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Electrical power and Machines Dept
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FIELDS OF SPECIALIZATION

Electrical Machines

DEGREES

- R.M. Hamouda, “**Coordination of Power System Auxiliary Controllers for Damping Torsional Oscillations**”, Ph.D Thesis, University of Windsor, Windsor, Ontario, Canada
- R.M. Hamouda, “**Effect of Converter Station Regulations on the Stability of AC/DC Power Systems**”, M.Sc. Thesis, Ain Shams University, Cairo, Egypt, 1983.
- R.M. Hamouda, “*Design of the Qattara Depression Hydro Station in the West Cost of the A.R.E*”, B.Sc. Project, Ain Shams University, Cairo, Egypt.

ACADEMIC AND INDUSTRIAL POSITIONS

- Dean of the Canadian International College, Sheikh Zayed Campus, Sheikh Zayed City, 6th of October, Egypt, Sept.2019
- Vice Dean of the Faculty of Engineering and Head of the Electro mechanics Department, Heliopolis University, Cairo Egypt, Sept. 2017- Aug, 2019
- Head of Energy Department at Heliopolis University for Sustainable Development (2016 to August 2017)
- Head of Electrical Power and Machines Department, Ain Shams University (from 2015 to 2016)
- Professor and consultant at Electrical Power and Machines Department, Ain Shams University (from 2012 to 2015)
- Professor and consultant at Electrical Power and Machines Department, King Saud University (from 1994 to 2012)
- Lecturer at Electrical Power and Machines Department, Ain Shams University (from 1989 to 1994)
- Post Doctor at Electrical and Computer Department, University of Toronto (from 1988 to 1989)

- Researcher at Electrical and Computer Department, University of Windsor (from 1985 to 1988)

AWARDS

- **University of Toronto Post Doctoral Fellowship**, Toronto, Ontario, CANADA, Jan. 1989 - Aug. 1989.
- **University of Windsor Scholarship**, Windsor, Ontario, CANADA, May 1988 - Aug. 1988.
- **University of Windsor Graduate Scholarship**, Windsor, Ontario, CANADA, May 1986 - April 1988.
- **University of Saskatchewan Graduate Scholarship**, Saskatchewan, CANADA, Jan. 1985 - Aug. 1985.
- **Ain Shams University Graduate Scholarship**, Cairo, EGYPT, Oct. 1978 - Dec. 1984.
- **The Government of Egypt Under Graduate Scholarship for Outstanding Students**, Oct. 1973 - May 1978.

PROFESSIONAL RECOGNITION

- **Member of Egyptian Syndicate of Professional Engineering. Til now**
- **Member in Electrical Consulting Group**, Dynamic Performance of Shoubrah El-Khema Power Station, Egyptian Electricity Authority (EEA) Project, Cairo, Egypt, 1993-1994.
- **Member in Electrical Consulting Group**, Investigation of Switching On (Energization) Failure at Substation 8053 in SEC-C Bulk System, Riyadh, Saudia, Jan, 2003.
- **Member in Electrical Consulting Group**, Investigation of Electrical Transients at 13.8 Kv Shunt Capacitor Bank Installed at EEH Sub-Station in SEC-WRB, Saudia, June 2004.

Research Projects

- **Research project with SABIC** titled "A pollution Free Wind-Driven Electricity Generator. Type I: Grid Connected Asynchronous Generator", King Saud University, Faculty of Engineering Research Center, Riyadh, 2007.
- **Research project with SABIC** titled "Improvement of Utility Interconnection of Wind Energy Systems", King Saud University, Faculty of Engineering Research Center, Riyadh, 2010.
- **Research project with SABIC** titled "A pollution Free Wind-Driven Electricity Generator. Type II: Isolated Self-Excited Asynchronous Generator". King Saud University, Faculty of Engineering Research Center, Riyadh, 2012 .
- **Research project with the Ministry of Water and Electricity** entitled "Economic feasibility to establish a national industry to cut the equipment for generation, transmission and distribution of

electricity in the Kingdom of Saudi Arabia" Project No. WMC 6004 - Ministry of Water and Electricity - Projects and Research Department - Ministry of Electricity Affairs – 2013.

- **Research project with ARAMCO** titled “*The Effect of Voltage Sag on the Performance of Electrical Equipment*” King Saud University, Faculty of Engineering Research Center, Saudi Aramco Chair in Electrical Power Riyadh, 2013 .

Consultant

- **Electrical Consultant, Consultation Center**, Faculty of Engineering, Ain Shams University for each of the following colleges:
 - Faculty of Al-Alsun - Ain Shams University.
 - Faculty of Engineering - Ain Shams University.
 - Faculty of Specific Education - Ain Shams University.
 - Faculty of Commerce - Ain Shams University.
- **Consultant Center**, Faculty of Engineering, Ain Shams University to design electrical power system for the project of the Abbasid Metro – Tora
- **Consultant Golden Group** for Industrial Works.
- **Consultant of the Food and Agriculture Organization of the United Nations (FAO) in Egypt** from 2017 -2019.
- **Designing the electricity network of Ain Shams Hospital, Ministry of Health.**
- **Project of Alexandria subway workshops** from 1999 to 2001
- **HVDC project Dammam**, Saudi Arabia from 2000 to 2003
- **Cosmos Village Project in 6th of October City** from 2003 to 2011
- **Surface Dams Project - Jizan** - Saudi Arabia from 2006 to 2008
- **Cinema Project - IMAX in 6th of October** from 2007 to 2008
- **Re-planning of Ramses Square** from 2009 to 2010
- **Half Moon Bay Project** - Dammam - Saudi Arabia from 2011 to 2013
- **A tourist resort project on Wadi Bish dam** in Saudi Arabia from 2012 to 2014

Committees

- ***Member in the lighting systems and their auxiliaries Committee of Saudi Arabian Standard Organization 2005-2012***
- ***Member in the Department Committee for PhD Exam 2005-2009***
- ***Member of the ABET committee (King Saud University) 2005-2010***
- ***Member in the Scientific Committee of the Seventh Saudi Engineering Conference. 2009.***
- ***Member of the quality program (postgraduate) committee “Preparing for Accreditation”, Electrical Power and Machines Dept, Faculty of Engineering, Ain Shams University, Cairo, EGYPT, 2012-Now.***

- *Member of the undergraduate quality program committee “Preparing for Accreditation”, Electrical Power and Machines Dept, Faculty of Engineering, Ain Shams University, Cairo, EGYPT, 2012-Now.*
- *Vice President of Publicity for the Middle East Power Engineering Conference, Version 16, MEPCON’14, Ain Shams University, Cairo EGYPT 23-25 Dec. 2014.*

Publications

Journal Papers

- 1- R. M. Hamouda, R. Iravani and R. Hackam, "Coordinated Static VAR Compensators and Power System Stabilizers for Damping Power System Oscillations", IEEE Trans., Vol. PWRS.2, No.4, pp 1059-1067, 1987.
- 2- R.M. Hamouda, R. Iravani and R. Hackam, “Damping Sub-synchronous Oscillations in Series Compensated AC Power Systems”, Canadian Journal of Electrical & Computer Engineering, Vol.14, No.2, 1989, pp. 55-62.
- 3- R. M. Hamouda, R. Iravani and R. Hackam, "Torsional Oscillations of Series Capacitor Compensated AC/DC Systems", Paper WP 89-137 IEEE PES Winter Meeting, 1989.
- 4- E. A. Mohamed, R. M. Hamouda, "A Knowledge Based Power System Contingency Selection Techniques" AMSE Periodical: Modeling, Measurement & Control, Vol.53, No.2, 1993, pp.23-32.
- 5- R.M. Hamouda, E.A. Mohamed, M.R. Irvani, R. Hackam, “Damping SSO in AC/DC Power Ssystems Using a Modal Control Based SVC”, Ain Shams University, Engineering Bulletin, Vol.28, No.3, Sept. 1993, pp. 277-293.
- 6- R. Iravani, Z. Zhao, R. M. Hamouda, "Impact of Inverter Station on Torsional Dynamics of Parallel HVDC-AC Power System”, IEEE Transaction on Power Systems, Vol.8, No.3, August 1993, pp.997-1003.
- 7- R. M. Hamouda, "Torsional Oscillations Phenomenon in a Long Distance Voltage Supported AC Transmission Line", Ain Shams University, Scientific Bulletin, Vol.29, Part 4, 1994, pp.144-160.
- 8- R. M. Hamouda, E. A. Mohamed, A. H. Amer, "Stabilizing Torsional Oscillations in Power Systems Using Modal Control Based Static Phase-Shifter", Ain Shams University, Engineering Bulletin, Vol.30, No. 2, June 1995.
- 9- E. A. Mohamed, R. M. Hamouda, A. K. El-Kharashi, H. M. El-Shaer, A. B. Abu Samra "Upper Egypt Power Dynamic Voltage Collapse Phenomenon", Ain Shams University, Faculty of Engineering, Scientific Bulletin, vol.30, Part 2, 1995, pp.207-215.
- 10-R. M. Hamouda, M . A. Badr and A. I. Alolah, "Effect of Torsional Dynamics on Salient Pole Synchronous Motor Driven Compressors", IEEE Transaction on Energy Conversion, Vol.11, No.3, Sept. 1996, pp. 531-538.

- 11-M.A. Badr, R.M. Hamouda and A.I. Alolah," Synchronization Problem of High Performance Reluctance Motors", IEE Proc., Electric Power Applications, Vol.144(2), 1997, pp.456-460.
- 12-A. A. Al-Ohly, R. M. Hamouda, M. A. Badr, "Torsional Oscillations Associated with the Starting of Three Phase Synchronous Motors Fed From a Single Phase Supply" IEEE Transaction on Energy Conversion, Vol.12, No.1, March 1997.
- 13-R.M. Hamouda, M.A. Badr and A.I. Alolah," Starting Transients of Three Phase Reluctance Motors as Affected by Torsional Dynamics", IEEE Trans., Vol.EC-14(3), 1999, pp.354-360.
- 14-R.M. Hamouda, A.I. Alolah, M.A. Badr and M. A. Abdel-halim," A comparative study on the starting methods of three phase wound-rotor induction motors, Part I", IEEE Trans., Vol.EC-14(4), 1999, pp.918-922.
- 15-Adel Ben Abdennour Rizk M. Hamouda and A. A. Al-Ohaly,"Countermeasures for Self Excited Torsional Oscillations Using Reduced Order Robust Control Approach", IEEE PES, 2000 Winter Meeting 23-27, Jan, 2000, Singapore.
- 16-R.M. Hamouda, A.I. Alolah and M.A. Badr," Electromechanical Transients of Series Connected three Phase Slip Ring Induction Motors", IEEE PES, 2000 Winter Meeting 23-27, Jan, 2000, Singapore.
- 17-M. A. Abdel-halim, M.A. Badr, A.I. Alolah and R.M. Hamouda," Torsional Oscillation Problems Associated with Shunt Induction Motor Driving Distributed Inertias", Electric Power Components and Systems, Vol.29, 2001, pp.739-755.
- 18-R.M. Hamouda, A.I. Alolah, M.A. Abdel-halim and M.A. Badr," Electromechanical Transients of Smoothly Started Slip Ring Induction Motor", Proc. of the IEEE Aegean Conference on Electrical Machines and Power Electronics (Acemp), Istanbul, Turkey, May 2004.
- 19-Adel Ben Abdennour, Rizk M. Hamouda and Nabeel M. Al-Haider,"Supression of Torsional Oscillations Using Genetic Algorithm Optimized Compensators", International Journal of Power & Energy Systems, Vol. 25, Number 3, pp. 211-216, 2005.
- 20- A.F. Almarshoud, M. A. Abdel-Halim, A. I. Alolah and R. M. Hamouda, "Analysis and Performance of 3-Phase Grid Connected Induction Generator via Transistorized ac Voltage Controller", Transaction on Systems, Signals & Devices, Vol. 3, No. 2, 2007.
- 21-A. Alsalloum, R.M. Hamouda, A.I. Alolah, Ali.M. Eltamaly ,”Transient Performance of an Isolated Induction Generator under Unbalanced Loading Conditions “, Journal of Energy and Power Engineering, ISSN 1934-8975. 05/2010; 4(5):52-57.
- 22-Ali M Eltamaly, A I Alolah, R. M. Hamouda, M Y Abdulghany,” A novel digital implementation of AC voltage controller for speed control of induction motor”., International Journal of Power and Energy Convers. 01/2010; 2(1).
- 23-M. Samhy, H. Elhelw, and Rizk Hamouda,” Implementing FRT & Anti-Islanding-Detection Utilizing Local Protection Relay for Distributed Generator”, Accepted for publication in Journal of Electrical Systems and Information Technology, August, 2018.

- 24-Ahmed El-Bassiouny, Mohamed El-Shemy and Rizk Hamouda, "Probabilistic Analysis of the Reliability Performance for the Transformers of Different Voltage Populations of Egyptian Grid", Accepted for Publication in the Renewable Energy and Sustainable Development (RES-D) Journal, eISSN: 2356-8569 pISSN: 2356-8518 July 2019.

Conferences

- 1- A. H. Amer, **R. M. Hamouda** and E. A. Mansour, "**Best Choice of Regulator Parameters for AC/DC Power Systems**", Proc. of International IEEE Conference, MEXICO, 1983.
- 2- A. H. Amer, **R. M. Hamouda** and A. A. Metwally, "**Effect of Converter Control schemes on the AC/DC Power System Dynamics**", Proc. of the International IASTED, Innsbruck, AUSTRIA, Feb. 1984.
- 3- **R. M. Hamouda**, M. R. Iravani and R. Hackam, "**Damping SSR in Systems Containing HVDC Links in Parallel with Series Capacitors Compensated AC Lines**", North American Power Symposium (NAPS), Edmonton, Alberta, CANADA, Oct. 22-23, 1987.
- 4- **R. M. Hamouda**, R. Iravani and R. Hackam, "**Damping Sub-synchronous Oscillations in Series Compensated AC Power Systems**", Canadian Journal of Electrical & Computer Engineering, Vol. 14, No.2, 1989, pp 55-62.
- 5- **R. M. Hamouda**, R. Iravani and R. Hackam, "**Damping Torsional Oscillations in High Voltage AC/DC Systems**", Proc. of the Middle East Power Conference (MEPCON), Assuit University, Jan. 6-9, 1992, Assuit, EGYPT, pp. 322-327.
- 6- A. El-Kharashi, **R. M. Hamouda**, M. M. Mansour, H. Moustafa, "**Transient Behavior of a wind Driven Induction Generator Connected to a Power System**", Proc. of the 1st International Conference on Electronic Circuits & Systems (ICECS), Dec. 19-22, 1994, Cairo, Egypt, pp. 520-526.
- 7- Adel Ben Abdennour, **Rizk M. Hamouda** and Nabeel M. Al-Haider, "**Damping Torsional Oscillations Using Genetic Algorithm Optimized Lead/Lag Compensators**", International Conference on Communication, Computer & Power (ICCCP'01), Muscat, Oman, February 12-14, 2001.
- 8- A. M. Alsaloum, A.I. Alolah and **R. M. Hamouda**, "**Operation of Three Phase Self-Excited Induction Generator Under Unbalanced Load**", Electrimacs 2002, Monterial, CANADA, August 18-21.
- 9- A. S. Abdallah, **R. M. Hamouda** and A.I. Alolah "**Iron Losses in Synchronous Generators**" Electrimacs 2002, Monterial, CANADA, August 18-21.
- 10- A. S. Abdallah, **R. M. Hamouda** and A.I. Alolah, "**Effects of Iron Loss and Saturation on Synchronous Generator Steady State Performance**", Second International Conference on Signals Systems Decision and Information Technology, March 26-28, 2003-Sousse, Tunisia.
- 11- A. I. Alolah, Ali M. Eltamaly and **R. M. Hamouda**, "**Control Limits of Three Phase AC Voltage Controller under Induction Motor Load**", XVII International Conference on Elect. Machines ICEM 2006, Sept. 2-5, 2006, Chania, Crete Iland, Greece.

- 12- Ali M. Eltamaly, A. I. Alolah and **R. M. Hamouda**, "**MatLab Simulation of Three Phase SCR Controller for Three Phase Induction Motor**", Mansoura Engineering Journal, MEJ, Vol.31, No. 3, Sept 2006, pp E1-E7.
- 13- Ali M. Eltamaly, A. I. Alolah and **R. M. Hamouda**, "**Limits of Three Phase SCR Controller under Induction Motor Load**", Asian Power Electronic Journal, Vol. xx, No. x, Mar 2007.
- 14- A. M. Eltamaly, A. I. Alolah and **R. M. Hamouda**, "**Performance Evaluation of Three Phase Induction Motor under Different AC Voltage Control Strategies 'Part I'**", International Aegean Conference on Electrical Machines and Power Electronics, ACEMP'07, 10-12 September 2007, Bodrum, Turkey.
- 15- A. M. Eltamaly, A. I. Alolah and **R. M. Hamouda**, "**Performance Evaluation of Three Phase Induction Motor under Different AC Voltage Control Strategies 'Part II'**", International Aegean Conference on Electrical Machines and Power Electronics, ACEMP'07, 10-12 September 2007, Bodrum, Turkey.
- 16- Ali M. Eltamaly, A. I. Alolah, and **R. M. Hamouda** "**A Novel Digital Firing Scheme for Soft Starting of Three-Phase Induction Motors**" The 4th IEEE-GCC Conference, Dhahran, Saudi Arabia, Nov. 2007.
- 17- **R. M. Hamouda** and Z. R. Alzaid, "**Damping Power System Oscillation using Thyristors Controlled Braking Resistors and Power System Stabilizer**", Paper: CD_414 accepted for publication in SPEEDAM SYMPOSIUM ,11-13 June 2008 - Ischia (Italy) .
- 18- **R. M. Hamouda**, Z. R. Alzaid and M. A. Mostafa, "**Damping Electro-Mechanical Oscillations by Coordination between Thyristor Controlled Braking Resistors and Power System Stabilizer**", AUPEC, 14-17 Dec., UNSW, Sydney, Australia, 2008.
- 19- **R. M. Hamouda**, Ali M. Eltamaly and A. I. Alolah, "**Transient Performance of an Isolated Induction Generator under Different Loading Conditions**", AUPEC, 14-17 Dec., UNSW, Sydney, Australia, 2008.
- 20- **R. M. Hamouda** and Z. R. Alzaid, "**Damping Torsional Oscillation in Large Turbogenerators by Coordination between Thyristors Controlled Braking Resistors and Power System Stabilizer**", Paper: CD_414 accepted for publication in SPEEDAM SYMPOSIUM ,11-13 June 2008 - Ischia (Italy)
- 21- Ali M. Eltamaly, A. I. Alolah, **R. M. Hamouda**, and M. Y. Abdulghany "**A Novel Control of AC Voltage Controller under Induction Motor Load**" International Conference on Power Electronics and Power Engineering, Paris, France, 24-26/6/2009
- 22- Ali M. Eltamaly A. I. Alolah **R. M. Hamouda** and M. Y. Abdulghany "**A Novel Digital Implementation of AC Voltage Controller for Speed Control of Induction Motor**" ECMS 2009, Madrid, Spain, June 2009

- 23- Ali M. Eltamaly, A. I. Alolah and **R. M. Hamouda** “**Transient Performance of Stand Alone Induction Generator under Different Operating Conditions**” International Conference on Electrical Machines and Power Electronics, Venice, Italy, October 28-30, 2009
- 24- **R. M. Hamouda**, Z. R. Alzaid and M. A. Mostafa, " **Coordinated Design of Thyristors Controlled Braking Resistors and Power System Stabilizer for Damping Electro-Mechanical Oscillations** ", AUPEC, 27-30 Sept., University of Adelaide, Adelaide, South Australia, 2009.
- 25- A.F. Almarshoud, M. A. Abdel-Halim, A. I. Alolah and **R. M. Hamouda**, "**Analysis and Performance of 3-Phase Grid Connected Induction Generator via Transistorized ac Voltage Controller**", Transaction on Systems, Signals & Devices, Vol. 3, No. 2, 2008.
- 26- Ali M Eltamaly, A I Alolah, **R Hamouda**, M Y Abdulghany ,” **General Model for Steady State Analysis of Three Phase Self Excited Induction Generator**”, Proceedings 23rd European Conference on Modelling and Simulation ©ECMS Javier Otamendi, Andrzej Bargiela, José Luis Montes, Luis Miguel Doncel Pedrera (Editors) ISBN: 978-0-9553018-8-9 / ISBN: 978-0-9553018-9-6 (CD); 06/2009
- 27- A. Al Saloum, **R. M. Hamouda** and A. I. Alolah, '**Transient Performance of Isolated Induction Generator under Different Loading Conditions**' Submitted and accepted to 11th International Multi-Conference on Systems, Signals and Device, February 11 - 14, 2014 - Castelldefels-Barcelona, Spain
- 28- A. Al Saloum, A. I. Alolah and **R. M. Hamouda**, ‘**General Model for Steady State Analysis of Three Phase Self Excited Induction Generator**’, International Conference on Renewable Energies and Power Quality (ICREPQ’14, Cordoba (Spain), 8th to 10th April, 2014.
- 29- M. Sroor, R. M. Sharkawy and **R.M. Hamouda** “**Dynamic Performance of Dstatcom used for Voltage Regulation in Distribution System**” , Accepted for publication in the Australian Universities Power Engineering Conference, AUPEC’15, Asutralia, 2015.
- 30- K. E. Amin, **R. M. Hamouda**, A. Abu Siada and M. A. El-Dessouki, “**Electromechanical Oscillations of Common Shaft Cascaded Induction Driving a Large Mechanical Load**” , Eighteenth International Middle-East Power Systems Conference (MEPCON), 2016.
- 31- Jomana Mohsen, **Rizk M. Hamouda**, Ahmed M. Ewais and Hadi M. El-Helw, ” A Modal Control based Fully Rated Converter for Damping Torsional Oscillations in Large Turbo-generators”, 2017 Nineteenth International Middle East Power Systems Conference (MEPCON), Menoufia University, Egypt, 19-21 December 2017.
- 32- K. E. Amin, **R. M. Hamouda**, A. Abu Siada and M. A. El-Dessouki, “**Mitigation of Torsional Oscillations Hazard in Cascaded Induction Motors Driving a Large Mechanical Load**” Accepted and presented in the 53rd Universities Power Engineering Conference UPEC 2018, Glasgow, UK, 4-7th of September 2018.