

Sherif Ahmed Zaid Farag

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PERSONAL INFORMATION

Name : Sherif Ahmed Zaid Farag
Birth Date : Jan. 17, 1970
Nationality : Egyptian
Marital Status: Married
Position (now): Associate Professor of Power Electronics at the Electrical Power and Machines department, Faculty of engineering, Cairo University.

EDUCATION:

- Promoted to Assoc. Prof., Electrical Engineering Jan. 2012
Cairo University, Giza, Egypt
- Ph.D., Electrical Engineering July. 1997 - Sept 2001
Cairo University, Giza, Egypt..
- M.Sc., Electrical Engineering Sept.1992 - March 1996
Cairo University, Giza, Egypt..
- B.Sc., Electrical Engineering Sep.1988 - July 1992
Cairo University, Giza, Egypt..

BACKGROUND:

- Ph.D. Topic: *Rigorous direct torque control for poly phase induction motor drives.*
- M.Sc. Thesis: *Analysis and design of GTO-CSRI for induction heating applications.*
- B.Sc. Degree : *Distinction with honor*
Graduation project on implementation of PWM generator for Inverters.

TEACHING CAREER EXPERIENCE:

- Cairo University, Egypt 9/92 - 10/2001
Teaching Assistant:
Conducted lab and tutorial sessions for courses Fundamentals of Electrical Engineering, Electromagnetic fields, Electric Circuits, Electrical Machines, Power electronics.
- Cairo University, Egypt 10/2001 - Now
Lecturer:
Conducted different graduate and undergraduate courses in the area of Power electronics. and

others.

Work Experience: Theoretical and practical teaching for;	
Graduate courses	1. Analysis & Design of power electronics Circuits (Cairo University), 2. Power electronics and applications (Cairo University),
Undergraduate courses	1. Power Electronics (Cairo University, Institute of aerospace science and technology), 2. Basic electronics (IAEMS University), 3. Electrical Engineering (IAEMS University), 4. Electrical Engineering Installations(Cairo University, Institute of aerospace science and technology), 5. Electromagnetic fields (IAEMS Egypt), 6. Elective power electronics Jazan university, 7. Electrical Engineering (Jazan University), 8. Renewable energy (Jazan University)
Training courses	9. Power electronics and electrical drives (High Technology Center, Cairo University), 10. Power electronics and electrical drives (Valeo Company)

INDUSTRIAL EXPERIENCE

■ Control & Instrumentation and system technology

An Engineering & Consultations Firm: (Part time)

- One of the teamwork of a project of production of **battery chargers** (TIPCO at 6 of October City, Egypt) .
- One of the teamwork of a project of production of **ATS** (TIPCO at 6 of October City, Egypt).
- One of the teamwork of a project of production of **furnace power supply** (Misr Alum Co., Nag Hammdy, Egypt).
- One of the teamwork of a project of “**Development and Implementation of Solar Energy System for Satellite**” project. This project was funded by the Academy of Science and Technology, Egypt.
- The project of repairing the **UPS units** (Upper Egypt Company for Producing Electricity)
- A consultant manager for the (El-Manar Electromechanical Company -Catar) 2010-till now

COMPUTER BACKGROUND

■ Software Languages:

Proficient in

- Basic (Undergraduate teaching experience)
- Fortran; (Working experience gained during Ph.D., M.Sc., teaching)

Familiar with

- C, C++ . (Self practice)

■ Operating Systems:

- MS-windows 2007. (Working experience)

■ S/W Packages:

Experienced with lots of software packages including;

- Microsoft office,
- MATLAB,

- Mathematica
- Harvard graphics and others.

TEACHING CAPABILITY

Capable of professionally teaching courses in the following areas:

- Power Electronics.
- Electrical Machines.
- Digital Electronics.
- Electromagnetic Fields.
- Circuit Analysis
- Electrical Engineering basics
- Electronics Engineering basics

HONORS:

- Graduate teaching assistance at Cairo Univ.1992-2001.
- Received Bachelor's Degree with Highest Honors 1992.
- Recipient of undergraduate Fellowship Cairo University form 1987 till 1992.

REFERENCES

Prof. Dr. Osama Mahgoub : Professor in the Dept. of Electrical Engineering. Cairo University.
Tel/Fax: (202) 336-8748, (202) 333-8749

Tel/Fax: (202)571-5920 , (202)572-8735

Prof. Dr. Khalid El-Metwally : Professor in the Dept. of Electrical Engineering. Cairo University.
Tel/Fax: (202) 336-8748, (202) 336-8749

Reviewer

He acted as a reviewer for some research projects, journals, and conferences:

- MEPCON'10 conference.
- MEPCON'12 conference.
- International Journal of Electrical Engineering (IJEE).
- Alex. Engineering Journal (AEJ).
- Electric Power Components and Systems (EPCS).
- IET Renewable Power Generation
- Research proposals for KACS

Conference Attending

- Electronics, Communication, and Photonics Conference (SIECPC-2013), Riyadh-Saudia Arabia, 27 - 30 April 2013. He presented paper #83.

PARTIAL LIST OF PUBLICATIONS

■ JOURNAL PAPERS

[1]A.A. Adly, **S. Zaid** , O. Mahgoub, and A. El-Kousy, "**Field distribution and power loss assessment in conductive rod cores exhibiting hysteresis**", IEEE Transaction on Magnetics, Vol 32, No 5,

- p4293-4295, September 1996.
- [2] M. A. Ahmed, S. A. Zaid, and O. A. Mahgoub, "**Implementation of Supply Voltage Sensorless Microcontroller-Based Three Phase PWM Rectifier**", Ain Shams Journal of Architectural Engineering (ASJAE), vol. no. 1 ISSN: 1687-8604, 2008.
- [3] M. A. Ahmed, S. A. Zaid & O. A. Mahgoub, "**Analysis and Implementation of Supply Voltage Sensorless Microcontroller-Based Three Phase Active Power Filter,**" Ain Shams Journal of Architectural Engineering (ASJAE), vol 2, Electrical, Dec. 2009, pp.305-312.
- [4] M. A. Ahmed, S. A. Zaid & O. A. Mahgoub, "**Implementation of Microcontroller-Based Three Phase PWM Rectifier,**" Journal of Electrical Engineering (JEE), Volume 10, No 3, Sept. 2010, pp. 139-143.
- [5] S. A. Zaid, O. A. Mahgoub K. El-Metwally, S.E. Abo-Shady, "**Direct torque control of a six phase induction motor drive** ", Journal of Engineering and Applied Science (JEAS), vol no 56, Feb 2009.
- [6] S. A. Zaid, O. A. Mahgoub K. El-Metwally, S.E. Abo-Shady, "**Dual inverter based direct torque control of a six phase induction motor** ", Journal of Engineering and Computer Science (QJECS), vol 3, no 1, Feb 2010.
- [7] S. A. Zaid, O. A. Mahgoub K. El-Metwally, "**Implementation of a New Fast Direct Torque Control Algorithm for Induction Motor Drives**", IET Electr. Power Appl. -- May 2010 -- Volume 4, Issue 5, p.305–313.
- [8] M. A. Ahmed, S. A. Zaid, O. A. Mahgoub, "**A Simplified Control Strategy for the Shunt Active Power Filter for Harmonic and Reactive Power Compensation** ", JEE, Journal of Electrical Engineering, Vol. 11, No. 2.7, pp. 45-51, 2011.
- [9] M. A. Ahmed, S. A. Zaid, O. A. Mahgoub, "**Improved Active Power Filter Performance Based on Indirect Current Control Technique** ", JPE, Journal of Power Electronics, Vol. 6, No. 19, pp. 931-937, Nov.2011.
- [10] S. A. Zaid, H. H. Hanafy, M. M. Abd-El-Aziz, A. M. Gesraha, "**A Novel Study for Constant Voltage and Frequency Operation of Self-Excited Short-Shunt Induction Generator**", Int. J. of Renewable Energy Technology (IJRET), Vol. 3, No. 3, pp. 237-253, 2012.
- [11] Mohamed T. Elsayed, S. A. Zaid, O. A. Mahgoub, "**Simulation Study of a New Approach for Field Weakening Control of PMSM** ", JPE, Journal of Power Electronics, Vol. 12, No. 1, pp. 128-135, 2012.
- [12] MOHAMOUD FAUZY SHOSHA, SHERIF AHMED ZAID, AND OSAMA AHMED MAHGOUB, "**The Effect of Harmonic Detection Speed on the Overall Performance of Shunt Active Power Filters**", WSEAS Trans. on Systems, Vol. 11, No. 8, pp. 294-304, August 2012.
- [13] Mohamed T. Elsayed, S. A. Zaid, O. A. Mahgoub, "**HARDWARE IMPLEMENTATION OF MTPA FOR SPMSM-DSP BASED**", JEE, Journal of Electrical Engineering, Vol. 13, No. 1, pp. 100-105, 2013.
- [14] Mohamed R. Amer, S. A. Zaid, O. A. Mahgoub, "**Simple Control Algorithm Using SRF Theory for Three Phase Shunt Active Power Filter** ", Journal of Engineering and Computer Science (QJECS), Vol. x, No. x, pp. xx-xx, 201x.
- [15] Wael Abd El-Aziz Al-Dosokey, Sherif Ahmed Zaid, and Mahmoud Abd El-Hakeem, "**Direct Torque Control of a Three-Level Inverter Fed Induction Motor, Analysis and Simulation,**" JEE, Journal of Electrical Engineering, Vol. 13, No. 4, pp. 37-44, 2013.
- [16] A. Hagrass, S. A. Zaid, A. A. Elkousy, and Sh. M. Saad, "**Performance Comparison of Shunt Active Power Filter for Interval Type-2 Fuzzy and Adaptive Backstepping Controllers,**" International Journal of Modeling, Identification, and Control, (IJMIC), Vol. 21, No. 3, pp. 270-287, 2014.

- [17] A. Hagrass, S. A. Zaid, A. A. Elkousy, and Sh. M. Saad, "Nonlinear Backstepping Control of Shunt Active Power Filter," JEE, Journal of Electrical Engineering, Vol. 13, No. 4, pp. 210-216, 2013.
- [18] A. Kassem, S. A. Zaid, "Load parameter waveforms Improving of a Stand Alone Wind-Based Energy Storage System and Takagi–Sugeno Fuzzy logic Algorithm", IET Renewable Power Generation, Volume 8, Issue 7, September 2014, p. 775 – 785.
- [19] Ehab S. Mohamed, Sherif A. Zaid, M. F. Abu-Elyazeed, Hany M. Elsayed, "Improved Model Predictive Control for three phase Inverter With Output LC Filter," International Journal of Modeling, Identification, and Control, (IJMIC), Vol. x, No. x, pp. xx-xx, 2015.
- [20] S. A. Zaid, "Fast Direct Torque Control for Induction Motor Drives", EPSR, Electric Power System Research, Vol. x, No. x, pp. xx-xx, 201x. submitted
- [21] Ehab S. Mohamed, Sherif A. Zaid, M. F. Abu-Elyazeed, Hany M. Elsayed, "Model Predictive Control and Classical Methods for UPS Inverter Applications With Output LC Filter," EPCS, Journal of Electrical Power Components and Systems, Vol. x, No. x, pp. xx-xx, 201x. submitted
- [22] Mohamed T. Elsayed, S. A. Zaid, O. A. Mahgoub, "Implementation of a New Approach for Field Weakening Control of PMSM", EPSC, Electric Power components and Systems, Vol. XX, No. X, pp. xx-xx, 2013. Submitted
- [23] Mohamed T. Elsayed, S. A. Zaid, O. A. Mahgoub, "DSP Setup for wide speed range PMSM", AEJ, Alex. Engineering Journal, Vol. XX, No. X, pp. xx-xx, 2013. Submitted

■ CONFERENCES PAPERS

- [24] S. A. Zaid, O. A. Mahgoub, A. A. Mahfouz, E. Abu El-Zahab "Complete analysis and simulation of the current source resonant inverter", Fourth Middle East Power System Conference MEPCON'96, Assiut Univ., Cairo, Jan 3-5, 1996, p362-366.
- [25] S. A. Zaid, O. A. Mahgoub, A. A. Mahfouz, A. M. El-Tobshy, "New exact model of GTO for cad simulation", Fourth Middle East Power System Conference MEPCON'96, Assiut Univ., Cairo, Jan 3-5, 1996, p388-392.
- [26] S. A. Zaid, O. A. Mahgoub K. El-Metwally, S.E. Abo-Shady, "Rigorous direct torque control method for induction motor drive", ACEMP01 International Aegean Conference on Electrical Machines and Power Electronics, Kusadasi, Turkey, June 2001, p478-483.
- [27] Mohamed R. Amer, Osama A. Mahgoub, and Sherif A. Zaid, "New Adaptive Hysteresis Modulation Technique for Three Phase Shunt Active Power Filter," 14th International Middle East Power Systems Conference (MEPCON'10), Cairo-Egypt, Dec. 19-21, 2010, Paper ID 118, pp. 66-73.
- [28] Mohamed T. Elsayed, Osama A. Mahgoub, and Sherif A. Zaid, "Simulation Study of Conventional Control Versus MTPA-Based for PMSM Control," 14th International Middle East Power Systems Conference (MEPCON'10), Cairo-Egypt, Dec. 19-21, 2010, Paper ID 183, pp. 382-385.
- [29] Mohamoud F. Shosha, Sherif A. Zaid, and Osama A. Mahgoub, "A Comparative Study on Four Time-Domain Harmonic Detection Methods for Active power filters serving in Distorted Supply," The International MultiConference for Engineers and Computer Scientists (IMECS 2011), Hong Kong, Volume II, March 2011, pp. 981-985.
- [30] Mohamoud F. Shosha, S. A. Zaid, and O. A. Mahgoub, "A Time Domain Harmonic Reference Estimation for Shunt Active Power Filters Under Non-Ideal Mains Voltages," The International Conference on Electrical and Computer Engineering (ICECE 2011), Penang-Malaysia, February 2011, Volume IV, Feb 2011, pp. 456-462.

- [31] Mohamed R. Amer, Osama A. Mahgoub, and Sherif A. Zaid, "**A Simple Algorithm For SRF Theory with Three Phase Shunt Active Power Filter**," The International MultiConference for Engineers and Computer Scientists (IMECS 2011), Hong Kong, Volume II, March 2011, pp. 942-947.
- [32] S. A. Zaid, "**Thyristor Firing Circuit Synchronization Techniques in Thyristor Controlled Series Capacitors**," International Conference on Clean Electrical Power (ICCEP 2011), Italy, July 2011, pp. 183-188.
- [33] Mohamoud F. Shosha, Sherif A. Zaid, and Osama A. Mahgoub, "**Better Performance For Shunt Active Power Filters**," International Conference on Clean Electrical Power (ICCEP 2011), Italy, July 2011, pp. 56-62.
- [34] A. A. Elkousy, S. A. Zaid, A. Hagra, and Sh. M. Saad, "**Adaptive Backstepping of Shunt Active Power Filter**," 15th International Middle East Power Systems Conference (MEPCON'12), Alexandria-Egypt, Dec. 23-25, 2012, Paper ID 246.
- [35] Wael Abd El-Aziz Al-Dosoky, Sherif Ahmed Zaid, and Mahmoud Abd El-Hakeem, "**Simulation Analysis of Direct Torque Controlled Three-Phase Induction Motor using a Three-Level Inverter**," 15th International Middle East Power Systems Conference (MEPCON'12), Alexandria-Egypt, Dec. 23-25, 2012, Paper ID 201.
- [36] Mohamed T. Elsayed, Osama A. Mahgoub, and Sherif A. Zaid, "**MTPA of SPMSM-DSP Based**," 15th International Middle East Power Systems Conference (MEPCON'12), Alexandria-Egypt, Dec. 23-25, 2012, Paper ID 160.
- [37] Ehab S. Mohamed, Sherif A. Zaid, M. F. Abu-Elyazeed, Hany M. Elsayed, "**Model Predictive Control and Classical Methods for UPS Inverter Applications With Output LC Filter**," , " Electronics Communication and Photonics Conference (SIEPC-2013), Riyadh-Saudia Arabia, 27 - 30 April 2013, p , Paper ID 83.
- [38] Ehab S. Mohamed, Sherif A. Zaid, M. F. Abu-Elyazeed, Hany M. Elsayed, "**Classical Methods and Model Predictive Control of Three-Phase Inverter With Output LC Filter for UPS Applications**," International Conference on Control, Decision and Information Technologies (CoDIT'13), Hammamet-Tunisia, 6 - 8 May 2013, p483-488 Paper ID 39.
- [39] Ehab S. Mohamed, Sherif A. Zaid, M. F. Abu-Elyazeed, Hany M. Elsayed, "**Three-Phase Inverter with Output LC Filter Using Predictive Control for UPS Applications**," International Conference on Control, Decision and Information Technologies (CoDIT'13), Hammamet-Tunisia, 6 - 8 May 2013, p489-494, Paper ID 41.
- [40] A. A. Elkousy, S. A. Zaid, A. Hagra, and Sh. M. Saad, "**Performance Comparison of Shunt Active Power Filter for Interval Type-2 Fuzzy and Adaptive Backstepping Controllers**," 5th International Conference on Modeling, Identification, and Control, (ICMIC'5), Cairo-Egypt, 31st Aug. -2nd Sept., 2013, Paper ID 62, pp175-180.