faiz, *Sineor Member IEEE*
  Prof. Gerard Andre Capolino , *Fellow IEEE*
  Prof. Humberto Henao , *Sineor Member IEEE*
  Dr. Shahin Hedayati Kia
- **Score:** Excellent

2012-2017 **Ph.D. student as Exceptional Talent Student in Electrical Machines and Power electronic Engineering (In process)**

- **Location:** "University of Picardie de Jule Verne" Amiens, France.
- **Title of the thesis:** "Condition Monitoring and Predictive Maintenance of Gearbox in Wind Turbines"
- **Supervisors:** Prof. Jawad Faiz, *Sineor Member IEEE*

Prof. Gerard Andre Capolino , *Fellow IEEE*

Prof. Humberto Henao , *Sineor Member IEEE*

Dr. Shahin Hedayati Kia

2008-2010 Master of science in Power Electronic Engineering

- **Location:** Shiraz University of Technology (SUTCH), Shiraz, Iran
- **Title of the thesis:** "Fuel Cell Power Generation System : Dynamic Modeling, Hybrid Power Generation and Control"
- **Supervisors:** Associate Prof. Majid Nayeripour
- **Score:** 20/20
- **Main objectives of the project:**
  - Power Management of Hybrid Power Generation (Wind/FC/Battery/Electrolizer /Hydrogen tank)
  - Control of Hybrid Power Generation
  - Optimal Operation of FC system
  - Dynamic Modeling and Control of FC system
  - Frequency deviation of Hybrid Power Generation

2003-2007 Bachelor of Electrical Engineering (Power)

- **Location:** Mazandaran University of Technology, Babol, Iran
- **Final Project:** "Power pulsation in Brushless DC Motor (BLDC)"
- **Supervisors:** Assistant Prof. Gholamyan

1999- 2003 High School Diploma

- **Location:** Shahid Beheshti, under the supervision of NODET (National Organization for Developing Exceptional Talents), Babol, IRAN.

Publication

- **<u>Journal Papers:</u>**

[1] M. H. Marzebali, S. H. Kia, H. Henao, G.-A. Capolino and J. Faiz, "Planetary gearbox torsional vibration effects on wound-rotor induction generator electrical signatures," *IEEE Transactions on Industry Applications*, vol. 52, no. 6, pp. 4770-4780, Nov.-Dec. 2016, (ISI Journal).

[2] M. Taghizadeh, M. Hoseintabar and J. Faiz. "Frequency control of isolated WT/PV/SOFC/UC network with new control strategy for improving SOFC dynamic response," *International Transactions on Electrical Energy Systems*, vol. 25, pp. 1748-1770, 2015, Wiley (ISI Journal).

[3] M. Nayeripour, M. Hoseintabar, "A new control strategy of solid oxide fuel cell based on coordination between hydrogen fuel flow rate and utilization factor", *Renewable & Sustainable Energy Reviews*, Elsevier, vol. 27, Nov. 2013, pp. 505-514 (ISI Journal).

[4] M. Nayeripour, M. Hoseintabar, T. Niknam, "A new method for dynamic performance improvement of a hybrid power system by coordination of converter's controller", *J. Power Sources*, vol. 196, 2011, pp. 4033-4043, Elsevier (ISI Journal).

[5] M. Nayeripour, M. Hoseintabar, T. Niknam, J. Adabi, "Power management, dynamic modeling and control of Wind/FC/Battery-bank based hybrid power generation system for stand-alone application", *European Transactions on Electrical Power*, vol. 23, no. 3, Wiley, Apr. 2012, Wiley, (ISI Journal).

[6] M. Nayeripour, M. Hoseintabar, T. Niknam, "Frequency deviation control by coordination control of FC and double-layer capacitor in an autonomous hybrid renewable energy power generation system", *J. Renewable Energy*, vol. 36, 2011, pp. 1741-1746, Elsevier (ISI Journal).

[7] M. Nayeripour, M. Hoseintabar, T. Niknam, "A new comprehensive analyze for power management of hybrid power generation incorporating renewable energy and energy storage system,"(*This paper has been presented at ICPDR'11, Hydarabad, India, Feb 2011 and selected papers published in the International Journal of Modeling and Optimization* (IJMO)*)*, vol.1, no.1, p. 62, 2011.

[8] M. Nayeripour, M. Hoseintabar, "Modeling and control of an autonomous hybrid power generation system for stand-alone application", *International Journal of Engineering and Technology* (IJET), vol. 4, no. 3, pp. 256-269, 2012.

- **International Conference Papers:**

[9] M. Nayeripour, M. Hoseintabar, T. Niknam, "Control of frequency deviation Based on coordination control of FC and flywheel in an autonomous hybrid renewable power generation system", *International Conference on Product Development and Renewable Energy Resources (ICPDRE 2011)*, India.

[10] J. Faiz, M. Hoseintabar, "Modeling and fault diagnosis of wind turbine generators: A Review", *Third International Congress on environment and Sustainable Development*, MACDES, 2014, Cuba.

[11] M. H. Marzebali, S. H. Kia, H. Henao, G. A. Capolino and J. Faiz, "Planetary gearbox torsional vibration effects on wound rotor induction generator electrical signatures," 2015 *IEEE International Electric Machines & Drives Conference (IEMDC)*, Coeur d'Alene, ID, USA, 2015, pp. 1440-1445.

[12] M. H. Marzebali, S. H. Kia, H. Henao, G. A. Capolino and J. Faiz, "Effet d'un multiplicateur planétaire sur les signaux électriques de la machine à induction à rotor bobiné dans la production d'énergie éolienne", Symposium de genie electrique (SGE 2016), 7-9 JUIN 2016, Grenoble, France.

[13] M. H. Marzebali, S. H. Kia, H. Henao, G. A. Capolino and J. Faiz,, "Simulation and experimental analyses of planetary gear tooth defect using electrical and mechanical signatures of wound rotor induction generators", *IEEE 11th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED)*, Tinos, Greece, 29 Aug.-1 Sept. 2017

Review Member

- **Electrical Power System & Component**, ISSN 1532-5008, Taylor & Francies Ltd.
- **International Journal of Electrical Power and Energy Systems,** Elsevier
- **Renewable Energy,** Elsevier
- **Energy,** Elsevier

Honor

- Received grant from France Government (Campus France) after passing requirements of interview from UPJV and France Embassy of Iran
- Received letter of commendation in 2011 for international journals were appreciated by Shiraz University of Technology.
- PhD student as Exceptional talent student at University of Tehran
- The best Teacher of Al-Taha University in Power engineering school in 2015 and second teacher as student'spoint of view among all teachers of engineering schools.

Language Skill

- English

Ministry of Science, Research and Technology (MSRT).

- French

Software and Hardware Skill

- Matlab (Simulink & m-file)
- PLC (Step 5)
- C++

- Pascal software
- PSCAD
- LABVIEW

Research Interests

- Fault Diagnose in Electrical Machine
- Renewable Energy (Wind Turbine,..)
- Back-to-back converter in wind turbine application
- Gearbox (Planetary gearbox, Multi-stage gearbox,…)
- Signal Processing
- DFIG
- Dynamic Modeling of Hybrid Power Generation
- Dynamic Modeling of Fuel Cell Power system (PEM, SOFC)
- Power Management of Hybrid Power Generation
- Frequency Deviation Control

Teaching

Lecturer at al-Taha University, Tehran

- Elector - magnetic (Three semesters)
- Mathematics (Eng.) (Three semesters)
- Electrical machines
- Lighting
- DC machines
- Electrical circuit (I) Lab.(Two semesters)
- Electrical Machine Lab (II)

Lecturer at University of Tehran

- Electrical machine & Circuits

Experience

- Spending a three-month training program as an apprentice in Mazndaran wood & paper Industries (Summer 2007)
- Spending one-month training program as an apprentice in Electrotablo(summer 2008)

Other degrees

- Qualified and permitted in electrical installation design and supervision
- Military service has been done.

Professional References

Prof. Jawad Faiz, jfaiz@ut.ac.ir , University of Tehran**,** Senior member IEEE.

Prof. Shahrokh Farhangi, farhangi@ut.ac.ir , University of Tehran.

A/Prof. Majid Nayeripour, nayeri@sutech.ac.ir**,** Shiraz University of Technology.

Dr. Shahin Hedayati Kia. Shahin.Hedayati.kia@u-picardie.fr,University of Picardie de Jules Verne (UPJV).
