**Prof. WARSAME H. ALI**
Department of Electrical and Computer Engineering
Roy G. Perry – College of Engineering
Prairie View A&M University, PO Box 519, MS 2520;
Prairie View TX 77446
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## PROFESSIONAL PREPARATION

| | | |
|---|---|---|
| King Saud University, Saudi Arabia | Electrical Engineering | B.S.E.E., 1986 |
| Prairie View A&M University, TX | General Engineering | M.S.E.E, 1988 |
| University of Houston, TX | Electrical Engineering | Ph.D., 2004 |

## APPOINTMENTS

| | | |
|---|---|---|
| 1989 – 2004 | : | Lecturer, Department of ECE, Prairie View A&M University, Prairie View, TX |
| 2004 – 2010 | : | Assistant Professor, Department of ECE, Prairie View A&M University, Prairie View, TX. |
| 2010 – Present: | | Assistant Professor, Department of ECE, Prairie View A&M University, Prairie View, TX. |
| 2007 – Present : | | Undergraduate Program Coordinator of Electrical & Computer Engineering Department |
| 9/08 - Present | | **Director**, Summer Engineering Education Camp. |
| 6/06-8/06 | | **Faculty Fellow**, Texas Instrument |
| 6/05-8/05 | | **Faculty Fellow**, NASA at Glenn Research Center |

## INDUSTRIAL EXPERIENCE

| | |
|---|---|
| 1986 | Saudi Consulting House |
| 6/06-8/06 | NASA at Glenn Research Center |
| 6/06-8/06 | Texas Instrument |

## MANAGEMENT EXPERIENCE

| | |
|---|---|
| 2008-Present | Summer Engineering Education Camp Director |
| 2009-2011 | Managing Engineering Education Workshop for High School Math and Science |
| 2009-2011 | Managing Engineering Education Workshop for High School Counselors |
| 2009-Present | Design Project |

## FIVE RELATED PUBLICATIONS

1- Babajide Kareem, Warsame Ali, Dhadesugoor Vaman, John Fuller, Penrose Cofie, "Dynamic Movement of Reference Nodes for Improved Tracking Accuracy of Indoor Situational Awareness Systems", International Congress for Global Science and Technology (ICGST) International Conference on Computer Science and Engineering, CSE-Dubai-12". July 16- 18, 2012, Dubai, UAE.

2- J. Zhang, Y. Zhang, W. Ali, and L. S. Shieh, "Linearization modeling for non-smooth dynamical systems with approximated scalar sign function," *The 50th IEEE Conf. on Decision and Control*, pp. 5205-5210, 2011.

3- W. Ali, Y. Zhang, P. Cofie, J. Zhang, and D. Vaman, "Digital controller design for analog MIMO systems with multiple I/O delays," *The 24th Chinese Control and Decision Conference*, pp. 39- 44, 2012.

4- Hamid Nejatiy, Ahmad Beiramiz, and Warsame H. Ali, "Design, Implementation, and Variability Analysis of the Zigzag Map for Truly Random Number Generation", Analog integrated circuits and signal processing (ALOG). Accepted to be Published July 2012.

5- Augustine Ajuzie, John Fuller, Yangpeng Zhang, Warsame Ali, Jian Zhang, "Network-Induced Delay Compensation with Digital Redesigned PAM/PWM Controller", 2012 International Conference on Power Systems Operation and Planning, January 15-19, 2012 Jomo Kenyatta University of Agriculture and Technology Nairobi, Kenya.

6- Warsame H. Ali, Penrose S. Cofie, Jian Zhang, Dhadesugoor R. Vaman, "Digital Cascaded Controller Design for MIMO Analog Systems with Multiple I/O Delays", 2012 International Conference on Power Systems Operation and Planning, January 15-19, 2012 Jomo Kenyatta University of Agriculture and Technology Nairobi, Kenya.

7- Sudip Mondal, Warsame Ali and Khaled N Salama, "A Novel Approach for K-Best MIMO Detection and itsVLSI Implementation", 2008 IEEE International Symposium on Circuits and Systems.(Accepted)

8- Warsame H. Ali, Penrose Cofie, Charlie Tolliver, Cajetan Akujuobi, and L. Shieh, "Design and Digital Implementation of PID Controller for Nonlinear Motors", ASEE-GSW Annual Conference , The University of Texas - Pan American March 28 - 30, 2007.

9- Ali, W.H., Y.P. Zhang, C. M. Akujuobi, C. L. Tolliver, and L. S. Shieh, "DSP- based controller design for the PMDC motor", *International Journal of Modeling and Simulation*, 2004,Vol. 26, No. 2,2006, pp. 2337-2354.

10- Zhang, Y. P., C. M. Akujuobi, W. H. Ali, , C. L.Tolliver ,and L. S. Shieh, ,"Load disturbance resistance speed controller design for PMSM", *IEEE Trans. On Industrial Electronics*, Vol. 53, No. 4, 2006, pp 1198-1208.

11- Zhang, Y.P., L.S. Shieh, C. M. Akujuobi and W.H. Ali, "Digital PID controller design for delayed multivariable systems", *Asian Journal of Control*, Vol. 6, No. 4, 2004, pp- 483-495.

**FIVE OTHER SIGNIFICANT PUBLICATIONS**

1. Jian Zhang,Yongpeng Zhang, Warsame Ali, Leang-san Shieh " Linearization Modeling for Non-smooth Dynamical Systems with Approximated Scalar Sign Function", IEEE Control systems Society Conference Management System 2011 (Accepted)

2. Cajetan Akujuobi, Emad Awada, Mathew Sadiku, and Warsame Ali, "Wavelet-Based Differential Nonlinearity Testing of Mixed Signal System ADC's. IEEE 2007.

3. Franklin, B. E., C. M. Akujuobi,W. H. Ali, "ADC automated testing using Labview software", *proceeding of the 2004 American Society for Engineering Education* Annual *Conference and exposition Copyright, American Society for Engineering Education*, 2004, Salt Lake, UT.

4. Ali, W., Biney, P., Fuller, J., "Real Hands-On Experience for Freshman Students", E&A Symposium, Prairie View A&M University, April 1996.

5. Comparison of Capabilities of the workbench and Pspice in the Implementation of Laboratory Type Circuit Projects", E&A Symposium, Prairie View A&M University, 1997.

**FUNDED RESEARCH PROJECTS AS PI/CO-PI/RESERCHER/COORDINATOR**

1. "Modeling and Design of Robust Scalable Network Architecture for QoS Assured Multi-Service", **Co-P.I**., Funding agency: **NSF**, Funding amount: **$992,706**. Funding period: September 1, 2009 through August 31, 2012.

2. "Climbing Assistance", **P.I.**, Funding agency: **Clarkson Co.**, Funding amount: **$20,000**. Funding  period: August 10, 2011 through August  30, 2012.

3. "Hiker Mobility", **P.I.**, Funding agency: **Clarkson Co.**, Funding amount: **$20,000**. Funding  period: October 1, 2010 through May 30, 2011

4. "Urban Surveillance", **P.I.**, Funding agency: **Clarkson Co.**, Funding amount: **$20,000**. Funding  period: October 1, 2009 through December 30, 2010.

5. "Increasing Engineering Students Using Summer Program Approach", **P.I.**, Funding agency:  **THECB**: Funding amount:  **$18,000**   Funding period: May, 2010 through December 30, 2010.

6. "Integrating ECE Curriculum with Analog Testing Environment", **P.I.**, Funding agency: **Texas Instrument**, Funding amount: **$104,000,** Funding period: August 01, 2009 through August 2010.

7. "Integrated Methods for Increasing Enrollment and Retention of Engineering Students" **P.I.**, Funding agency: **Texas Workforce Commission**, Funding amount: **$318,738**. Funding period:  January 1, 2009 through December 2010.

8. "Development of Energy Laboratory in Electrical and Computer Engineering, **Co-P.I.**, Funding agency: USAF, Funding amount: **$81,700**, Funding period: September 30, 2009 through September 30, 2010.

9. "Increasing Engineering Students Using Summer Program Approach", **P.I.**, Funding Agency: **THECB**: Funding amount:  **$11,000**   Funding period: May, 2009 through August 31, 2009.

10. "Renewable Energy Camp", **CO-P.I.**, Funding agency: **Texas Workforce Commission**, Funding amount: **$29,470**, Funding period:  May1, 2009 through October 1, 2009.

11. "Integrating ECE Curriculum with Analog Testing Environment", **P.I.**, Funding Agency: **Texas Instrument**:  Funding amount: **$95,000,** Funding period: August 01, 2008 through August 2009.

12. "Covert In-Building Reconnaissance", **P.I.,** Funding Agency: **Clarkson Co**., Funding amount: **$32,822,** Funding Period: September 30, 2009 through September 30, 2009.

13. "Increasing Engineering Students Using Summer Program Approach", **P.I.**, Funding agency: **THECB**, Funding amount: **$19,000**   Funding period: January 25, 2008 Through August 31, 2008.

14. "Integrating ECE Curriculum with Analog Testing Environment", **CO-P.I.**, Funding agency: **Texas Instrument**, Funding amount: **$95,000,** Funding period: August 01, 2007 through August 2008.

15. "Sensor and Detector Application to Nuclear Materials", **Researcher**, Funding agency: Department of Energy/NNSA**,** Funding amount: **$2,087,250**, Funding period:  October 2005 through September 2010.

16. "Enhancing the Electrical Engineering PHD Program", **Power Laboratory Equipment Coordinator**, Funding amount: **$250,000,** Funding period: Funding period: 2009 through 2010.

**ANNUALLY AND QUARTERLY TECHNICAL REPORTS FOR FUNDING PROJECTS**

1. "Hiker Mobilty", **Final report,** Funding agency: Clarkson Co. September 13, 2011.
2. "Urban Surveillance", **Final report,** Funding agency: Clarkson Co. September 13, 2010.
3. "Integrated Methods for Increasing Enrollment and Retention of Engineering Students", **Quarterly report,** Funding agency: Texas Workforce Commission (TWC), July 10, 2010.
4. "Integrated Methods for Increasing Enrollment and Retention of Engineering Students", **Quarterly report,** Funding agency: Texas Workforce Commission (TWC), April 10, 2010.
5. "Integrated Methods for Increasing Enrollment and Retention of Engineering Students", **Quarterly report,** Funding agency: Texas Workforce Commission (TWC), January 10, 2010.
6. "Modeling and Design of Robust Scalable Network Architecture for QoS Assured Multi-Service", **Annual report**, Task #4. Funding agency: NSF, June 2010.
7. "Covert In-Building Reconnaissance", **Final report**, Funding agency: Clarkson Co. September 13, 2009.
8. "Increasing Engineering Students Using Summer Program Approach", **Final report,** Funding agency: **THECB**, September 2009.
9. "Integrated Methods for Increasing Enrollment and Retention of Engineering Students", **Quarterly report,** Funding agency: Texas Workforce Commission (TWC), October 10, 2009.
10. "Integrated Methods for Increasing Enrollment and Retention of Engineering Students", **Quarterly report,** Funding agency: Texas Workforce Commission (TWC), October 10, 2009.
11. "Integrated Methods for Increasing Enrollment and Retention of Engineering Students", **Quarterly report,** Texas Workforce Commission (TWC), April 10, 2009.
12. "Increasing Engineering Students Using Summer Program Approach", **Final report,** Funding agency: **THECB**, September 2008

**COMPLETED PROJECTS**
1. 2008 Ali, Attia " Increasing Engineering students enrollment and Retention through Summer Program" sponsored by Texas Higher Education Coordinating Board
2. 2005 Ali, W.H, Santiago, W., and Beach, R. F. "Soft Switching Snubber for PWM Inverter", NASA Summer Report @ Glenn Research Center.
3. 1996 – 1997 Aircraft Ice Detection; Testing and evaluation of various sensors for detection of ice on aircraft wings Funded by the Federal Aviation administration.
4. 1997 –1998 Using the DSP chip for voice recognition.  Use of the computer with DSP interface circuitry to recognize voice commands and issue appropriate control signals.  Funded by NASA.(1997-2000) Development and Demonstration of a highly efficient hybrid vehicle with better than zero emissions.
5. (2000 – 2001) Developing software to test different equipment in different  stations
6. (2001- 2002) Army Research Laboratory – Collaborate Technical Alliance
7. **(**2001-2001)Army Research Laboratory – Collaborate Technical Alliance
8. Developing Mixed Signal Lab curriculum With Dr. Cajetan Akujuobi Sponsored By TI
9. (2001-2002) Annual Report for the Collaborative Technology Alliance on Power and Energy group

10. (2002-2003) Annual Report for the Collaborative Technology Alliance on Power and Energy group.

## WORKSHOPS/SEMINARS/SHORT COURSES

1. (Jan. 24-25, 2005) Workshop for Historically Black Colleges and Universities and Minority Serving Institutions: Home Land Security at Wilberforce,University, Dayton, Ohio.
2. (July 9-13, 2003) NSF-Sponsored Faculty Summer Workshop Teaching of First Courses in Power Electronics and Electronic Drives. University Minnesota, Minneapolis, Minnesota.
3. (April 29-May 12003) Collaborative Technology Alliance conferences held at Inn and Conference Center University of Maryland University College, Adelphi, Maryland
4. (Jan-5-7, 2003) NSF/ONR Faculty Workshop on Teaching of First Courses in Power Electronics and Electronic Drives. Organizes by University of Minnesota held at Arizona State University

## HONORS AND AWARDS

1. 1998: Outstanding research instructor
2. 1997: Deans award of teaching of teaching Computer Application.
3. 1986 Prairie View A&M University Competitive Award for being an outstanding Student.
4. 1988 Certificate of being an Outstanding Graduate Student at Prairie View A&M University.
5. 1989 Certificate of Appreciation from NTA Research Program.
6. 1998 Certificate of outstanding research coordinator summer 1998

## SYNERGISTIC and EDUCATIONAL ACTIVITIES

1. Program Coordinator, to coordinate electrical and Computer engineering students
2. Faculty advisor, the purpose is to advise undergraduate students of Electrical Engineering.
3. Served on Department Scholarship Committee
4. Development of electronics labs and mixed signals labs.
5. Auditing ECE students toward their degree plan
6. Working with the head department to comply with ABET Accreditation

## COLLABORATORS WITHIN THE LAST 48 MONTHS
Prof. L.S shieh, University of Houston.TX; Prof. Khalid Salama, Rensselaer Polytechnic Institute, Troy, New York, ;Prof. Massoud. Rice University, Houston, TX;        Prof. Karen Butler, Prof. Toliyat, Prof. Ehsani, Texas A&M University,TX;Prof. Cajetan Akujuobi, Prof. John Attia, Prof. Tolliver, Prof. Vaman, Prairie View A&M University, TX.

Students with Theses/Dissertations directed to completion in the last 3 years

| Name of Student | Year | Name of Student | Year |
|---|---|---|---|
| Jian Zhang  (MS) | 2009 | Jian Zhang   (PHD) | Present |
| Samson Olewe (MS) | 2012 | Mamatha (PHD) | Present |
| Babjide  Kareem (MS) | 2012 | Vasileios Galanis (MS) | Present |
| Samson Olewe (MS) | 2012 | | |

Students with Graduate Research Projects directed to completion in the last 3 years* (attach a sheet if necessary):

| Name of Student | Year | Name of Student | Year |
|---|---|---|---|
| Sean Harris (MS) | 2008 | Priyanka Akula | Present |

Graduate student committees served on in the last 3 years* (attach a sheet if necessary):

| Name of Student | Year | Name of Student | Year |
|---|---|---|---|
| Meng T. Tiang (MS) | 2007 | | |
| Nana Ampah (PHD) | 2008 | Tekena (MS) | Present |
| Shubha Kyatsandra (MS) | 2009 | Mohamed Ayub (MS) | Present |
| Emad Awad (PHD) | 2010 | Mahamadou Tembely(MS) | Present |
| Golam Faruk (PHD) | 2011 | Richard Gnahoua(MS) | Present |
| Dhrabehan Kalaris (MS) | 2011 | | |
| Niraj Shakarmi (PHD) | 2012 | | |

## Services to Profession
- Reviewed NSF SBIR/STTR Phase I/Phase II   proposals
- Invited to present paper to NASA- GLENN Research Center
- Invited to present Mixed Signal Testing at TAMU workshop (Summer 2010)

## *SCIENTIFIC &PROFESSIONALSOCIETIES*

- ***Associate Membership Sigma Xi The Scientific Research Society.***
- American Society of Engineering Education (ASEE)

## SOFTWARE USAGE:
- C/C++
- Fortran
- Visual Basic
- Matlab/ Simulink
- Pspice
- Multisim WorkBench
- Dspace
- labView and Ni-Elvis
- Infinity Project

## COMMUNITY SERVICES:
**Organizations founded**:
- Co-Founder and President of Somali Community Development Association of Greater Houston established in 1997
- Co-Founder and President of Multiethnic Community Center of Greater Houston established in 2003

## SPOKEN AND WRITTEN LANGUAGES
- English
- Arabic
- Somali