

Resume

Name: **Al-Kandari, Ahmad Mohammad**
Date and Place of Birth: **1954, Kuwait**
Mailing Address: **Public Authority for Applied Education
and Training (PAAET), Kuwait.
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Marital Status: **Married**
Nationality: **Kuwaiti**
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Post Secondary Education:

1. B.Sc. Electrical Engineering, Bradley University, Peoria, Illinois, USA, May 1977.
2. M.Sc. Electrical Engineering Systems, University of Toledo, Toledo, Ohio, USA, Feb.1982.
3. Ph.D. Electrical Engineering, Dalhousie University, Halifax, Nova Scotia, Canada, Feb.2001.

Honours and Rewards:

1. Kuwait Government Scholarship 1972 – 1977 for B.Sc.
2. Kuwait Government Scholarship 1979 – 1982 for M.Sc.
3. Kuwait Government Scholarship 1996 – 2001 for Ph.D.
4. **Hanafy M. Ismail and Ahmad M. Alkandari," Impact of using natural trees on the electric field reduction of Kuwait high voltage transmission systems", Kuwait Journal of Science and Engineering, Vol. 36(1B), pp. 131-145, 2009.**

(The above journal paper (10) got Kuwait Foundation for the Advancement of Sciences (KFAS) prize for the best research paper published in Kuwaiti refereed journal - Kuwait Journal of Science and Engineering, Vol. 36(1B), pp. 131-145, 2009).

5. **I am “ Prize Winner For Scientific Production For 2013 in Engineering Sciences” from Kuwait Foundation for the Advancement of Sciences (KFAS)**

Related Work Experience:

1. Assistant Teacher, Kuwait Institute for Applied Technology, June 1977 – Dec. 1978.
2. Teacher, Kuwait Institute for Applied Technology, Feb. 1982 – July 1986.
3. Teacher, College of Technological Studies, July 1986 – June 1988.

4. Lecturer, College of Technological Studies,
June 1988 – Feb. 2001.
5. Assistant Professor, College of Technological Studies,
Feb. 2001 – April 2008.
6. Associate Professor, College of Technological Studies,
May 2008 – now.

Present Occupation:

- ♦ **Associate Professor**
Electrical Engineering Technology Dept.
College of Technological Studies,
Public Authority for Applied Education and Training (PAAET), Kuwait.

Managerial Experience:

1. Manager: Supply and Construction Maintenance Dept.
Construction and Planning Sector
Public Authority for Applied Education and Training
(PAAET), Kuwait.
Sep. 1986 – Dec. 1987.
2. Manager: Projects Dept.
Construction and Planning Sector
Public Authority for Applied Education and Training
(PAAET), Kuwait.
Jan. 1988 – Dec. 1988.
3. Manager: Scholarship Dept.
Research and Applied Education Sector
Public Authority for Applied Education and Training
(PAAET), Kuwait.
Jan. 1989 – Jan. 1990.
4. Chairman: Electrical Engineering Technology Dept.
College of Technological Studies
Public Authority for Applied Education and Training
(PAAET), Kuwait.
March. 1992 – Nov. 1994
5. **Assistant Dean of Admission and Registration for Records and Information**
Deanship of Admission and Registration
Public Authority for Applied Education and Training
(PAAET), Kuwait
Sep.2009 – Jan. 2011

Teaching Experience:

The following courses are some of what I had taught:

1. Basic Electricity
2. Electric Circuits
3. Electrical Engineering Fundamentals (Kuwait University)
4. Electrical Measurements
5. Electrical Drawing
6. Machines
7. Transmission and Distribution of Electrical Energy
8. Electrical Protection
9. Electrical Installation
10. Field Training
11. Computers
12. Electrical Calculations
13. Fundamentals of Personal Computer (Kuwait University –CFW)
14. Technical Calculations (Basic Education College)
15. Industrial Safety (Basic Education College)
16. Probability & Statistics For Engineering & Science (Kuwait University)
17. Probability & Statistics For Business (Gulf University For Science & Technology)
18. Control
19. Advanced Engineering Mathematics (Kuwait University)
20. Advanced Statistics (Gulf University For Science & Technology)
21. College Algebra (Gulf University For Science & Technology)
22. Calculus (Gulf University For Science & Technology)
23. Business Statistics (Gulf University For Science & Technology)

Other Institutions:

I taught at:

1. **Kuwait University (KU)**
2. **Gulf University For Science And Technology (GUST)**
3. **Basic Education College**
4. **Dalhousie University**
5. **Kuwait University For Female (CFW)**

Research Interests:

1. Harmonics in Electrical Power Systems.
2. Distribution Networks for Electric Energy.
3. Fault Location and Electric Short Circuit in Electrical Networks.
4. Fuzzy Regression.
5. Short-Term Load Forecasting.
6. Power Electronics.
7. Control of Power Systems.
8. Genetic Programming

Professional Organizations Memberships: -

1. The Institute of Electrical and Electronics Engineers (IEEE) USA.
2. The Kuwaiti Engineers Society - Kuwait.
3. The Engineering Education Society -U.S.A.

Training Courses Taught:-

1. “Maintenance of Electric Motors”, For Kuwait National Petroleum Company (KNPC), 1995.
2. “Electrical Installations ”, Community Service and Continuing Education, Public Authority For Applied Education and Training, from 1984-1996.
3. “Electrical Installations, Machines, Measurements and Power Courses”, for Kuwait Navy, Coastal Guard and Air Force, from 1984 -1995.
4. “Electrical Installations and Maintenance”, Maintenance Department, Ministry of Islamic Affairs, Oct. 2001.
5. “Computer Programming in Projects Planning”, for Kuwait Municipality, May 2002.
6. “Report Writing & Quality Control for Electrical Instruments”, for Kuwait Ministry of Electricity & Water, Oct. – Dec.2002.
7. “Measurements & Instruments Maintenance”, for Kuwait Ministry of Electricity & Water, Jan. 2003.
8. “Relays & Control Circuits”, for Kuwait Ministry of Electricity & Water, March 2003.
9. “Fundamentals of PC”, for Kuwait Ministry of Health, February 2006.
10. “Fundamentals of PC”, for Kuwait Ministry of Health, September 2006.

Books:

1. A. Al-Kandari, “Electrical Installation”, in Arabic, Public Authority for Applied Education and Training (PAAET), Kuwait, 1994.
2. A. Al-Kandari, “Maintenance of Electrical Installation”, in Arabic, Public Authority for Applied Education and Training (PAAET), Kuwait, 1995.
3. A. Al-Kandari, “Maintenance of Electrical Home Appliances Part I”, in Arabic, Public Authority for Applied Education and Training (PAAET), Kuwait, 1996.
4. S. A. Soliman, A. M. Al-Kandari and M. Al-Mazidi, “Power Systems”, Translation to Arabic, Kuwait University Publications, Kuwait, 1996.
5. S. A. Soliman, A. M. Al-Kandari and S. M. Imbabi, “Electronic Instruments and Measurements”, Translation to Arabic, 2nd edition, ARA Publishers, Kuwait, 2003.

6. A. Al-Kandari and S. A. Soliman, "Transmission and Distribution of Electric Energy", in Arabic, 3rd. edition, ARA Publishers, Kuwait, 2007.
7. S. A. Soliman, and A. M. Al-Kandari, " **ELECTRICAL LOAD FORECASTING: MODELING AND MODEL CONSTRUCTION**" ISBN: **978-0-12-381543-9**, Elsevier Publishing, Butterworth-Heinemann, New York, NY, USA, 2010.
8. S. A. Soliman, and A. M. Al-Kandari, " **Electric Power Systems Harmonics - Identification and Measurements**", ISBN: **978-953-307-335-4**, InTech-Open Access Publisher, the link:
<http://www.intechopen.com/articles/show/title/electric-power-systems-harmonics-identification-and-measurements>

Publications:

Journals:

1. A. Al-Kandari, S. A. Soliman and K. El-Naggar, "Digital Dynamic Identification of Power Systems Sub-Harmonics Based on Least Absolute Value", Electric Power System Research Journal, Vol. 28, No. 2, pp. 99-104, 1993.
2. S. A. Soliman, A. M. Al-Kandari, K. El-Naggar and M. E. El-Hawary, "A New Dynamic Filter Based On Least Absolute Value Algorithm For On-Line Tracking Of Power System Harmonics", IEE Proceedings, Generation, Transmission and Distribution, Vol. 142, No. 1, pp. 37-44, 1995.
3. A. Al-Kandari, "Linear Programming Algorithm Applied to Power Systems Measurement For Frequency Relaying", The Journal of the University of Kuwait (Science), Vol. 22, No. 2, pp. 139-153, 1995.
4. S. A. Soliman, A. M. Mahdi, A. M. Al-Kandari and M. El-Arini, "Digital Measurement Of Symmetrical Components For Power System Protection", The Arabian Journal For Science And Engineering, Vol. 20, No. 2A, 1995.
5. A. M. Al-Kandari, S. A. Soliman, and M. El-Arini, "An estimation algorithm for an independent frequency load modeling in the presence of harmonics", The Arabian Journal For Science And Engineering, Vol. 22, No. 2B, 1997.
6. S. A. Soliman, A. M. Al-Kandari, S. Persaud, K. El-Naggar and M. E. El-Hawary, "Short-term load forecasting using weighted least absolute value filter", Electric Machines and Power Systems, Vol. 25, No.3, pp. 295-303, April, 1997.
7. S. A. Soliman, A. M. Al-Kandari and M. E. El-Hawary, "Time Domain Estimation Techniques for Harmonic Load Models", International Journal Of Electric Machines and Power Systems, Vol. 25, pp. 885-896, Oct., 1997

8. S. A. Soliman, A. M. Al-Kandari and M. E. El-Hawary, "Parameter identification of a separately excited DC motor for speed control", *Electric Power Systems Research*, Vol. 26, No.8, pp. 831-838, Oct. 1998.
9. S. A. Soliman, I. Helal, and A. M. Al-Kandari, "Fuzzy linear regression for measurement of harmonic components in a power system", *Electric Power Systems Research*, Vol. 50, No. 2, pp. 99-105, May, 1999.
10. S. A. Soliman, R. A. Alammari, A. M. Al-Kandari and M. E. El-Hawary, "A Demodulation Technique For Power System Local Frequency And Voltage Measurements", *Engineering Journal of the University of Qatar, Qatar*, Vol. 16, pp. 99-108, 2003.
11. A. M. Al-Kandari, S. A. Soliman and M. E. El-Hawary, "Fuzzy Short-Term Electric Load Forecasting", *International Journal Of Electrical Power & Energy Systems*, Vol. 26, pp. 111-122, 2004.
12. A. M. Al-Kandari, K. M. El-Naggar, "Recursive identification of harmonic loads in power systems", *International Journal Of Electrical Power & Energy Systems*, Vol. 28, pp. 531-536, 2006.
13. A. M. Al-Kandari, S. A. Soliman and R. A. Alammari, "Power quality analysis based on fuzzy estimation algorithm: Voltage flicker measurements", *International Journal Of Electrical Power & Energy Systems*, Vol. 28, pp. 723-728, 2006.
14. S. A. Soliman, A. M. Al-Kandari, "Electric annual peak load forecasting based on fuzzy systems", *Engineering Intelligent Systems*, Vol. 14, no. 3, pp. 169-176, September 2006.
15. A. M. Al-Kandari, K. M. El-Naggar, "A genetic-based algorithm for optimal estimation of input-output curve parameters of thermal power plants", *Electrical Engineering*, Vol. 28, pp. 531-536, 2006.
16. R. A. Alammari, A. M. Al-Kandari, S. A. Soliman and M. A. Mostafa, "Digital Frequency Relaying Based on $\alpha\beta$ Transformation: A Variable Frequency Model", *Transactions on Systems, Signals & Devices*, Vol. 2, No. 2, pp. 143-158, 2007.
17. A. M. Al-Kandari, S. A. Soliman, "Measurements of Power System Nominal Voltage, Frequency and Voltage Flicker Parameters", *International Journal of Applied Engineering Research*, Vol. 2, No. 4, pp. 721-735, 2007.
18. M. Gilany, A. Alkandari, J. Madou " A New Strategy for Determining Fault Zones in Distance Relays", *IEEE Transaction on Power Delivery*, Volume: 23, No. 4, pp. 1857-1863, Oct. 2008.
19. Ahmad M. Al-kandari, and Nabil A. Ahmed, "Electronically Switched Capacitor-fed Three-phase Induction Motor Operating from Single -phase supply", *Electric Power Components and Systems*, Volume 37, No. 6, pp. 612-628, 2009.

20. Hanafy M. Ismail and Ahmad M. Alkandari," Impact of using natural trees on the electric field reduction of Kuwait high voltage transmission systems", Kuwait Journal of Science and Engineering, Vol. 36(1B), pp. 131-145, 2009.
21. A. M. Al-Kandari, S. A. Soliman, "Measurement of a power system nominal voltage, frequency and voltage flicker parameters", International Journal of Electrical Power & Energy Systems, Volume 31, Issues 7-8, pp. 295-301, September 2009.
22. A.M. Al-kandari, S. A. Soliman, and J. Madouh, " Fuzzy Measurements of Symmetrical Components for Power System Control", Annals of Fuzzy Sets, Fuzzy Logic and Fuzzy Systems, Volume 1, issue 1, pp.67-78, February 2011.
23. Ahmad Al-Kandari, Mahmoud Gilany, and Jamal Madouh, "An accurate technique for locating faults by distance relays", International Journal of Electrical Power & Energy Systems, Volume 33, pp. 477-484, 2011.
24. Ahmad M. Alkandari, Soliman Abd-Elhady Soliman, and Mansour H. Abdel-Rahman, "Steady State Analysis of a Doubly Fed Induction Generator", Energy and Power Engineering, Volume 3, No. 4, September 2011
25. J. Madouh, A.M. Al-kandari, S. A. Soliman, and R. A. Alammari, "Hartly Transform for Symmetrical Components Measurement In A power System", Applied Mathematics and Computational Sciences, Volume 3, issue 2, pp.141-150, August- October 2011.
26. A.M. Al-kandari, J. Y. Madouh, M. E. El-Hawary, and S. A. Soliman, "Fuzzy Optimal Flow With Fuzzy Active And Reactive Power Genrations And Loads", Annals of Fuzzy Sets, Fuzzy Logic and Fuzzy Systems, Volume 1, issue 3, pp.183-199, October 2011.
27. Soliman Abd-Elhady, A. M. Al-Kandari, R.A. Alammari, "Linear Filter Algorithm with Clarke Transformation for Power System Frequency Estimation", Global Journal of Researches in Engineering: F, Electrical and Electronics Engineering, Volume 12, issue 1, Version 1, January 2012.
28. Jamal Madouh, Nabil A. Ahmed, Ahmad M. Al-kandari, "Advanced power conditioner using sinewave modulated buck-boost converter cascaded polarity changing inverter", International Journal of Electrical Power & Energy Systems, No. 43, pp. 280-289, 2012.
29. Ahmad M. Al-kandari, Jamal Y. Madouh, Soliman A. Soliman, and Rashid A. Alammari, "Park's Transformation for Electric Power Quality Recognition and Classification in Distribution Networks, International Journal of System Dynamics Applications, Volume 1, No. 2, pp. 60-79, April - June 2012.
30. Mahmoud Gilany, Ahmed Al-Kandari, and Bahaa Hassan, "Novel Algorithm for Estimating the Distance of Open-Conductor Faults in HV Transmission Lines", Journal of Energy and Power Engineering, Volume 6, No. 8, pp. 1301-1307, August 2012.

31. A.M. Alkandari, J. Y. Madouh, and Soliman. A. Soliman, "Fuzzy Economical Dispatch of All Thermal Power Systems; Transmission line losses are included", International Journal of Multidisciplinary Research and Advances in Engineering (IJMRAE), Vol. 5, No. I, pp.75-104, January 2013.
32. S. A. Soliman, R. A. Alammari, J. Madouh, and A.M. Alkandari, "Fuzzy Short-Term Electric Load Forecasting", International Journal of Multidisciplinary Research and Advances in Engineering (IJMRAE), Vol. 5, No. I, pp.105-124, January 2013.

Conferences:

1. A. Al-Kandari and S. A. Soliman, "An Algorithm for Estimating a Transmission Line Unsymmetrical Shunt Fault Location Based on Least Absolute Value Technique: Part I", AMSE (Modelling, Measurement and Control), A, Vol. 53, No.2, pp. 41-54, 1993.
2. M. El-Arini, S. A. Soliman and A. Al-Kandari, "A Line Outage Simulation and Voltage Determination Method for Contingency Evaluation", International AMSE Conference, Bahrain, Vol. 2, pp. 109-125, 1994.
3. S. A. Soliman, H. K. Temraz, M. E. El-Hawary and A. M. Al-Kandari, "Estimation of Power System Voltage and Frequency Using the Three-Phase Voltage Measurements and $\alpha\beta$ - Transformation", Seventh International Middle-East Power Systems Conference MEPCON'2000, Cairo, Egypt, Vol. 1, pp. 385-391, 2000.
4. S. A. Soliman, M. E. El-Hawary and A. M. Al-Kandari, "Hartly Transform for symmetrical components measurement in power systems", 8th.International Middle East Power Systems Conference, MEPCON 2001, Egypt, part 1, Vol 1, pp. 27-31, 2001.
5. S. A. Soliman, A. M. Al-Kandari and M. E. El-Hawary, "Power System Frequency Estimation Using Linear Kalman Filtering Algorithm and $\alpha\beta$ -Transformation: A Constant Frequency Model", International Power Engineering Conference 2001, IPEC'01, Singapore, pp. 127-133, 2001.
6. S. A. Soliman, M. A. Mostafa, M. E. El-Hawary and A. M. Al-Kandari, "Two Digital Filtering Algorithms for Fast Estimation of Symmetrical Components in a Power System: A Static Estimation Approach", 2001 Large Engineering Systems Conference on Power Engineering, LESCOPE'01, Halifax, Nova Scotia, Canada, pp. 125-130, 2001.
7. A. M. Al-Kandari and Tamer H. Abdelhamid, "A Sinusoidal PWM Control For Four-Quadrant Single-Phase Drive System", Eleventh Mediterranean Electrotechnical Conference, MELECON 2002, Cairo, Egypt, pp. 147-151, 2002.
8. A. M. Al-Kandari, S. A. Soliman and M. E. El-Hawary, "Fuzzy Systems Application to Electric Short-Term Load Forecasting: Part I Problem Formulation", 2003 Large Engineering Systems Conference on Power Engineering, LESCOPE'03, Montreal, Quebec, , Canada, pp. 125-130, 2003.

9. A. M. Al-Kandari, S. A. Soliman and M. E. El-Hawary, "Fuzzy Systems Application to Electric Short-Term Load Forecasting: Part II Computational Results", 2003 Large Engineering Systems Conference on Power Engineering, LESCOPE'03, Montreal, Quebec, , Canada, pp. 131-137, 2003.
10. Hanafy M. Ismail and Ahmad M. Al-Kandari, "Electric Field Reduction of Kuwait Transmission Systems Using Natural Trees", POWER AND ENERGY SYSTEMS, Proceedings of the 3rd IASTED International Conference, Marbella, Spain , pp. 335-340, 2003.
11. A. M. Al-Kandari, K. M. El-Naggar, "Time Domain Modeling and Identification of Nonlinear Loads Using Discrete Time-Filtering Estimator", 2003 Transmission and Distribution Conference and Exposition, United States Of America, Vol. 1, pp. 126-131, Sep., 2003.
12. A. M. Al-Kandari, S. A. Soliman and A. H. Mantaway, "Nonlinear Estimation Based On Simulated Annealing Optimization Technique", 4th International Engineering Conference, IEC, Mansoura University, Egypt, pp. B1-B6, 2004.
13. A. M. Al-Kandari, S. A. Soliman and R. A. Alammari, "Digital Measurements Of Symmetrical Components Of A Four-Phase Power System", 4th International Engineering Conference, IEC, Mansoura University, Egypt, pp. B27-B32, 2004.
14. A. M. Al-Kandari, S. A. Soliman and R. A. Alammari, "Digital Measurements Of Symmetrical Components Of A Multi-Phase Power System", 2004 Large Engineering Systems Conference on Power Engineering, LESCOPE'04, Halifax, Nova Scotia, Canada, pp. 179-185, 2004.
15. A. M. Al-Kandari, S. A. Soliman and M. E. El-Hawary, "Fuzzy Measurements Of Power System Symmetrical Components", 2004 Large Engineering Systems Conference on Power Engineering, LESCOPE'04, Halifax, Nova Scotia, Canada, pp. 186-190, 2004.
16. A. M. Al-Kandari, S. A. Soliman and M. A. Mostafa, "Digital Frequency Relaying Based On α - β Transformation And Linear Kalman Filter: A Variable Frequency Model", Third International Conference On Systems, Signals & Devices, SSD'05, Sousse, Tunisia, Vol. 1, 2005.
17. M. A. Mostafa, S. A. Soliman and A. M. Al-Kandari, "Linear Kalman Algorithm With α - β Transformation For Power System Frequency Estimation", Third International Conference On Systems, Signals & Devices, SSD'05, Sousse, Tunisia, Vol. 1, 2005.
18. Ahmad Al-Kandari, Mahmoud Gilany, and A. Shaltout, "PLC Controller Algorithm For Optimum Operation of Photovoltaic-Battery System", 2006 Large Engineering Systems Conference on Power Engineering, LESCOPE'06, Halifax, Nova Scotia, Canada, pp. 112-118, July 2006.

19. A. M. Al-Kandari, K. M. El-Naggar, "Non-Smooth Fuel Cost Function Parameters Estimation of Thermal Power Plants Using Genetic Algorithms", Third IASTED Asian Conference, Power And Energy Systems, Phuket, Thailand, pp. 348-353, April 2-4, 2007.
20. A. K. Al-Othman, Nabil A. Ahmed, A. M. Al-Kandari and H. K. Ebraheem, "Selective Harmonic Elimination of PWM AC/AC Voltage Controller Using Hybrid RGA-PS Approach", World Academy of Science, Engineering and Technology Conference WASET, Berlin, Germany, Vol. 23, pp. 140-146, August 2007.
21. Mahmoud Gilany and Ahmad Al-Kandari, "An Efficient Distance Relay Setting Strategy", Seventh IASTED International Conference, Power And Energy Systems, Palma De Mallorca, Spain, pp. 361-365, August 29-31, 2007.
22. A. M. Al-Kandari and K. M. El-Naggar, "A Dynamic Technique for Power System Oscillations Monitoring", 2007 Large Engineering Systems Conference on Power Engineering, LESCOPE'07, Montreal, Quebec, Canada, pp. 18- 23, October 2007.
23. A. M. Al-Kandari, J. Y. Madouh, S. A. Soliman and M. E. El-Hawary, "Fuzzy Economical Dispatch of All Thermal Power Systems", 7th International Conference on Electrical Engineering (ICEENG 2010), Military Technical College, Cairo, Egypt, May 25-27, 2010.
24. Ahmad M. Al-Kandari, Paul Manuel, and Indra Rajasingh, "Wiener Index of Certain Interconnection Networks", International Conference on Mathematics and Computer Science (ICMCS 2011), Loyola College, Chennai, India, January 7-8, 2011.
25. Ahmad M. Al-Kandari, Jamal Y. Madouh, Anwar A. Alnaqi, and Ahmed Sami, "The Smart Trouble Call System For Power Distribution Networks", 1st. International Conference on New Paradigma in Electronics and Information Technologies (PEIT'011), Alexandria, Egypt, October 9-12, 2011.
26. Ahmad M. Al-Kandari, Anwar A. Alnaqi, Ayman Ahmed Sami and Ahmed Sami, "Role Of Geographic Information System For Asset Management Information Risk Assessment In Electric Utilities", International Conference on Information Technology, System and Management (ICITSM 2012), Dubai, UAE, March 25-26, 2012.
27. Ahmad M. Al-Kandari, Ayman Ahmed Sami, Ahmed Sami, and Bader Alkandari, "Constraint Map Development For High Voltage Overhead Transmission Lines Congestion Management Deregulated Electricity", 3rd International Science, Technology And Engineering Conference (ISTE-C 2012), pp. 302-304, Dubai, UAE, December 13-15, 2012.
28. Ahmad M. Al-Kandari, Osama Alduaij, Ayman Ahmed Sami, and Ahmed Sami, "Proposed Business Process Inventory For Human Resource Asset Management", International Conference: SDI & SIM 2013, pp. 42-46, Skopje, FYROM, November 13-16, 2013.

29. Ahmad M. Al-Kandari, Osama Alduaij, Ahmed Sami, and Anwar Alnaki “Impact of Distributed Generations (DG) On The Market of Reactive Power Ancillary Service”, 3rd International Conference on Advanced Control Circuits and Systems (ACCS’013), Luxor, Egypt, 30 Nov. – 03 Dec. 2013.