

CURRICULUM VITAE

Amer Al-Hinai

PERSONAL INFORMATION

Amer Al-Hinai

Assistant Professor

Electrical and Computer Engineering

College of Engineering

Sultan Qaboos University

M: (+968) 95208895, Tel.: (+968) 24141356, Fax.: (+968) 24141356

P.O. Box 33, PC. 123 Al-Khouth

Sultanate of Oman

Email : hinai@squ.edu.om

EDUCATION AND EMPLOYMENT INFORMATION

EDUCATION:

- Ph. D. West Virginia University, USA, 2005
- M.Sc. West Virginia University, USA, 2000
- B.Eng. Sultan Qaboos University, Oman, 1997

CAREER RECORDS

WITH SULTAN QABOOS UNIVERSITY

- Assistant Professor of Electrical and Computer Engineering, since June 2005- present
- Lecture, Electrical and Computer Engineering, 2001- 2005
- Demonstrator, Electrical and Computer Engineering, 1998- 2001

WITH MASDAR INSTITUTE OF SCIENCE & TECHNOLOGY

- Visiting Professor of Electrical Engineering, Sep. 2012- present

WITH THE AUTHORITY OF ELECTRICITY REGULATION - OMAN

- Chairman, Authority of Electricity Regulation – Oman. May 2014- present
- Member, Authority of Electricity Regulation – Oman. Nov. 2011- April 2014

AWARDS AND RECOGNITION

1. *Recognition by SQU during the University Day 2014 for research & international award achievement in 2013.*
2. *Reception of the first prize for the technical competence of the paper "Adaptive Control of Grid Connected PV inverter for Maximum VA Utilization" presented at the 39th IECON, 10-13 November 2013, Vienna, Austria.*
3. *Recognition by SQU during the University Day 2013 for international award achievement in 2012.*
4. *Reception of the Award of "One of the Pioneers in the Engineering Practice in the Gulf", during the "15th Gulf Engineering Gathering" held in Bahrain 28-30/11/2011*
5. *Recognition as IEEE Senior Member, IEEE, 2011*
6. *Reception of Electrical Engineering Consultant Certificate, Oman Society of Engineering, 2010*
7. *Reception of Fulbright Research Scholarship, United States Council for the International Exchange of Scholars, 2008*
8. *Reception of full PhD scholarship, Sultan Qaboos University & West Virginia University, 2001-2005*
9. *Reception of full MSc scholarship, Sultan Qaboos University, 1999-2001*

TEACHING

With Masdar Institute,

- *EPE 503: Distributed Generation*
- *EPE 507: Power System Operation*
- *EPE 502: Dynamic Systems and Control*
- *FDN412: Applied Calculus*
- *FDN455: Introduction to Power Systems*
- *FDN456: Energy Conversion*

With SQU:

- *ECCE 6335: Special Topics in Power Engineering*
- *ECCE 5323: Power System Operation*
- *ECCE 4316: Power System Analysis II*
- *ECCE 4312: Power System Analysis I*
- *ECCE 3352: Electrical Technology*
- *ECCE 3016: Circuit Analysis II*
- *ECCE 3015: Electrical Engineering Fundamentals*

SERVICES

UNIVERSITY ADMINISTRATION AND COMMITTEES:

- *Electrical Engineering & Computer Science, MI: Accreditation & Curriculum Committee, 2014*
- *Electrical Engineering & Computer Science, MI: Students Admission Committee, 2014*
- *Sultan Qaboos University: Energy Saving Committee (Chairman, 2009-2010)*

- *College of Engineering: College of Engineering Board Member (2007-2008, 2010-2011)*
- *College of Engineering: Acting HoD, Electrical & Computer Engineering Dept (summer 2006)*
- *Electrical & Computer Eng. Dept: Human Recourse & Recruitment Committee (member & Chair 2009-2011)*
- *Electrical & Computer Eng. Dept: Student Advising Committee (2010-2011)*
- *Electrical & Computer Eng. Dept: Advisory Board Committee (2010-2011)*
- *Electrical & Computer Eng. Dept: Accreditation Curriculum and Timetabling Committee (2005-2008)*
- *Electrical & Computer Eng. Dept: HSE & Teaching Facilities Committee (2006-2007)*
- *Electrical & Computer Eng. Dept: Student Society and Social Activities Committee, (Chair, 2008-2010)*
- *Electrical & Computer Eng. Dept: Industrial outreach & Community Service Committee (2007-2008)*

SERVICE TO THE PUBLIC:

- *Authority of Electricity Regulation – Oman, Chairman (Since 2014-present)*
- *IEEE-Oman Section Chairman (Since 2014-present)*
- *IEEE-Oman Section Vice-Chair (Since 2012-2014)*
- *Authority of Electricity Regulation – Oman, Board member (Since 2011-present)*
- *IEEE-PES-Oman Chapter Vice- Chairman (Since 2010-present)*
- *IEEE-Oman Section Secretary (Since 2010-present)*
- *Mazoon Electricity Company, Jury member of Mazoon Studies Award (2010)*

PROFESSIONAL MEMBERSHIP

- *IEEE, Senior member (since 2011-present)*
- *IEEE, member (2008-2011)*
- *IEEE, Student member (2001-2005)*
- *IASTED, member (2006-2007)*

SCHOLARLY ACHIEVEMENTS

PUBLISHED REFEREED JOURNAL PAPERS

1. *K. Saleh, H. H. Zeineldin, A. Al-Hinai, E. El-Saadany, "A New Dual-Setting Characteristic for Directional Overcurrent Relays Considering Multiple Fault Locations" accepted for publication in IET Generation, Transmission & Distribution, 2015*
2. *K. Saleh, H. H. Zeineldin, A. Al-Hinai, E. El-Saadany, "Optimal Coordination of Directional Overcurrent Relays Using a New Time-Current-Voltage Characteristic" IEEE Transaction of Power Delivery, 2014, DOI: 10.1109/TPWRD.2014.2341666*
3. *M. H. Albadi, A. S. Al Hinai, A. H. Al-Badi, M. S. Al Riyami, S. M. Al Hinai, R. S Al Abri, "Measurements and Evaluation of Flicker in High Voltage Networks", Renewable Energy and Power Quality Journal (RE&PQJ) ISSN 2172-038 X, No.12, April 2014.*

4. H. Baluyan, B. Joshi, A. Al-Hinai, and W. Woon, "Novel Approach for Rooftop Detection using Support Vector Machine", *ISRN Machine Vision*, vol. 2013, Article ID 819768, 11 pages, 2013. DOI: 10.1155/2013/819768
5. A. Al-Hinai and A. Al-Badi, E. A. Feilat, and M. Albadi, "Efficiency Enhancements of Electric Power System and Economic Analysis- Practical Case Study", *International Journal of Thermal & Environmental Engineering, IJTEE*, Vol , no. 2, p183-190, 2013
6. M. Albadi, A. Al-Hinai, N. Al-Abri, R. Al-Sadairi, and Y. Al-Busafi, "Optimal allocation of solar PV systems in rural areas using genetic algorithms – case study", *International Journal of Sustainable Engineering*, p1-6, DOI:10.1080/19397038.2013.788684, 2013
7. A. Al-Hinai and A. Feliachi, "Multi-Agent Based Controllers for Distributed Generators", *Journal of Electrical Engineering, JEE*, Vol 12, no. 1, 2012
8. K. Ellithy, A. S. Al-Hinai, and A. H. Moosa, "Optimal Shunt Capacitors Allocation in Distribution Networks Using Genetic Algorithm- Practical Case Study", *International Journal of Innovations in Energy Systems and Power, IJIESP*, Vol 3, no. 1, p18-45, 2008
9. K. Ellithy, A. Gastli, S A I-Alawi, A. Al-Hinai and Z. Al Abri, "Voltage Stability Analysis of Muscat Power System During Summer Weather Conditions", *Journal of Science & Technology*, Vol. 5, p35-45, 2000.

RECENT CONFERENCE PROCEEDINGS

1. M. Klimontowicz, A. Al-Hinai, and J. Peng, "Decentralized Sliding Mode Control for Load Frequency Problem in Three – Area Power Systems", *8th IEEE-GCC Conference and Exhibition, Muscat, Oman*, 1-4 Feb. 2015
2. J. Peng, A. Al-Hinai, and H. Al-Riyami , "A Review of Reactive Compensation in the Main Interconnected System of Oman", *8th IEEE-GCC Conference and Exhibition, Muscat, Oman*, 1-4 Feb. 2015
3. Y. Al Jabri, N. Hosseinzadeh, R. Al-Abri, and A. Al-Hinai, "Voltage Stability Assessment of a Microgrid", *8th IEEE-GCC Conference and Exhibition, Muscat, Oman*, 1-4 Feb. 2015
4. Y. Al Shamli, N. Hosseinzadeh, H. Yousef, and A. Al-Hinai, "A Review of Concepts in Power System Stability", *8th IEEE-GCC Conference and Exhibition, Muscat, Oman*, 1-4 Feb. 2015
5. I. P. Nikolakakos, I. A. Al-Zyoud, H. H. Zeineldin, M. S. El-Moursi, and A. Al-Hinai, 'Enhancement of Islanded Droop-Controlled Microgrid Performance via Power Filter Design', *IEEE Power Engineering General Meeting, Washington, DC*, July 27-31, 2014
6. H. Al Yammahi, and A. Al-Hinai, "Real-Time Demand Response for Primary Frequency Regulation in Microgrids", *International Engineering Conference on Sustainability in Design and Innovation, Amman, Jordan*, May 13-15, 2014
7. A.H. Al-Badi, M.H. Albadi, and A. Al-Hinai, "Designing of Filter to Reduce Harmonic in Industrial Power Networks", *IEEE ENERGYCON 2014, Dubrovnik, Croatia*, May 13-16, 2014
8. I.A. Metwally, A. Al-Badi, A. Al-Hinai, M. Al-Mayasi, A. Al-Harhi, K. Al-Hashmi, and I. Al-Zaabi, "Reduction of Electric-Field Intensification and Hot-Spot Formation inside Cable Terminations", *17th IEEE Mediterranean Electrotechnical Conference, Beirut, Lebanon*, 13-16 April 2014

9. K. A. Saleh, H. H. Zeineldin, and A. Al-Hinai, " A Three-Phase Fault Currents Calculation Method Used For Protection Coordination Analysis ", IEEE Distribution & Transmission conference, Chicago, IL, April 13-17, 2014
10. M. Albadi, A. Al-Hinai, A. Al-Badi, M. Al-Reyami, S. Al-Hinai, and R. Al-Abri, "Measurements and Evaluation of Flicker in High Voltage Networks" International Conference on Renewable Energies and Power Quality (ICREPQ'14)', Córdoba (Spain) 8-10 April, 2014
11. H. Baluyan, B. Joshi, A. Al-Hinai, and W. Woon, "Automatic Rooftop Detection Using a Two-stage Classification", IEEE 16th International Conference on Computer Modelling and Simulation (UKSim2014), Cambridge University, London, UK, 26-28, March, 2014
12. J. Peng, A. Al-Hinai, H. Al-Riyami, and M. Al-Ismaili, "Investigating the Impact of Inter-Area Oscillations in Oman Transmission Grid", 9th GCC - CIGRE International Conference, Abu Dhabi, UAE, November 18-20, 2013.
13. M. Albadi, A. Al-Hinai, A. Al-Badi, M. Al-Reyami, S. Al-Hinai, and R. Al-Abri, "Measurements and Evaluation of Harmonics in HV Networks – Oman MIS Case Study", 7th IEEE-GCC Conference and Exhibition, Doha, Qatar, 17-20 November 2013
14. O. H. Abdalla, R. Al-Badwawi, H. Al-Hadi, H. Al-Riyami, A. Al-Nadabi, K. Karoui, A. Szekut, and A. Al-Hinai, "Small-Disturbance Stability of Oman/UAE Interconnected System", 7th IEEE-GCC Conference and Exhibition, Doha, Qatar, 17-20 November 2013
15. V. Sant, V. Khadkikar, W. Xiao, H. Zeineldin, and A. Al-Hinai, "Adaptive Control of Grid Connected Photovoltaic Inverter for Maximum VA Utilization" 39th Annual Conference of the IEEE Industrial Electronics (IECON 2013), Vienna, Austria, 10-13 Nov 2013 "Best Paper Award"

RECENT TECHNICAL REPORTS:

1. A. Al-Hinai, R. Pandi, and H. Al-Yammahi, "Intelligent Load Frequency Control Scheme for Distributed Generation" Progress report 1, MI, June 2014
2. A. Al-Hinai A. Al-Abri, M. Al-Qayudhi, & Y. Al-Shamli "Amal Steam Project Field Measurements & Harmonic Study", PDO, April 2012
3. A. Al-Hinai A. Al-Abri, M. Al-Qayudhi, Y. Al-Shamli, & H. Al-Nasseri "Amal Steam Project Electrical System and Harmonic Study", PDO, March 2012
4. A. Al-Hinai E. Feilat, M. Al-Badi, H. Al-Nasseri & A. Al-Badi, "PDO Power System Losses Optimization Study", PDO, January 2012
5. A. Al-Badi, A. Al-Hinai & M. Al-Badi, "Study of Installation of 1-phase transformers in specific locations of MJEC's network", MJEC, June 2011
6. A. Al-Badi, A. Al-Hinai & M. Al-Badi, "Effect of 220 kV Power line from Sur Power Station to Sur Grid Station on a buried gas pipeline", OETC, June 2011
7. A. Al-Hinai & A. Al-Badi, "Optimal VAR Compensation for Electrical Distribution Systems Using Particle Swarm Optimization, Application to SQUH Distribution Network", SQU, January 2011
8. A. Al-Hinai & E. Feilat, "Review of Harmonic Study of Kauther Depletion Compression Project", PDO, January 2011

9. E. Feilat, & A. Al-Hinai, "Technical Evaluation of Power System Analysis Software for PDO Applications", PDO, August 2010
10. A. Al-Hinai, A. Al-Abri & S. Al-Hinai, "Harmonic Analysis: Qarn Alarm Steam Project Electrical System and Harmonic Study" PDO, July 2010
11. A. Al-Hinai, & A. Al-Abri, "Short Circuit Analysis: Qarn Alarm Steam Project Electrical System and Harmonic Study" PDO, June 2010
12. A. Al-Hinai, E. Feilat, & S. Al-Hinai, "EDSA-Based AC Arc Flash Analysis Study of OXY 11-kV RMUs Network – Safah Field" Occidental of Oman, June 2010
13. A. Al-Hinai, H. Al-Nasseri & S. Al-Hinai, "Under-Frequency Load Shedding" Occidental of Oman, June 2010
14. A. Al-Hinai, H. Al-Nasseri, A. Al-Abri & S. Al-Hinai, "Load Flow, Short Circuit Analysis, Motor Starting, & Maximum Power Exchange of Inter-tie Safah-Jalal-Wadi Laithem" Occidental of Oman, June 2010
15. A. Al-Hinai, A. Al-Abri & S. Al-Hinai, "Power Flow Analysis: Qarn Alarm Steam Project Electrical System and Harmonic Study" PDO, May 2010
16. E. Feilat, & A. Al-Hinai, "Verification of Short Circuit Withstand Capability of VoltAmp 10MVA Power Transformer" VoltAmp, May 2010
17. A. Al-Hinai, & A. Al-Abri, "Harmonics Measurements at Center of Information System (CIS)" SQU, February 2010
18. A. Al-Hinai, H. Al-Nasseri & S. Al-Hinai, "Protection Settings for the Inter-tie Line between Safah-Jalal & Jalal-Wadi Laithem" Occidental of Oman, Mar 2010
19. A. Al-Hinai, & S. Al-Hinai, "Power Flow Analysis of Occidental of Oman Network" Occidental of Oman, January 2010
20. A. Al-Hinai, H. Al-Nasseri & S. Al-Hinai, "Under-Frequency Load Shedding for Occidental of Oman Network" Occidental of Oman, January 2010

CONFERENCE, FORUM, SHORT COURSE & WORKSHOP ATTENDANCE

Attended Training/Short Courses:

1. "First Aid Training", Target Training Services, Muscat, Oman, 2015
2. "How to Publish a Scientific Journal Article", Springer & MI, Abu Dhabi, UAE, 2013
3. "Cooperation for Energy Conservation in the Gulf Cooperation Council Countries", Chatham House, The Royal Institute of International Affairs, London, UK, 2013
4. "Better Regulations", Public Administration International, London, UK, 2012
5. "Smart Metering Lessons Learned", PES General Meeting, Detroit, USA, 2011
6. "Smart Distribution Systems", PES General Meeting, Detroit, USA, 2011
7. "Power System Quality", SQU, Oman, 2011
8. "ETAP Power System Engineering Workshop", AlKhobar, Saudi Arabia, 2010
9. "Reliability Centered Maintenance", Muscat, Oman, 2010
10. "IEEE Technical English Program Workshop" Abu Dhabi, UAE, 2010
11. "ETAP 101 Power System Analysis & Operation", Dubai, UAE, 2010
12. "Result Based Management & Technical Cooperation Project Planning & Formulation", Muscat, Oman, 2009
13. "Paladin/DesignBase Master Training" EDSA, San Diego, USA, October 2006

14. *"Workshop on WebCT", SQU, Muscat, Oman, August 2005*
15. *"Instructional Skills" SQU, Muscat, Oman, August-November 2005*
16. *"Energy Storage Technologies for Distributed Energy Resources and other Electric Power Systems", NETL, Morgantown, WV, Aug. 2003*
17. *"Advanced Fuel Cell Power Conditioning Systems Workshop", Morgantown, WV, March. 2002*
18. *"The electric utility in transition background: Critical Issues and strategic responses", Morgantown, WV, May 9-10, 2001*

FUNDING GRANT AND CONTRACT SUPPORT

Grants:

1. *Intelligent Load Frequency Control Scheme for Distributed Generation, MI*
2. *Optimal VAR Compensation for Electrical Distribution Systems Using Particle Swarm Optimization, Application to SQUH Distribution Network, SQU*
3. *Conversion Investigation of Omani Distribution Overhead Power Lines to Underground Cables, TRC*
4. *Enterprises Transition to Smart Grid in Oman, TRC*

Contracts & Support Services:

1. *Harmonic Analysis & Field Measurements of Amal Steam Project, PDO*
2. *Amal Steam Project Electrical System and Harmonic Study, PDO*
3. *PDO Power System Electrical Losses Optimization Study, PDO*
4. *Study of Installation of 1-Phase Transformers in Specific Locations of MJEC's Network, MJEC*
5. *Effect of 220 kV Power line from Sur Power Station to Sur Grid Station on a buried gas pipeline, OETC*
6. *Energy Saving Distribution Board, IIC & NEI*
7. *Qarn Alam Steam Project Electrical System and Harmonic Study, PDO*
8. *Analysis & Setting of Protective Devices at Selected Distribution Feeders in Muscat Electricity*
9. *Power System Study for Block 9 Electrical Power Network, Occidental of Oman*
10. *Kauther Phase II: Harmonics Study, PDO*
11. *Power System Study for two Additional Solar Turbines in Safah Field, Occidental of Oman*
12. *Saih Rawl Depletion Compression Project Harmonic Study, PDO*
13. *Stray Current Study: Reality Check & Implementation Stage, PDO*
14. *Power System Study for Occidental of Oman Power Network, Occidental of Oman*
15. *Electrical Energy Saving Study for Sultan Qaboos University Hospital, Financial Affairs, SQU*
16. *Evaluation of Kauther Phase II Harmonic Model/Study, PDO*
17. *Short Circuit Calculation of VoltAmp10MVA Power Transformer, VoltAmp*
18. *Technical Evaluation of Power System Analysis Software for PDO Applications, PDO*

19. *Harmonics Measurements at SQU Computer Building (Computer Information System), SQU*
20. *Harmonics Measurements: SRDC Project, PDO*
21. *Under-Frequency Relays Settings of Occidental of Oman Power System, Occidental of Oman*
22. *Electromagnetic Field Measurements, AER Oman*
23. *Harmonics Measurements at Mina Al Fahal Computer Building (Main LV Switchboard), PDO*
24. *Customer Satisfaction Survey for Majan Electricity Company, ITEC*
25. *APT Transient Voltage Surge Suppressor (TVSS) Test, PDO*
26. *Power System Study for Occidental of Oman Power Grid, Occidental of Oman*

Delivered Short courses:

1. *"Electrical Power System Modeling & Analysis", SQU, March 21-23. 2011*
2. *"Electrical Engineering Principles and Energy Saving", Muscat, November 1-3, 2010*
3. *"Electrical Power System Modeling & Analysis", SQU, June 27-29. 2010*
4. *"Electrical Fault Analysis", Mazoon Electricity Company, October 5-7, 2009*
5. *"Fundamental of Electrical Engineering and Circuit Breakers", GPDC, March 8-9, 2009*
6. *"Electrical Engineering Principles and Energy Saving", Muscat, May 17-19, 2008*
7. *"Electrical Engineering Principles for non-Electrical Engineers", SQU, August 27-29, 2007.*
8. *"Power Systems Operation & Control", SQU, August 26-28, 2006*
9. *"Electrical Engineering Principles for non-Electrical Engineers", SQU, May 29-31, 2006.*