

Graham Thomas

College of Science, Engineering and Technology
Department of Engineering
Adjunct Professor, January 2006
Assistant Professor, September 2006
Faculty in Residence (FIR), Urban Academic Village (UAV), August 2011
Zero years towards tenure
Assistant Professor
Associate Professor, September 2011
Tenured Associate Professor
College of Science, Engineering and Technology
Department of Engineering

Education

01/2002 – 06/2006 New Mexico State University Las Cruces, NM
Ph.D. Electrical/Computer Engineering.
08/1999 – 12/2001 New Mexico State University Las Cruces, NM
M.S., Electrical Engineering.
08/1996 – 06/1999 New Mexico State University Las Cruces, NM
B.S., Electrical Engineering; Minor: Mathematics

Special Training Program

08/1993 – 05/1994 New Mexico State University, Las Cruces, NM
Certificate in Curriculum & Instruction

Teaching Interests

Electrical and Computer Engineering courses

Research Interests

Cross curriculum discipline research and integration
Effective teaching methods
Electrical Engineering – an emphasis on alternative sources of energy, globalization of engineering, integrated circuit design, digital signal processing and application, Microprocessor/controller design and use in embedded systems.
Engineering Education – special emphasis on integration of disciplines, primarily business management; curriculum development and instruction in engineering management.

Work Experience

09/2006 – Present. Department of Engineering Technology, TSU TX
Associate Professor
Teach undergraduate courses in Electronics Engineering Technology
01/2006 – 05/2006 Department of Management, TSU TX
Adjunct Professor
05/2005 – 08/2005 Freescale Semiconductor Inc. Tempe, Arizona

Analog Circuit Design Engineer

05/2004 – 8/2004 Freescale Semiconductor Inc. Austin, Texas

Digital Logic Circuit Design Engineer

08/2002 – 12/2003 Electrical Engineering Department, NMSU NM

Laboratory Instructor and Graduate Assistant

01/2002 – 05/2002 Mathematics Department, NMSU NM

Math Instructor/tutor

12/1999 – 12/2001 Syndetix Inc. Las Cruces, NM

Digital and Analog Circuit Design Engineer

09/1986-06/1996 St. Joseph Secondary School, St. Joseph, Dominica

Chemistry and General Science Teacher

Professional Service Activities

Department's Electronic Engineering Technology ABET accreditation Coordinator (2012 to present)

REAP high school student mention (2013 & 2014)

Department's SACS assessment Coordinator (2008 to present)

Coordinator (summer 2008 & 2009)-TSU-UNITE/JETS pre-engineering summer college program

Reviewer – Journal of Science, Technology, Engineering and Mathematics (JSTEM) Education, 2009, 2010, 2011, 2012, 2013, 2014

Reviewer -- Institute of Electrical and Electronics Engineers, fall 2007

Reviewer – American Society for Engineering Education, spring 2007, 2008, 2009, 2010, 2013, 2014

Faculty Advisor – National Society of Black Engineers – TSU Chapter (2006 – 2014)

Professional Organization Affiliations

Member, American Society of Engineering Education (ASEE), January 2006 to present

Member, Institute of Electrical and Electronics Engineering, IEEE, January 2006 to present

Member, National Society of Black Engineers (NSBE)

Honors & Awards

Summer undergraduate research program (SURP) award, COSET, Texas Southern University – 2013/2014/2015

Distinguished Advisement/Mentoring Award, COSET, Texas Southern University -- 2015

Boeing Company Research/Engineering Support Grant ---2014

REAP/UNITE summer research grant – 2013 and 2014

NASA Summer of Innovation grant -- 2011

Nuclear Regulatory Commission Faculty Research Participation Program Fellowship Award

Distinguished Black Scholar, 2001, 2002, 2003 (NMSU)

National Society of Black Engineers (NSBE), Board of Cooperate Affiliate Scholarship – 2005

Professional Grant Writing Activities (submitted or under review)

- Thurgood Marshall College Fund - 2014
- Boeing company Inc. (2013) Engineering development and support (\$63,457.00, funded)
- REAP (2013) high school students mentorship grant (\$3,900, funded)
- NASA summer of innovation grant (2012), (\$2,500, funded)

- 2014 REAP high school students mentorship grant
- 2013 Boeing company Inc. Engineering development and support
- 2013 REAP high school students mentorship grant
- 2013 NASA summer of innovation grant
- 2012 NASA summer of innovation grant
- 2010 NSF career research grant
- 2009 Knowles Science Teaching Foundation (KSTF) research Fellowship
- 2009 Higher Education HP Technology for Teaching Grant Initiative
- 2009 Texas Southern University Research Enhancement Program, Research Seed Grant
- 2007 Texas Southern University Research Enhancement Program, Research Seed Grant
- 2007 Higher Education HP Technology for Teaching Grant Initiative

Research Accomplishments

Publications

- Thomas, G. & Darayan, S. (2017). Electronic Engineering Technology Program Exit Examination as an ABET and Self-Assessment Tool. *Journal of Science, technology, Engineering and Mathematics (JSTEM)*. Dec 2017.
- Thomas, G. (2017). “Opportunities of Globalization and Technology for Sustainable Development for the Organization of Eastern Caribbean States (OECS)”. *Early Stage Researchers' Journal (esrjournal.org)*, Vol. 1 No. 2 March 2017
- Thomas, G., Darayan, S. & Darayan, S. (2016). “Positioning the Engineering Curriculum to meet the demands of the global economy”. *International Journal of Education and Human Developments*, Vol. 2 No. 6 October 2016.
- Osakue, E.E. & Thomas, G. (2011). “Students’ Perception of Project Assisted Learning (PAL). *Latin American and Caribbean Journal of Engineering Education, JEE* 2011.
- Thomas, G. (2011). Built-in-self-test (BIST) for System-On-Chip using Output Voltage Difference between Fault-Free and Faulty Devices. *The International Technology Interface Journal*
- Thomas, G. & Thomas, E.R. (2009). Incorporating industry-style design into course projects in undergraduate engineering technology courses. *The Technology Interface Journal*. Vol. 10 No. 1.
- Thomas, G. & Thomas, E.R. (2008). The Impact of Historical Excess on the Survival of the countries of the Caribbean Community and Common Market (CARICOM) *Journal Publication: Journal of Critical Organization Theory, TAMARA* (May, 2008)
- Thomas, G. (2006). Programmable Structured Test for System-on-a-Chip (SoC) Using Pseudo-Voltage Comparators. *Dissertation*.

Proceedings and Presentations

- Laurier, D., Davis, T. Darayan, S. & Thomas, G. (2017). Design of a scaled Remote-Control Hovercraft. *ASEE Conference, 2017, Columbus, Ohio*.
- Thomas, G. & Darayan, S. (2015). Electronic Engineering Technology Program Exit Examination as an ABET and Self-Assessment Tool. *ASEE Conference, 2015, Orlando, Florida*.
- Kanu, S. Dr. Thomas, G. (2015). “Active Suspension System (Electromagnetic) for Space Exploration Vehicles”. *Proceedings of SURP. 2014. COSET, Texas Southern University*

- Valdez, F., Thomas, G. (2014). Making more sufficient photovoltaic cells using materials absorbing different colors of light. Proceedings of SURP. 2014. COSET, Texas Southern University.
- Khan, K., & Thomas, G. (2013). Bio Electromagnetism: Effects of Electromagnetic on Living Tissues, Cells, and Organisms. Proceedings of SURP. 2013. COSET, Texas Southern University.
- Thomas, G. (2011). Illustrations as a viable Pedagogical Tool in Teaching Engineering Technology Courses. ASEE Conference, 2011, Vancouver, Canada.
- Thomas, G., Thomas, M. (2011). Meeting the Challenge of Securing Individual and Business Data and Information. . SWDSI Conference, 2011, Houston, Texas
- Osakue, E.E. & Thomas, G. (2010). Using Project Assignment to Improve Students' Knowledge and Skills. Conference for Industry and Education Collaboration American Society for Engineering Education (ASEE). February 3-5, 2010. Palm Spring, CA.
- Chen, X., Olowokere, D., & Thomas, G. (2008). Teaching Java – Objects First With Bluej. Proceedings: American Society of Engineering Education Annual Conference, Pittsburg, PA.
- Thomas, G. (2008). Teaching Electronics Engineering Technology Design Using Cases: A student perspective. Proceedings: American Society of Engineering Education (ASEE) Annual Conference, Pittsburg, PA.
- Thomas, G. & Thomas, E. R. (2008). Ad Hoc Mobile Wireless Networks for Private and Public Sector Business Organizations. Proceedings: South Western Decision Sciences Institute (SWDSI) Conference, Houston, TX.
- Thomas, G., & Thomas, E. R. (2007). Students' Perceptions of the Value of Illustrations in Teaching a Management Information Systems Course. Presentation & Publication, South Western Decision Sciences Institute (SWDSI) Conference, San Diego, CA. March 2007.
- Thomas, E. R., & Thomas, G. (2007). Balancing the Enrollment Scales: Exploring the Gender Divide in Engineering Studies at a Historically Black University. Presentation & Publication, Standing Conference for Management & Organizational Inquiry (Sc`Moi), Las Vegas, NV. March 2007.
- Thomas, G., Olowokere, D., & Thomas, E. R. (2007). Embracing the Opportunities of Globalization and Technology for Sustainable Development: An Alternative Approach for the Organization of Eastern Caribbean States (OECS). Accepted for presentation & publication: The Fifth International Latin American and Caribbean Conference for Engineering and Technology (LACCEI'2007) Tampico, México. May 29 – June 1, 2007.

Work under review for publication

Thomas, G., Darayan, S. (2019). Effect of Using Adjunct Instructors in an Electronics Engineering Technology Program. ASEE southwestern Division (CIEC-2020 - ETD).

Work in progress

Darayan, S. & Thomas, G. (2019). “Low-Frequency Calibration Model of Liquid Conductivity Measurement”.

Thomas, G. (2017). “How effective is pre-engineering summer programs in the recruitment of underrepresented students to engineering/related disciplines”

Strong Knowledge of the following

Saber and SystemVision software for aerospace system design

Taught online courses using blackboard

Advance Computer architecture

Analog and Digital VLSI circuit design.

A/D and D/A converter design.

Design of CMOS RF integrated circuits.

Computer Network Security (Cryptography).

Java, C/C++, FORTRAN programming,

Computer Networking – analysis of protocols (TCP/IP)

Information Systems Analysis & Design

Wireless Networks – Analysis of Transmission, Protocols and Architectures.

Data Communications.

Discrete electronic components such as MOSFETS, BJTS, OPAMPS, memories.

Digital Signal Processing, microprocessor architecture, applications of microprocessor software

Digital Logic Circuits, Digital hardware design

Computer Skills

Saber and SystemVision software for aerospace system design

Computer programming language: JAVA, C/C++, FOTRAN, HTML.

Cadence software for VLSI design.

Data base design using Microsoft Access and Oracle software

Spice software for writing run scripts.

LABVIEW software.

Word Perfect, Microsoft Excel and Microsoft Word.

ORCAD, MAX PLUS II & VHDL software in designing and circuit schematics, and MATLAB, assembly language.