

July/ 2005

Curriculum Vitae

A) Personal



Name	Nationality	Date of Birth	Sex / Marital Status
Abdulrahman Ibrahim Alolah	Saudi	22 nd January 1958	Male / Married

B) Business Address

University / Department	Position	Address	Phone , Fax and E-mail
King Saud University College of Engineering Electrical Engineering Department	Professor	EE Dept. College of Eng. P.O. Box 800 Riyadh 11421 Saudi Arabia	Tel.: +966-1-4676753 Fax : +966-1-4676757 E-mail: alolah@ksu.edu.sa

C) Educational

B.Sc.

Electrical Engineering
King Saud University
Riyadh
Saudi Arabia
June, 1979

Ph.D.

Electrical and Electronics Engineering
University of Bradford - Bradford
U.K.
March 1986
Thesis Title: Microprocessor Controlled Three Phase PWM Inverter for Variable Speed
Induction Motor Drives
Supervisor: Prof. W. Shepherd

D) Academic Positions

Date	Position/ Institute
13/11/1994 AD - present	Professor, Electrical Engineering Department, College of Engineering, King Saud University, Riyadh, Saudi Arabia.
29/5/1990 - 12/11/1994 AD	Associate Professor, Electrical Engineering Department, College of Engineering, King Saud University, Riyadh, Saudi Arabia.
21/4/1986 - 28/5/1990 AD	Assistant Professor, Electrical Engineering Department, College of Engineering, King Saud University, Riyadh, Saudi Arabia.
25/7/1982 - 24/3/1986 AD	Post Graduate Student, University of Bradford, Bradford, England.
21/9/1979 - 24/7/1982 AD	Teaching Assistant , Electrical Engineering Department, College of Engineering, King Saud University, Riyadh, Saudi Arabia.

E) Area of Research

Interest	Active Research
Electrical Machines	Transients and Starting of Induction and Reluctance Motors Analysis of Induction Generators
Power Electronics	Firing Circuits - Analysis of AC Controllers – Inverter Control

F) RECENT R&D FUNDED CONTRACTS (Last Five Years)

Title	Sponsor	Date
A Pollution Free Wind-Driven Electricity Generator: Type I: Grid-Connected Induction Generator	SABIC	June 2004
A Pollution Free Wind-Driven Electricity Generator Type II: Isolated Self-Excited Asynchronous Generator	SABIC	June 2005
Avoiding Motor Failure by Minimizing the Over-voltage Due to Long Cable between IGBT Inverter and Induction Motor	College of Engineering King Saud University	June 2004

G) Academic Supervision

- 1) Ph.D.: Power Electronics and Electrical Machines: 2 students
- 2) M.Sc: Power Electronics and Electrical Machines: 6 students

H) Publications

1) Recent Publications (Last five years)

1- A.F. Almarshoud, **A. I. Alolah**, and M. A. Abdel-halim, "Performance of Grid Connected Induction Generator under Naturally Commutated AC Voltage Controller", Electric Power Components and Systems, Vol.32 (7), 2004, pp.691-700.

2- A.F. Almarshoud, and **A. I. Alolah**, "A Novel PC-Based Firing Scheme For Static Converters Using High Level Language" Proc. of the IEEE International Conference on Electronics, Circuits and Systems (ICECS), Sharjah, UAE, December 2003.

3- A.F. Almarshoud, **A.I. Alolah**, and M. A. Abdel-halim, "Analysis and Operation of Non-Isolated Three-Phase Induction Generator Controlled by Symmetrical Angle Technique", Proc. of IEE International Conference on Computational Aspects and Their Applications in Electrical Engineering, Jordan, March 2004.

4- A.M. Alsalloum, **A.I. Alolah** and R.M. Hamouda, "Operation of Three-Phase Self-Excited Induction Generator Under Unbalanced Load", Proc. of IEE International Conference on Computational Aspects and Their Applications in Electrical Engineering, Jordan, March 2004.

5- A.F. Almarshoud, **A. I. Alolah**, and M. A. Abdel-halim, "Analysis and Operation of Non-Isolated Three-Phase Induction Generator Controlled by a Transistorized ac Converter", Proc. of the IEEE Aegean Conference on Electrical Machines and Power Electronics (Acemp), Istanbul, Turkey, May 2004.

6- 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.

7- 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", IEEE Third International Conference on Systems, Signals & Devices, March 2005 – Sousse, Tunisia.

8- M. E. Haque, A. A. Bokhari and **A. I. Alolah** "Simulink Modeling of the Problem Associated with Fast Switching PWM IGBT-Inverter Fed AC Motor Drive with Long Cable and Its Remedies", IEEE Third International Conference on Systems, Signals & Devices, March 2005 – Sousse, Tunisia.

9- A.F. Almarshoud and **A. I. Alolah** "A PC-Based Cost-Effective Three Phase Firing Circuit for Power Electronics Applications", 8th International Conference on Modeling and Simulation of Electric Machines, Converters and Systems (ELECTRIMACS 2005) April 17-20, 2005, Hammamet, Tunisia

2) Other Publications

I) Journals

(a) IEEE Transactions

1- **A.I. Alolah**, L. Hulley and W. Shepherd, " A Three Phase Neutral Point Clamped Inverter for Motor Control", IEEE Trans., Vol.PE-3(4), 1988, pp.399-405.

2- A.Kh. Aljabri and **A.I. Alolah**, "Limits on the Performance of Three Phase Self-Excited Induction Generator", IEEE Trans., Vol.EC-5(2), 1990, pp.350-356.

3- **A.I. Alolah** and M.A. Badr, " Starting of Three Phase Reluctance Motor Connected to Single Phase Supply", IEEE Trans., Vol.EC-7(2), 1992, pp.259-301.

4- Y.H. Rahim, **A.I. Alolah** and R.I. Al-Mudaiheem, "Performance of Single Phase Self-Excited Induction Generator", IEEE Trans., Vol.EC-8(3), 1993, pp.389-395.

5- M.A. Badr and **A.I. Alolah**, " Starting Transient of Three Phase Synchronous Motors Connected to a Single Phase Supply", IEEE Trans., Vol.EC-10(1), 1995, pp.48-55.

6- M.A. Badr, **A.I. Alolah** and M.A. Abdel-halim, " A Capacitor Start Three Phase Induction Motor ", IEEE Trans., Vol.EC-10(4), 1995, pp.675-680.

7- R.M. Hamouda, M.A. Badr and **A.I. Alolah**, " Effect of Torsional Dynamics on Salient Pole Synchronous Motor-Driven Compressors", IEEE Trans., Vol.EC-11(3), 1996, pp.531-538.

- 8- M.A. Badr, M.A. Abdel-halim and **A.I. Alolah**, "A Nonconventional Method for Fast Starting of Three Phase Wound Rotor Induction Motors", IEEE Trans., Vol.EC-11(4), 1996, pp.701-707.
- 9- M.A. Abdel-halim, M.A. Badr, and **A.I. Alolah**, "Smooth Starting of Slip Ring Induction Motors", IEEE Trans., Vol.EC-12(4), 1997, pp.317-322.
- 10- M.A. Badr, **A.I. Alolah** and A.F. Almarshood, "Transient Performance of Series Connected Three Phase Slip Ring Induction Motors", IEEE Trans., Vol.EC-13(4), 1998, pp.305-310.
- 11- 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.
- 12- 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.
- 13- **A.I. Alolah** and M.A. Alkanhal, "Optimization-Based Steady State Analysis of Three Phase Self-Excited Induction Generator", IEEE Trans., Vol.EC-15(1), 2000, pp.61-65.

(b) IEE Proceedings

- 14- A.Kh. Aljabri and **A.I. Alolah**, "Capacitance Requirements for Isolated Self-Excited Induction Generator", IEE Proc., Part B, Vol.137(3), 1990, pp.155-159.
- 15- **A.I. Alolah**, "Capacitance Requirements for Three Phase Self-Excited Reluctance Generators", IEE Proc., Part C, Vol.138(3), 1991, pp.193-198.
- 16- **A.I. Alolah**, "Steady State Operating Limits of Three Phase Self-Excited Reluctance Generators", IEE Proc., Part C, Vol.139(3), 1992, pp.261-268
- 17- M.A. Badr and **A.I. Alolah**, "Transient Analysis of Three Phase Reluctance Motor Fed from a Single Phase Supply", IEE Proc., Electric Power Applications, Vol.142(2), 1995, pp.104-112
- 18- 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.

(c) Other Journals

- 19- **A.I. Alolah** and A.M. Alsuwailem, "Static Starting Switch for Single Phase Induction Motor", International Journal of Electronics, Vol.67(1), 1989, pp.153-160.
- 20- **A.I. Alolah**, "Steady State Operation of Three Phase Reluctance Motor Fed from Single Phase Supply", International Institution of Engineers (India), Vol.70-PtEL(5), 1989, pp.157-161.
- 21- **A.I. Alolah** and M.S. Smiai, "Single Phase Firing Circuit for Variable Frequency-Distorted Voltage Phase Angle Control", The Arabian Journal for Science and Engineering (AJSE), Vol.15(2A), 1990, pp.183-189.
- 22- **A.I. Alolah** and M.S. Smiai, "A General Purpose Three Phase Firing Circuit for Phase Angle Control Applications", International Journal of Electronics, Vol.69(3), 1990, pp.393-402.
- 23- **A.I. Alolah**, "Static Power Conversion from Three Phase Self-Excited Induction and Reluctance Generators", Electric Power Systems Research, Vol.31, 1994, pp.111-118.
- 24- **A.I. Alolah**, "Steady State Analysis of Three Phase Self-Excited Reluctance Generators", European Transactions on Electric Power Engineering (ETEP), Germany, Vol.5(2), 1995, pp.133-138.
- 25- **A.I. Alolah**, "Speed Control of a Three Phase Induction Motor Fed from a Single Phase Supply", Journal of King Saud University, Engineering Sciences, Vol.(1), 1995, pp.109-123.
- 26- **A.I. Alolah** and M.A. Badr, "Effect of Machine and Balancer Parameters on the Pulling into Step of Three Phase Reluctance Motors Fed from a Single Phase Supply", European Transactions on Electric Power Engineering (ETEP), Germany, Vol.5(3), 1995, pp.207-214.

- 27- M. Abou-Elela and **A.I. Alolah**, "A Simple Correction Scheme for Phase and Sequence of Three Phase Firing Circuit in Phase Angle Control Applications", *International Journal of Electronics*, Vol.84(5), 1998, pp.549-559.
- 28- 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.
- 29- A.F. Almarshoud, **A. I. Alolah**, and M. A. Abdel-halim, "Performance of Grid Connected Induction Generator under Naturally Commutated AC Voltage Controller", *Electric Power Components and Systems*, Vol.32 (7), 2004, pp.691-700.

II) Conferences

(a) IEEE Conferences

- 1- Y.H. Rahim and **A.I. Alolah**, "Development in Electrical Machine Laboratory at King Saud University", *IEEE Melecon'89 Conf.*, Lisbon, Portugal, April 1989, pp.771-773.
- 2- Y.H. Rahim, **A.I. Alolah** and R.I. Al-Mudaiheem, "Performance of Single Phase Self-Excited Induction Generator", *IEEE PES Summer Meeting*, Seattle, USA, July 1992.
- 3- **A.I. Alolah**, "Balanced Operation of Three Phase Reluctance Motors Connected Single Phase Supplies", *IEEE Melecon'94 Conf.*, Antalya, Turkey, April 1994, pp.813-816.
- 4- **A.I. Alolah** and M.A. Badr, "Operation of Three Phase Synchronous Motors Fed from a Single Phase Supply", *IEEE Melecon'94 Conf.*, Antalya, Turkey, April 1994, pp.1257-1278.
- 5- M. Aou-Elela and **A.I. Alolah**, "A Novel Self-Adjusting Firing Circuit for Phase Angle Control Application", *IEEE Conf. on Advanced Technologies in I&M*, Hamamatsu, Japan, May 1994, pp.619-623.
- 6- M.A. Badr and **A.I. Alolah**, "Starting Transient of Three Phase Synchronous Motors Connected to a Single Phase Supply", *IEEE PES Summer Meeting*, San Francisco, USA, July 1994.
- 7- M.A. Badr, M.A. Abdel-halim and **A.I. Alolah**, "A Nonconventional Method for Fast Starting of Three Phase Wound Rotor Induction Motors", *IEEE PES Summer Meeting*, Denver, USA, July 1996.
- 8- **A.I. Alolah**, "Excitation of Synchronous Machines Using Induction Generators", *IEEE Int. Conf. on Electric Machines and Drives (IEMDC)*, Milwaukee, USA, May 1997, pp.429-431.
- 9- M.A. Badr, **A.I. Alolah** and A.F. Almarshood, "Transient Performance of Series Connected Three Phase Slip Ring Induction Motors", *IEEE PES Winter Meeting*, Tampa, USA, Feb. 1998.
- 10- R.M. Hamouda, M.A. Badr and **A.I. Alolah**, "Starting Transients of Three Phase Reluctance Motors as Affected by Torsional Dynamics", *IEEE PES Winter Meeting*, Tampa, USA, Feb. 1998.
- 11- K.F. Ali and **A.I. Alolah**, "A New Approach for the Analysis of Three Phase Self-Excited Induction Generators", *IEEE IEMDC Conf.*, Seattle, USA, May 1999, pp.342-344.
- 12- M.A. Badr, **A.I. Alolah** and A.F. Almarshood, "Transient Analysis of a Two Speed Synchronous Induction Motor", *IEEE IEMDC Conf.*, Seattle, USA, May 1999, pp.357-359.
- 13- A.F. Almarshoud, M. A. Abdel-halim, and **A. I. Alolah**, "Including Effects of Cross-saturation and Leakage Path Saturation Together in The Generalized Model of Three Phase Induction Machine", *Proc. of IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, Toronto, Canada, May 2001, 195-200.
- 14- M. A. Abdel-halim, A.F. Almarshoud and **A. I. Alolah**, "Control of Grid Connected Induction Generator Using Naturally Commutated AC Voltage Controller", *Proc. of IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, Toronto, Canada, May 2001, pp. 839-843.
- 15- **A.I. Alolah**, "Balanced Operation of Three Phase Synchronous Motors Connected to a Single Phase Supply", *IEEE IEMDC Conf.*, Cambridge, USA, June 2001.
- 16- A.F. Almarshoud, M. A. Abdel-halim, and **A. I. Alolah**, "Including Effects of Cross-saturation and Leakage Path Saturation Together in The Generalized Model of Three-Phase Induction Generator", *Proc. of the IEEE Aegean Conference on Electrical Machines and Power Electronics (Acemp)*, Kusadasi, Turkey, 27-29 June 2001,

pp 30-35.

17- A.F. Almarshoud, and **A. I. Alolah**, "A Novel PC-Based Firing Scheme For Static Converters Using High Level Language" Proc. of the IEEE International Conference on Electronics, Circuits and Systems (ICECS), Sharjah, UAE, December 2003.

18- A.F. Almarshoud, **A. I. Alolah**, and M. A. Abdel-halim, "Analysis and Operation of Non-Isolated Three-Phase Induction Generator Controlled by a Transistorized ac Converter", Proc. of the IEEE Aegean Conference on Electrical Machines and Power Electronics (Acemp), Istanbul, Turkey, May 2004.

19- 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.

(b) IEE Conferences

20- **A.I. Alolah**, L. Hulley and W. Shepherd, "A Three Phase Neutral Point Clamped Inverter for Motor Control", IEE 2nd Power Electronics and Variable Speed Drive Conf., Birmingham, England, 1986, pp.144-143.

21- **A.I. Alolah**, "A New Scheme for Speed Control of Three Phase Induction Motors Using Phase Angle-Controlled Single Phase Supply", IEE 6th Int. Conf. on Electrical Machines and Drives, Oxford, England, Sep. 1993, pp.144-148.

22- A.F. Almarshoud, **A.I. Alolah**, and M. A. Abdel-halim, "Analysis and Operation of Non-Isolated Three-Phase Induction Generator Controlled by Symmetrical Angle Technique", Proc. of IEE International Conference on Computational Aspects and Their Applications in Electrical Engineering, Jordan, March 2004.

23- A.M. Alsalloum, **A.I. Alolah** and R.M. Hamouda, "Operation of Three-Phase Self-Excited Induction Generator Under Unbalanced Load", Proc. of IEE International Conference on Computational Aspects and Their Applications in Electrical Engineering, Jordan, March 2004.

(c) Other Conferences

24- **A.I. Alolah**, L. Hulley and W. Shepherd, "A Neutral Point Clamped PWM Inverter", 20th UPEC Conf., Huddersfield, England, 1985, pp.200-203

25- **A.I. Alolah**, "A Proposal for Harmonic Elimination for HVDC Systems", IASTED Int. Conf. on High Technology in the Power Industry, Lugano, Switzerland, June 1987, pp.14-17.

26- **A.I. Alolah** and A.M. Alsuwailem, "Static Starting Switch for Single Phase Induction Motor", IASTED Int. Conf. on High Technology in the Power Industry, Lugano, Switzerland, June 1987, pp.45-48.

27- Y.H. Rahim, **A.I. Alolah** and R.I. Al-Mudaiheem, "Analysis of Variable Speed Single Phase Self-Excited Induction Generator", Proc. of the 3rd Saudi Engineering Conf., Riyadh, Saudi Arabia, Nov. 1991, pp.309-312.

28- **A.I. Alolah**, "A Simple Iterative Method for Steady State Analysis of Three Phase Self-Excited Induction Generator", International Conf. on Electrical Machines (ICEM), Istanbul, Turkey, 1998, pp.1550-1553.

29- **A.I. Alolah**, "Steady State Operation of Three Phase Synchronous Motor from a Single Phase Supply", ICEM Conf., Helsinki, Finland, August 2000, pp.1983-1985.