

Hany Mohamed Hasanien

Curriculum Vitae

1. PERSONAL DATA:

a) Address:

Electrical Engineering Department
 College of Engineering
 King Saud University
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 PO Box: 800, Riyadh 11421
 Riyadh
 Kingdom of Saudi Arabia

b) Education:

DEGREE	PLACE	DATES	COMMENTS
Joint Research	Kitami Institute of Technology, Kitami, Japan.	June 2008-2011	Renewable energy systems and control of electric drives. Advisors: Prof. Junji Tamura
PhD Electrical Engineering	AinShamsUniversity, Cairo, Egypt	July 2007	Thesis: Speed control of axial laminations switched reluctance motor Advisors: Prof. Mohamed A. Badr
M.Sc. Electrical Power and Machines Engineering	AinShamsUniversity, Cairo, Egypt	July 2004	Thesis: Performance enhancement of switched reluctance motor Advisors: Prof. Mohamed A. Badr Overall average: 95%
B.Sc. Electrical Power and Machines Engineering	AinShamsUniversity, Cairo, Egypt	July 1999	Thesis: Power system planning for a new developing area Advisors: Prof. Soliman El Debiky Overall average: 98%

c) Employment:

POSITION	PLACE	DATES	COMMENTS
Assistant Professor and Associate Prof.	King Saud University, College of Engineering, Electrical Engineering Dept., Riyadh, SA.	20 Sept. 2011-present	Instructor of several Electrical Engineering undergraduate and graduate courses. Research: Transverse flux linear motor design and control; Analysis of Transient Behaviour of WTGs Connected to Grid. Impact of DG Existence in the Electrical Distribution Networks. Improvement of Wind generator transient stability using advanced controllers.
Associate Professor	Ain Shams University, Electrical Power and Machines Dept. Cairo, Egypt	2 August 2012	
Assistant Professor	1) Ain Shams University, Electrical Power and Machines Dept. Cairo, Egypt 2) Part timer at British University in Egypt 3) Part timer at Arab Academy for Science and Technology and Maritime Transport, Cairo, Egypt	July 2007-Sept. 2011	Instructor of several Electrical Engineering undergraduate and graduate courses. Supervisor of undergraduate and graduate research assistants, and several teaching assistants. Research: Transverse flux linear motor design and control; Analysis of Transient Behaviour of WTGs Connected to Grid. Impact of DG Existence in the Electrical Distribution Networks. Improvement of Wind generator transient stability using advanced controllers.
Teaching Assistant	Ain Shams University, Electrical Power and Machines Dept. Cairo, Egypt	July 2004-June 2007	Teach tutorials and labs for different electrical engineering courses.
Demonstrator	Ain Shams University, Electrical Power and Machines Dept. Cairo, Egypt	July 1999-June 2004	Teach tutorials and labs for different electrical engineering courses.

2. RESEARCH:

a) Area of Interest:

- i) Performance evaluation and control of distribution systems with distributed generation.
- ii) Smart grids operation and control.
- iii) Improvement of Wind generator transient stability using advanced controllers.
- iv) Design, analysis and control of variable speed ac drives using advanced controllers.

b) Research Projects

- [1] Hany M. Hasanien and Syed Q. Ali, “Wind generator stability improvement by adaptive neural network controlled superconducting magnetic energy storage”, Sustainable Energy Technology (SET), King Saud University, S.A. SP12/A1/010. 15 Jan. 2012-15 July 2012.
- [2] Hany M. Hasanien, Syed Q. Ali, and Essam A. Al-Ammar “Transient stability enhancement of DFIG based Wind farm using advanced controllers”, Saudi Aramco Chair of Electrical Power, King Saud University, S.A. 1 Jan. 2012-30 Oct. 2012.

c) Publications:

1) Books: 3

- [1] Hany M. Hasanien and Sayed Abbas Atia, “Control Systems and Applications”, Upgrading of Industrial Secondary School, Ministry of Education, Egypt, April 2010.
- [2] Hany M. Hasanien, S. M. Muyeen, and Junji Tamura, “Switched Reluctance Machine”, Praise Worthy Prize Press, Napoli, Italy, ISBN 978-88-96329-02-3, Feb. 2010.
- [3] Hany M. Hasanien, “Digital Control Lab.”, Electrical and Communications Dept., British University in Egypt, April 2009.

2) Book Chapters: 1

- [1] Hany M. Hasanien, and Ahmed Aldurra, “Grid connection scheme of a variable speed wind turbine driven switched reluctance generator”, Springer Verlag, London, 2011. Book ISBN 978-1-4471-2200-5. Book title ‘Wind Energy Conversion System’.

3) Book Co-Editor: 1

- [1] Co-Editor with both of Dr. S.M. Muyeen and Dr. Ahmed Al-Durra. Book Title: Wind Farm, Publisher: InTech, ISBN: 980-953-307-562-9.

4) Books Reviewer: 5

- [1] Tarek Mosad and Akram Ismail, "Technical Drawing and Circuit Analysis", Upgrading of Industrial Secondary School, Ministry of Education, Egypt, Feb. 2011.
- [2] Mohamed Gad and Mahmoud Orabi, "Programmable Logic Technology", Upgrading of Industrial Secondary School, Ministry of Education, Egypt, March 2011.
- [3] Tarek Mosad and Ahmed Gouda, "Power Electronics", Upgrading of Industrial Secondary School, Ministry of Education, Egypt, April 2011.
- [4] Salha Fathy and Nehal Saed, "Technical Training", Upgrading of Industrial Secondary School, Ministry of Education, Egypt, April 2011.
- [5] Akram Ismail and Mohamed Ibrahim, "Electrical Installations", Upgrading of Industrial Secondary School, Ministry of Education, Egypt, May 2011.

5) Articles Published and accepted to appear in refereed Journals: 20

- [1] S. M. Muyeen, Hany M. Hasanien, and Ahmed Al-Durra, "Transient stability enhancement of wind farms connected to a multi-machine power system by using an adaptive ANN-controlled SMES", *Energy Conversion and Management*, vol. 78, no. 2, pp. 412-420, February 2014. [ISI Journal](#)
- [2] S. Q. Ali, Hany M. Hasanien, and Essam. A. Al-Ammar, "Application of an adaptive artificial neural network controller for improving the dynamic Response of doubly fed induction generator based wind farm", *Journal of Bioinformatics and Intelligent Control*, vol. 2, no. 2, pp. 83-91, June 2013.
- [3] Hany M. Hasanien, "Design Optimization of PID Controller in Automatic Voltage Regulator System Using Taguchi Combined Genetic Algorithm Method", *IEEE Systems Journal*, vol. 7, no. 4, pp. 825-831, December 2013. [ISI Journal](#)
- [4] Hany M. Hasanien, and S. M. Muyeen, "A Taguchi Approach for Optimum Design of Proportional-Integral Controllers in Cascaded Control Scheme", *IEEE Transactions on Power Systems*, vol. 28, no. 2, pp. 1636-1644, May 2013. [ISI Journal](#)
- [5] Hany M. Hasanien, and Essam. A. Al-Ammar, "Dynamic Response Improvement of Doubly Fed Induction Generator Based Wind Farm Using Fuzzy Logic Controller", *Journal of Electrical Engineering, Slovakia*, vol. 63, no. 5, pp. 281-288, September 2012. [ISI Journal](#)
- [6] S.M. Muyeen, Hany M. Hasanien, and J. Tamura, "Reduction of frequency fluctuation for wind farm connected power systems by an adaptive artificial

- neural network controlled energy capacitor system”, *IET Renewable Power Generation*, vol. 6, no. 4, pp. 226-235, July 2012. [**ISI Journal**](#)
- [7] Syed Q. Ali, and Hany M. Hasanien, “Frequency control of isolated network with wind and diesel generators by using adaptive artificial neural network controller”, *International Review of Automatic Control*, vol. 5, no. 2, pp. 179-186, March 2012.
- [8] Hany M. Hasanien, and S. M. Muyeen, “Design Optimization of Controller Parameters used in Variable Speed Wind Energy Conversion System by Genetic Algorithms”, *IEEE Transactions on Sustainable Energy*, vol. 3, no. 2, pp. 200-208, April 2012.
- [9] Hany M. Hasanien, and S. M. Muyeen, “Speed control of grid-connected switched reluctance generator driven by variable speed wind turbine using adaptive neural network controller”, *Electric Power Systems Research, Elsevier*, vol. 84, no. 1, pp. 206-213, March 2012. [**ISI Journal**](#)
- [10] Eyhab El-Kharashi, and Hany M. Hasanien, “Reconstruction of the switched reluctance motor stator”, *Journal of Electrical Engineering, Slovakia*, vol. 63. no. 1, pp. 1-10, January 2012. [**ISI Journal**](#)
- [11] Hany M. Hasanien, “Particle Swarm Design Optimization of Transverse Flux Linear Motor for Weight Reduction and Improvement Thrust Force”, *IEEE Transactions on Industrial Electronics*, vol. 58, no. 9, pp. 4048-4056, September 2011. [**ISI Journal**](#)
- [12] Hany M. Hasanien, “FPGA Implementation of Adaptive ANN Controller for Speed Regulation of Permanent Magnet Stepper Motor Drives”, *Energy Conversion and Management, Elsevier*, vol. 52, issue 2, pp. 1252-1257, Feb. 2011. [**ISI Journal**](#)
- [13] Hany M. Hasanien, Ahmed. S. Abd-Rabou, and Sohier. M. Sakr, “Design Optimization of Transverse Flux Linear Motor for Weight Reduction and Performance Improvement Using Response Surface Methodology and Genetic Algorithms”, *IEEE Transactions on Energy Conversion*, vol. 25, no. 3, pp. 598-605, September 2010. [**ISI Journal**](#)
- [14] Hany M. Hasanien, S. M. Muyeen, and Junji Tamura, “Torque ripple minimization of axial laminations switched reluctance motor provided with digital lead controller”, *Energy Conversion and Management, Elsevier*, vol. 51, issue 12, pp. 2402-2406, Dec. 2010. [**ISI Journal**](#)
- [15] Hany M. Hasanien, S. M. Muyeen, and Junji Tamura, “Speed Control of Permanent Magnet Excitation Transverse Flux Linear Motor by Using Adaptive Neuro-Fuzzy Controller”, *Energy Conversion and Management, Elsevier*, vol. 51, issue 12, pp. 2762-2768, Dec. 2010. [**ISI Journal**](#)
- [16] Ahmed Abdrabo, Hany M. Hasanien, and Soheir M. Sakr, “Design development of permanent magnet excitation transverse flux linear motor with inner mover type”, *IET Electric Power Applications*, vol. 4, issue 7, pp. 559-568, August 2010. [**ISI Journal**](#)
- [17] Hany M. Hasanien, “Torque ripple minimization of permanent magnet synchronous motor using digital observer controller”, *Energy Conversion and Management, Elsevier, Science Direct*, vol. 51, pp. 98-104, Jan. 2010. [**ISI Journal**](#)

- [18] Sayed O. Madbouly, Hussein F. Soliman, Hany M. Hasanien, and M. A. Badr, "A fuzzy logic controller based enhancing the dynamic performance of brushless doubly fed induction generator", *Ain Shams Journal of Electrical Engineering*, vol. 2, Dec. 2009.
- [19] S. M. Muyeen, Hany M. Hasanien, Rion Takahashi, Toshiaki Murata, and Junji Tamura "Integration of space vector pulse width modulation controlled STATCOM with wind farm connected to multimachine power system", *Journal of Renewable and Sustainable Energy, American Institute of Physics*, vol. 1, no. 013103, pp. 1-15, Jan. 2009. **ISI Journal**
- [20] Hany M. Hasanien "Steady State Performance of Switched Reluctance Generator" *Journal of Electrical Engineering, University Politehnica, Timisoara, Romania*, vol. 8, no. 1, pp 53-60. April 2008.

6) Articles Published and accepted to appear in refereed Conferences:17

- [1] Hany M. Hasanien, "Speed control of switched reluctance motor using an adaptive neuro-fuzzy controller", *in the proceeding of International Conference of Electrical and Electronics Engineers, ICEEE*, 3-5 July 2013, London, U.K..
- [2] H. S. K. El-Goharey, Hany M. Hasanien, and I. M. Ibrahim, "Design and Analysis of Axial Flux Permanent Magnet (AFPM) Machine", *in the proceeding of International Middle East Power Systems Conference, MEPCON*, 23-25 December 2012, Alexandria, Egypt.
- [3] Hany M. Hasanien, Syed Q. Ali, and S.M. Muyeen, "Wind generator stability enhancement by using an adaptive artificial neural network controlled superconducting magnetic energy storage", *in the proceeding of International Conference on Electrical Machines and Systems, ICEMS*, 21-24 October 2012, Sapporo, Japan.
- [4] Farzana Islam, Hany M. Hasanien, Ahmed Al-Durra, and S.M. Muyeen, "A New Control Strategy for Smoothing of Wind Farm Output using Short-Term Ahead Wind Speed Prediction and Flywheel Energy Storage System", *in the proceeding of American Control Conference, ACC*, 27-29 June 2012, Montreal, Canada.
- [5] Brwene Salah Ali, Hany M. Hasanien, and Yasser Galal, "Speed control of switched reluctance motor using artificial neural network controller", *in the proceeding of International Conference on Control, Communication, and Power Engineering, CCPE*, 7-8 Nov. 2011, India.
- [6] Samuel Raafat Fahim, Walid Helmy, Hany M. Hasanien, and M. A. Badr, "Optimal Study of Distributed Generation Impact on Electrical Distribution Networks using GA and Generalized Reduced Gradient", *in the proceeding of the 10th WSEAS International Conference on Applications of Electrical Engineering (AEE '11)*, 24-26 March 2011, Spain.
- [7] Sherihan A. Shaheen, Hany M. Hasanien, and M. A.L Badr, "Study on Doubly Fed Induction Generator Control", *in the proceeding of the 14th international middleeast power system conference (MEPCON 2010)*, Dec. 2010, Cairo University, Egypt.

- [8] Ahmed Y. El-Ibiary, Hany M. Hasanien, and M. A.L Badr, “Speed Control of Permanent Magnet Transverse Flux Linear Motor Using Artificial Neural Network Controller”, *in the proceeding of the 14th international middleeast power system conference (MEPCON 2010)*, Dec. 2010, Cairo University, Egypt.
- [9] Hany M. Hasanien, and Gamal M. Hashem, “Speed Control of Switched Reluctance Motor Based on Fuzzy Logic Controller”, *in the proceeding of the 14th international middleeast power system conference (MEPCON 2010)*, Dec. 2010, Cairo University, Egypt.
- [10] Sayed O. Madbouly, Hussein F. Soliman, Hany M. Hasanien, and M. A. Badr, “Improving the dynamic performance of brushless doubly fed induction generator driven by vector control with variable gain”, *in the proceeding of the 13th international middleeast power system conference (MEPCON 2009)*, Dec. 2009, Asuit University, Egypt.
- [11] Hany M. Hasanien, S. M. Muyeen, and Junji Tamura, “Frequency control of isolated network with wind and diesel generators using fuzzy logic controller”, *in the proceeding of IEEE ICEMS Conference*, Tokyo, Japan, Nov. 2009.
- [12] Hany M. Hasanien, S. M. Muyeen, and Junji Tamura, “Speed control of permanent magnet synchronous motor using digital pole placement controller”, *in the proceeding of IEEE Powertech Conference*, Bucharest, Romania, June 2009.
- [13] Hassan M. Kamel, Hany M. Hasanien, and H. E. A. Ibrahim, “Speed Control of Permanent Magnet Synchronous Motor Using Fuzzy Logic Controller”, *in the proceeding of IEEE International Electric Machines and Drives Conference (IEMDC)*, Miami, USA, pp. 1587-1591, May 2009.
- [14] Hany M. Hasanien, N.H. Saad, M.A. Mostfa, M.A. Badr “Speed control of axial lamination switched reluctance motor provided with digital pole placement controller” *in proceeding of the 17th international Conference of Electrical Machines. (ICEM 2006)*, Crete island, Greece, September 2006.
- [15] Hany M. Hasanien, N.H. Saad, M.A. Mostfa, M.A. Badr “Steady state performance of axial laminations switched reluctance motor” *in proceeding of the 11th international middle east power system conference (MEPCON 2006)*, El Minia University, Egypt.
- [16] Hany M. Hasanien, A.A. Abbas, M.A. El Sayad, M.A. Badr “ Torque ripple minimization of switched reluctance motor using lead-lag compensator controller” *in proceeding of the 10th international middle east power system conference (MEPCON 2005)*, Port-Said, Egypt.
- [17] Hany M. Hasanien, A.A. Abbas, M.A. El Sayad, M.A. Badr “ Speed regulation of switched reluctance motor using optimized harmonic injection technique” *in proceeding of the 9th international middle east power system conference (MEPCON 2003)*, Shebin El kom, Egypt.

3. TEACHING:

a) Courses taught:

A summary by course for the results from teaching critiques are given in the following sections.

Course	Level
Control of Electrical Machines	Grad
Special Electrical Machines	Grad
Electrical Testing	Grad
Electrical Circuits	Undergrad
Power Electronics	Undergrad
Automatic Control	Undergrad
Utilization of Electrical Power	Undergrad
Digital Control	Undergrad
Measurement and Instrumentation	Undergrad
Electromagnetic field	Undergrad
Energy Conversion	Undergrad
Electrical Machines	Undergrad

b) Thesis Supervision:

In most cases, I have been the *main research supervisor*, given the status of the other professors

Summary:

Total PhD Students supervised and graduated as of August 1, 2011: 1

Total MS Students supervised and graduated as of October 1, 2011: 6

Total MS Students under present supervision, as of October 1, 2011: 7

No.	Name	Degree	Dates	Comments
1	Sayed Madboly	PhD	July 2006-April 2010	Thesis: Investigation the dynamic response of Brushless doubly-fed induction generator used for variable speed wind energy applications Co-supervisor: Prof. M. A. Badr
2	Rania Raafat	M.Sc	May 2007-May 2010	Thesis: Equivalent models for wind farms Co-supervisor: Prof. M. A. Badr
3	Ahmed Abd Rabo	M.Sc	Oct. 2008-April 2011	Thesis: Optimal design of transverse flux linear motor Co-supervisor: Prof. Sohier. Sakr
4	Ahmed Yousry	M.Sc	May 2009-Sept. 2011	Thesis: Analysis and control of transverse flux linear motor Co-supervisor: Prof. M. A.L. Badr
5	Ibrahim Mohamed	M.Sc	Oct. 2009-Feb. 2013	Thesis: Analysis, performance and control of axial flux

				permanent magnet brushless machine Co-supervisor: Prof. Hamdy El gohary
6	Mohamed Hussien	M.Sc	Oct. 2009-today	Thesis: Generation and Control of the Energy Produced from the Nuclear Power Plants Co-supervisor: Prof. Sohier. Sakr
7	Mokhtar Mostfa	M.Sc	May. 2009-today	Thesis: Analysis of Transient Behaviour of WTGs Connected to Grid Co-supervisor: Prof. Hamdy El gohary
8	Rana Adel	M.Sc	Oct. 2008-today	Thesis: Sensorless control of induction motor drives Co-supervisor: Prof. M. A. Badr
9	Sameh Yousef	M.Sc	Oct. 2008-today	Thesis: Power electronic on-load transformer tap changers Co-supervisor: Prof. M. A.L. Badr
10	Samuel Rafat	M.Sc	Oct. 2008-Nov. 2011	Thesis: Impact of DG Existence in the Electrical Distribution Networks Co-supervisor: Prof. M. A.L. Badr
11	Sherehan Ashraf	M.Sc	Oct. 2008-Sept. 2011	Thesis: Performance enhancement of DFIG driven by wind farm Co-supervisor: Prof. M. A.L. Badr
12	Soha Essam	M.Sc	Oct. 2008-today	Thesis: Analysis and optimal design of three phase power transformer Co-supervisor: Prof. Sohier. Sakr
13	Talha Taj	M.Sc	July 2013-today	Thesis: DFIG wind farms Co-supervisor: Prof. Alolah
14	Rashid Meer	M.Sc	July 2013-today	Thesis: TFLMs Co-supervisor: Prof. Alolah

4. PROFESSIONAL ACTIVITIES:

a) Achievements and Awards

- **He has been awarded Encouraging Egypt Award for Engineering Sciences in 2012.**
- **He is a member of Editorial board of Electric Power Components and Systems Journal in 2013.**
- His Biography has been included in '2000 Outstanding Intellectuals of the 21st Century 2011' in International Biographical Center, Cambridge, England.
- His Biography has been included in 'Great Minds in the 21st Century' in American Biographical Institute, North Carolina, U.S.A. 2011.
- His Biography has been included in 'Marquis Who's Who' in the world for its 28th edition, 2011.
- Ain Shams University international publications award for 2010.
- Ain Shams University international publications award for 2011.
- Highest distinction in B.Sc., first rank with honor.
- Faculty of Engineering, Ain Shams University excellent grade award for 5 years (1994-1998).

b) Societies, Journals and Conferences:

- Senior Member of the IEEE 2011-present.
- Member of the IEEE 2009-2010.
- Senior Member of Power and Engineering Society (PES), 2011-present.
- Member of Power and Engineering Society (PES), 2009-2010.
- Senior Member of Industrial Electronics Society (IES), 2011.
- Technical Committee Chair of International Conference on Advances in Industrial Control, Electronics, and Computer Engineering (AICECE) 2012, Aveiro-Portugal, 13-16 July 2012.
- Member of the Technical Organizing Committee of Second Ain Shams University International Conference on Environmental Engineering, which hold in Cairo, Egypt, April 10-12 2007.
- Member of the Technical Organizing Committee of Third Ain Shams University International Conference on Environmental Engineering, which hold in Cairo, Egypt, April 14-16 2009.
- An Editor of the Third Ain Shams University International Conference on Environmental Engineering, which hold in Cairo, Egypt, April 14-16 2009.

c) Refereeing and reviewing for Journals and Conferences:

Regular reviewer for various journals and conferences, notably:

- IEEE Transactions on Industrial Electronics
- IEEE Transactions on Energy Conversion

- IEEE Transactions on Power Systems
- IEEE Transactions on Sustainable Energy
- IET Renewable Power Generation
- IET Generation, Transmission, Distribution
- Electric Power Components and Systems
- European Transactions on Electrical Power
- International Review of Electrical Engineering
- Electric Power Systems Research
- Energy Conversion and Management
- International Journal of Electrical Power and Energy Systems
- Ain Shams Engineering Journal.
- IEEE, IEMDC, 2009

d) Reviewer of Msc and PhD thesis:

1. N. Balaji, “Development of a novel gate drive with active protection for IGBT and estimation of the optimal thermal limits of a PSSD in power supplies”, PhD thesis, Visvesvaraya Technological University, Jnana Sangama, Belgaum, India, March 2013.
2. Hassan Mohei Al-Deen Hassan Hussein, “Maximum power extraction from electric utility interfaced wind turbine system”, Msc thesis, King Saud University, College of Engineering, Electrical Engineering Department, Riyadh, Saudi Arabia, April 2013.
3. Ammar Anwar Khan, “Online partial discharge detection in underground power cables”, Msc thesis, King Saud University, College of Engineering, Electrical Engineering Department, Riyadh, Saudi Arabia, April 2013.
4. Mohamed Hasan Mohamed Qais, “Transient response of distance relays to power swings on series compensated transmission lines”, Msc thesis, King Saud University, College of Engineering, Electrical Engineering Department, Riyadh, Saudi Arabia, January 2014.