

Graham Thomas

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Position/Status:

Tenured Associate Professor
Department of Engineering Technology
College of Science and Technology
Texas Southern University
3100 Cleburne Ave.
Houston, Texas 77004

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

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.

Research Accomplishments

Publications

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. (2009). 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.

Conference Proceedings and Presentations

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. (2014). "Positioning the Engineering and Engineering Technology Curriculum to meet the demands of the changing Global economy through small businesses" (Journal of Science, Technology, Engineering and Mathematics, JSTEM)

Work in progress

Thomas, G. (2014). "How effective is pre-engineering summer programs in the

recruitment of underrepresented students to engineering/related disciplines”

Strong Knowledge of the following

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

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.

Externally funded grants

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

Professional Grant Writing Activities (submitted or under review)

- 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

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

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

Digital and Analog Circuit Design Engineer

Work Experience

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

Chemistry and General Science Teacher

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)

Professional Service Activities

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

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

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

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

Faculty Advisor – National Society of Black Engineers – TSU Chapter

Honors & Awards

Nuclear Regulatory Commission Faculty Research Participation Program Fellowship Award, 2007 (\$3,700)

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

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

NMSU Student Support Services: Outstanding Tutor, 1996 – 1997; Secret Teaching Weapon Award, 1996 -1997 & CRLA Certification – regular, advanced and master levels.