



34TH ANNUAL UNIVERSITY-WIDE RESEARCH SYMPOSIUM  
MARCH 26-30, 2012

# *Sustaining the Legacy*



THE FORTY-EIGHT YEAR LEGACY OF DISTINGUISHED AND SCHOLARLY LEADERSHIP  
FOR RESEARCH AND SPONSORED PROGRAMS, 1964-2012



# *of Excellence Through Research*



CELEBRATING 100 YEARS

CENTENNIAL COMMEMORATIVE EDITION



TENNESSEE  
STATE UNIVERSITY

# Center of Excellence for Learning Sciences

Building Capacities to Strengthen Communities Through Education



## Celebrating Leadership in Learning Sciences, Research, and Service

### PROGRAMS AND PROJECTS

Head Start Career Advancement Partnership Program (HS-CAPP)  
Tennessee Early Childhood Training Alliance (TECTA)  
Tennessee State University-TN CAREs Early Head Start  
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### RESEARCH INITIATIVES

STEM Education  
Teaching and Learning  
Early Intervention Models  
Student Learning Measurement  
Early Childhood Educator Professional Development  
P-12 Instructor and Administrator Professional Development  
Birth to Three Curriculum, Program and Professional Development

### For more information, please contact:

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Division of Research and Sponsored Programs  
34th Annual University-Wide Research Symposium  
Official 2012 Symposium Program Booklet  
Centennial Commemorative Issue

*Sustaining the Legacy  
of Excellence  
Through Research*

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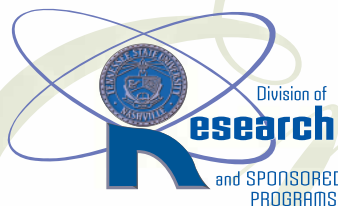
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*The 34th Annual University-Wide  
Research Symposium Booklet*

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*(former Symposium Co-chair)*



OFFICE OF  
THE PRESIDENT

TENNESSEE STATE UNIVERSITY  
3500 JOHN A. MERRITT BOULEVARD  
NASHVILLE, TENNESSEE 37209-1561



March 16, 2012

Dear Colleagues:

Welcome to Tennessee State University and our 34th Annual University-Wide Research Symposium.

As we celebrate our centennial year of excellence, we continue to recognize research as a key component of a world-class education for our graduates in the 21<sup>st</sup> Century. The Symposium is a week-long forum for students and faculty to confer with and to present research endeavors to the campus and affiliated publics for an interactive and collaborative critique of the research process.

As we confer toward greater knowledge, we also celebrate excellence in research as exemplified by our symposium keynote speaker Dr. Levi Watkins, Jr., Associate Dean, Johns Hopkins School of Medicine. Dr. Watkins is a 1966 graduate of Tennessee State University who invented the Automatic Implantable Defibrillator (AID) and implanted the first AID at Johns Hopkins in 1980. The groundbreaking and life-saving research of Dr. Watkins provides solid inspiration to our students to continue this legacy of greatness into the next generation of researchers.

As you discuss the countless issues along the spectrum of knowledge during the research symposium, be cognizant that your presence and contribution represent a core dynamic of our motto *Think, Work, and Serve*.

Sincerely,

A handwritten signature in blue ink that reads "Portia H. Shields".

Portia H. Shields, Ph.D.  
President



OFFICE OF  
THE VICE PRESIDENT

TENNESSEE STATE UNIVERSITY  
RESEARCH AND SPONSORED PROGRAMS  
3500 JOHN A. MERRITT BOULEVARD  
NASHVILLE, TENNESSEE 37209-1561



March 16, 2012

Dear Colleagues:

Welcome to the 34th Annual University-Wide Research Symposium as we celebrate our centennial year at Tennessee State University and the world-changing contributions of our researchers, such as our alumnus and keynote speaker Dr. Levi Watkins, Jr. ('66).

Dr. Watkins is Associate Dean of the Johns Hopkins University School of Medicine and full Professor of Cardiac Surgery who created and implanted the first Automatic Implantable Defibrillator (AID) at Johns Hopkins in 1980. Since that time, the device and its derivatives have revolutionized heart care having been implanted in tens of thousands of patients.

The Symposium is comprised of a week of interdisciplinary presentations by faculty and students seeking competitive awards for their deliberative innovation that showcases the research process from laboratory to solution. The Symposium thus constitutes an annual capstone of university-wide research endeavors that deliver academic value to Tennessee State University undergraduate and graduate students who promise to continue the creative legacy of Dr. Watkins.

On behalf of the Office of Research and Sponsored Programs, we celebrate this campus environment of research excellence which can manifest in life-saving and other innovative inventions and processes.

Sincerely,

A handwritten signature in blue ink that reads "Michael Busby".

Michael Busby, Ph.D.  
Interim Associate Vice President of Academic Affairs  
Office of Research and Sponsored Programs

# Overview of Events

MONDAY, MARCH 26, 2012

**8:00 a.m. - 1:30 p.m.**      **Symposium Registration** – Program booklets available  
Research and Sponsored Programs Bldg, First Floor Lobby

**ALL ORAL PRESENTATIONS**      **Research and Sponsored Programs Building, Room 163**

**9:00 a.m. – 12:15 p.m.**      **ORAL PRESENTATIONS SESSION A: GRADUATE ENGINEERING**

**School of Nursing Day • 8:00 a.m. - 1:00 p.m. James E. Farrell – Fred E. Westbrook Building, 118**

**11:40 a.m. – 1:00 p.m.**      **Luncheon** – Speaker **Dr. Susan A. DeRiemer**,  
*Professor, Department of Professional & Medical Education, Meharry Medical College*

**TIGER Institute Ribbon Cutting Ceremony • 1:00 p.m. Research and Sponsored Programs Building, Basement Level**

**RESEARCH SYMPOSIUM  
OPENING CEREMONY  
AND PLENARY SESSION**      **E. T. Goins Recital Hall, 174 Performing Arts Center**

**2:00 p.m. – 4:00 p.m.**      **Keynote Address** – Speaker - **Dr. Levi Watkins, Jr., M.D.**  
*Associate Dean of the Johns Hopkins University School of Medicine and Professor of Cardiac Surgery*

TUESDAY, MARCH 27, 2012

**8:00 a.m. - 1:30 p.m.**      **Symposium Registration** – Program booklets available  
Research and Sponsored Programs Bldg, First Floor Lobby

**9:00 a.m. – 12:15 p.m.**      **ORAL PRESENTATIONS SESSION B: GRADUATE SCIENCE I**

**1:30 p.m. – 3:45 p.m.**      **ORAL PRESENTATIONS SESSION C: GRADUATE SCIENCE II**

**Psychology Day • 1:00 p.m. - 6:00 p.m. Robert Murrell Forum, Kean Hall**

**3:00 p.m. – 4:00 p.m.**      **Speaker Dr. Jeri L. Lee**,  
*Assistant Chair, Psychology Department, Tennessee State University*

WEDNESDAY, MARCH 28, 2012

**8:30 a.m. - 4:00 p.m.**      **Symposium Registration** – Program booklets available  
Research and Sponsored Programs Bldg, First Floor Lobby

**9:00 a.m. - 12:00 p.m.**      **ORAL PRESENTATIONS SESSION D: GRADUATE SCIENCE III**

**1:00 a.m. - 2:15 p.m.**      **ORAL PRESENTATIONS SESSION E: UNDERGRADUATE SCIENCE**

**2:15 p.m. - 4:30 p.m.**      **ORAL PRESENTATIONS SESSION F: UNDERGRADUATE ENGINEERING**

**College of Engineering Day • 12:00 p.m. – 1:00 p.m. James E. Farrell – Fred E. Westbrook Building, 118**

**Speaker, Dr. John Hopkins**  
*Director of Strategic Operations, University of Tennessee*

**College of Health Sciences Day • 9:00 a.m. – 1:00 p.m. Clement Hall, 165**

**12:00 p.m. – 1:00 p.m.**      **Luncheon** – Speaker, **Dr. Iris Johnson Arnold**,  
*Associate Professor, Department of Speech Language Pathology and Audiology, Tennessee State University*

Posters will be displayed in the Jane Elliott Hall Auditorium. March 28-29, 2012

# Overview of Events

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THURSDAY, MARCH 29, 2012

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**9:00 a.m. - 2:00 p.m.**                      **Symposium Registration** – Program booklets available  
Research and Sponsored Programs Bldg, First Floor Lobby

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**JUDGING for Graduate Posters**– Jane Elliott Hall Auditorium

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**9:00 a.m. – 12:00 noon**                      **POSTER SESSION: GRADUATE AND FACULTY**

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**12:30 noon – 3:30 p.m.**                      **POSTER SESSION: UNDERGRADUATE**

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**Association of Pre-Professional Life Scientists (APLS) Day • 9:00 a.m.- 5:30 p.m.**  
Research and Sponsored Programs Building

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**9:00 a.m. – 12:00 noon**                      **Laboratory and Technical Skills Training (Hands-On and Demos),**  
**Nanoscience and Biotechnology Core Facility**

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**1:30 p.m. – 3:00 p.m.**                      **APLS Panel Discussion: “Transitioning from College to the Workplace:**  
**Strategies for Success,” Conference Room 163**

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**3:00 p.m. – 4:00 p.m.**                      **APLS Professional Development Workshop Series: “Development of**  
**a Professional Portfolio for Effective Self-Marketing,” Conference Room 107**

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**4:30 p.m. – 5:30 p.m.**                      **APLS Business Meeting (members only), Conference Room 163**

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FRIDAY, MARCH 30, 2012

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**8:30 a.m. - 10:30 a.m.**                      **Symposium Registration** – Program booklets available  
Research and Sponsored Programs Bldg, First Floor Lobby

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**ORAL PRESENTATIONS**                      **Research and Sponsored Programs Building, Room 163**

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**9:00 a.m. – 11:00 a.m.**                      **ORAL PRESENTATIONS: FACULTY**

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**AWARDS AND CLOSING CEREMONY**      **James E. Farrell – Fred E. Westbrook Building, 118**

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**12:00 p.m. – 2:00 p.m.**                      **Luncheon. Presentation of Awards. Adjournment**

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34TH ANNUAL UNIVERSITY-WIDE RESEARCH SYMPOSIUM

OPENING CEREMONY  
AND PLENARY SESSION

MONDAY, MARCH 26, 2012

2:00 PM – 4:00 PM

E. T. GOINS RECITAL HALL, PERFORMING ARTS BUILDING

MISTRESS OF CEREMONIES, KIMBERLEY LAMARQUE, MFA  
ASSOCIATE PROFESSOR OF THEATER AND DIRECTOR OF FORENSICS

PRELUDE..... GARY WELCH, SOLOIST  
DARRYL G. NETTLES, PIANIST

TENNESSEE STATE UNIVERSITY “ALMA MATER”, LAURA M. AVERITTE, 1918

WELCOME AND GREETINGS

DR. PORTIA HOLMES SHIELDS  
PRESIDENT, TENNESSEE STATE UNIVERSITY

OCCASION

MRS. NANNETTE C. MARTIN  
RESEARCH SYMPOSIUM CO-CHAIR

INTRODUCTION OF KEYNOTE SPEAKER

DR. MICHAEL BUSBY  
INTERIM ASSOCIATE VICE PRESIDENT  
FOR ACADEMIC AFFAIRS FOR RESEARCH AND SPONSORED PROGRAMS

KEYNOTE ADDRESS,  
SHOCKING THE HEART BACK TO LIFE: THE STORY OF HUMAN DEFIBRILLATION

DR. LEVI WATKINS, JR.  
PROFESSOR OF CARDIAC SURGERY  
ASSOCIATE DEAN, SCHOOL OF MEDICINE  
THE JOHNS HOPKINS UNIVERSITY, BALTIMORE, MD

REMARKS AND PRESENTATION OF AWARD

DR. MICHAEL BUSBY

SPECIAL MUSIC

GARY WELCH, SOLOIST  
DARRYL G. NETTLES, PIANIST

“GO, LOVELY ROSE” BY ROGER QUILTER

THE FORTY-EIGHT YEAR LEGACY OF DISTINGUISHED AND SCHOLARLY RESEARCH  
LEADERSHIP, 1964 – 2012 HONORING PAST RESEARCH ADMINISTRATORS FOR  
RESEARCH AND SPONSORED PROGRAMS AT TENNESSEE STATE UNIVERSITY

MS. KIMBERLEY LAMARQUE

CLOSING ..... DR. CAROLYN CAUDLE,  
RESEARCH SYMPOSIUM CO-CHAIR

RECEPTION TO FOLLOW IN THE ROTUNDA

GARY WELCH, SENIOR IN MUSIC  
DARRYL G. NETTLES, ASSOCIATE PROFESSOR OF MUSIC



K E Y N O T E S P E A K E R

## LEVI WATKINS, JR., M.D.

Associate Dean, School of Medicine

Professor of Cardiac Surgery

The Johns Hopkins University, Baltimore, Maryland

### Shocking the Heart Back to Life: The Story of Human Defibrillation



Dr. Levi Watkins, Jr. is the Associate Dean of the Johns Hopkins University School of Medicine and full Professor of Cardiac Surgery. He is the first African American to achieve these positions at Hopkins. Dr. Watkins was the third of six children born to Dr. and Mrs. Levi Watkins of Montgomery, Alabama. He received his elementary and secondary education from the Alabama State Laboratory High School where he graduated valedictorian. While in high school he was interested in athletics and was selected to the Montgomery All Star basketball team.

Growing up in Alabama exposed him to widespread prejudice and the early civil rights movement, both of which would have lasting effects. He initially attended First Baptist Church of Montgomery and became close friends with his pastor, Dr. Ralph David Abernathy and his family; later he attended Dexter Avenue Baptist Church where he was first introduced to Martin Luther King, Jr. and his family.

After graduating from high school, Dr. Watkins attended Tennessee State University where he majored in biology and continued the development of his political interests by becoming president of the student body. He led many student movements on that campus, and in addition, graduated with highest honors. While at Tennessee State he was a member of the Alpha Phi Alpha fraternity, Alpha Kappa Mu honor society, Beta Kappa Chi honor society, and many other notable organizations.

In 1966 he integrated the Vanderbilt University School of Medicine becoming the first black ever admitted and the first black to graduate from that institution. He was later honored by that institution by being selected to become a member of Alpha Omega Alpha medical honor society. In June 1988, he was honored again being awarded the Vanderbilt Medal of Honor for outstanding alumni. Further recognition came in October 2002, when Vanderbilt established a Professorship and Associate Deanship in his name because of his work for diversity in medical education. In October 2005 his portrait was unveiled at the School of Medicine, honoring his life's work and commitment to Vanderbilt. In October 2008, he received the university's "Most Distinguished Alumnus Award".

In 1970 he went to Johns Hopkins Hospital as a surgical intern and in 1978 became the first black chief resident in cardiac surgery at that institution. He interrupted his surgical training between 1973 and 1975 to develop his research interest at the Harvard Medical School Department of Physiology. There he defined the role of the renin-angiotensin blockers in the treatment of congestive heart failure today.

After completing his residency, he joined the full time faculty in the Division of Cardiac Surgery at Johns Hopkins. Since joining the faculty, Levi pursued several different interests, both professional and political. Professionally, he performed the world's first human implantation of the automatic implantable defibrillator in February 1980 and subsequently developed several different techniques for the implantation of this device. To date, over 1 million devices have been implanted and the lives of approximately 2/3 of these patients have been saved with this treatment. He has also helped develop the cardiac arrhythmia service at Hopkins where various new open heart techniques are now being performed to treat patients at risk of sudden cardiac death. His interest in coronary heart disease in blacks led to his research in that area.

Early exposure to the civil rights movements and its leaders sealed Levi's commitment to racial equality, particularly in the area of medicine. In 1979, he joined the admissions committee of the medical school and after four years, minority representation increased 400%. Similarly, growth has now occurred in the faculty and house staff.

In May 1983, the largest number of black physicians ever to graduate from Johns Hopkins finished the institution. His efforts were recognized nationally and in 1983 he was appointed to the National Board of the Robert Wood Johnson Minority Faculty Development Program. This program seeks to increase the number of minority medical faculty nationally.

His interest in worldwide human rights led him to initiate the annual Martin Luther King commemoration at Johns Hopkins University. He has brought to the program many world leaders among whom are Nobel Laureate Desmond Tutu, Coretta Scott King, Martin Luther King III, Mayor Andrew Young, Harry Belafonte, Maya Angelou, Benjamin Hooks, and Zenani Mandela Dlamini, daughter of Nelson and Winnie Mandela. While the program honors King, it focuses attention on global humanitarian issues. Because of his work in both medicine and human rights, the Sojourner-Douglass College conferred upon him the Doctorate of Humane Letters in July 1988. In May 1989 a second doctorate was conferred by Meharry Medical College. In May 1996 he received a third doctorate from Spelman College. In May of 1997, he along with President William Clinton received a doctorate from Morgan State University.

In June 1991, he was promoted to full Professor of Cardiac Surgery, and that September appointed Dean for Post Doctoral Programs and Faculty Development in the Johns Hopkins School of Medicine. In this capacity, he helped revolutionize the culture for postdoctoral education in America by working to establish the nation's first postdoctoral association. Today, over fifty associations now exist throughout America. For this, he was featured in the September 1999 issue of Science, the official publication from the American Association for the Advancement of Science.

In 1986, he along with Oprah Winfrey, was named Baltimore's Best by then Mayor William Donald Schaffer. In April of 1993, his life and work were featured on national television on PBS' New Explorers program entitled "A Dream Fulfilled." In 1996 his life was featured again on Maryland Public TV. In June 1999, he was the recipient of the Johns Hopkins University Alumni Association Heritage Award for exceptional contributions and devotion of the university. In May 2000, he was honored nationally by the Guidant Corporation for his pioneering work on the automatic defibrillator. In December 2008, he was honored by the National Black Caucus of State Legislators with the Nation Builders Award, along with President-Elect Barack Obama and James H. Meredith.

In January 2010, he was appointed co-chair of Mayor Stephanie Rawlings-Blake's transition team for Health and Human Services and in April of 2010 he received the Thurgood Marshall College Fund award for excellence in medicine.

In January 2012, he was the recipient of the National Trumpet Award along with Ted Turner and Earth, Wind and Fire.

Four recently published books, African-American Medical Pioneers by Charles H. Epps, Jr., Here Is My Hope by Randi Henderson, They Too Call Alabama Home by Richard Bailey and Noteworthy Publications by African-American Surgeons by Claude H. Organ, Jr., M.D. all featured his achievements.

# The Research Symposium

## A B R I E F H I S T O R Y

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The Annual University-Wide Research Symposium at Tennessee State University is celebrating 33 years of providing an opportunity for faculty, undergraduate, and graduate students to present their research. In 1979, the event started as Research Day and it was renamed University-Wide Research Day in 1981. During the early years, only oral presentations were given. Since 1995, both poster and oral presentations have been included. Also, in 1995, the number of presentations had increased so much that all activities could not be completed in one day. Consequently, the name was changed from Research Day to Research Symposium where there are now five days of activities, including presentations from several speakers from various disciplines. Dr. Rubye Torrey, Assistant Vice President for Research and Professor of Chemistry (Emeritus), was the first Research Day Chair (1979-1981). TSU honored Dr. Torrey at the 2008 Symposium.

In 1979, the winners of the student presentations and their advisors were: Tyrone McKinnie (Richard Hogg, Advisor), George Pruitt (Rudolph Woodberry, Advisor) and Karen Sharp (Sandra Sheick, Advisor). Faculty presenters included Baqar A. Husaini (Sociology); Robert Taylor (currently Dean of Agricultural and Environmental Sciences, Alabama A&M University); Asalean Springfield (English), and Sandra Scheick (Mathematics). Remarks were given by then-Governor Lamar Alexander, Congressman John Bray, Mayor Richard Fulton, Fisk University President Walter Leonard, Meharry Medical College President Richard Lester, and Vanderbilt University President Emmett Fields.

Over the ensuing 33 years of annual symposia, the following persons have served as Symposium Chairs: Rubye Torrey (1979-1981), Jacquelyn Martin (1982-1986), Joan Elliot (1987-1994), Carolyn Caudle (1995-1999), Elbert Lewis Myles (2000-2004), Elaine Martin (2005-2007), and Brenda McAdory and Valerie Williams (2008-2010).

The Dean of the College of Arts and Sciences (Wendolyn Bell, Bobby Lovett, William Lawson, and Interim Dean Gloria Johnson) has supported the research symposium from its inception. In 1995, Maurice Mills (Director, Office of Sponsored Research) embraced the vision of the research symposium being campus wide and being supported by, not only the College of Arts and Sciences, but also by the Office of Sponsored Research with increased financial and human resources. With Carolyn Caudle (Faculty Liaison, OSR) at the helm of the research symposium leadership, activities moved to a new level. She re-established the presentation times to 15 minutes and introduced concurrent sessions. The symposium reached a peak of 130 presentations during her chairmanship. Caudle instituted advertisements in the symposium booklet from schools, departments and institutes throughout the University. Caudle's co-chair, Nannette Martin, and later Jovita Wells, assisted in the design of the Research Symposium booklets and many of the advertisement pages. In 2004, Marcus W. Shute, first Vice President for the Division of Research and Sponsored Programs, significantly increased the level of financial support for the Symposium and began the tradition of inviting TSU alumni engaged in research careers to speak to students during the awards luncheon. In 2009, as a part of TSU's grand recruitment campaign for students, the Division of Research and Sponsored Programs, under the leadership of Dr. Maria Thompson introduced unit research days for various disciplines and programs; and in 2010, she initiated the Spring Break Academy for high school students. The research symposium booklets were given to all attendees and were used as a recruitment tool for students and faculty by the University's president, School of Engineering and other departments and schools of the University. The research symposium booklet (or program) also became a means to showcase various research activities at Tennessee State University.

Vice President Maria Thompson of the Division of Research and Sponsored Programs and Interim Dean Gloria Johnson of the College of Arts and Sciences continue to support the chairs of the Research Symposium. Only the research titles and authors are now published in the program booklet, while the abstracts and presentations are published on Tennessee State University's research website ([www.tnstate.edu/research](http://www.tnstate.edu/research)).

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## Dr. Nebraska Mays *(Retired)*

SENIOR VICE CHANCELLOR FOR ACADEMIC AFFAIRS AND STRATEGIC PLANNING,  
TENNESSEE BOARD OF REGENTS  
DISTINGUISHED PROFESSOR IN EDUCATION, TENNESSEE STATE UNIVERSITY

A graduate of Alcorn State University, Mays received his M.S. and Ph.D. from Southern Illinois University. After receiving his Ph.D. in 1962, Mays accepted a nine month appointment at Florida A & M University. In August of the following year, he began a career in Tennessee that would span 43 years when he accepted his first of several university appointments in the State of Tennessee and at Tennessee A& I University, now known as Tennessee State University (TSU).

In his early years at TSU, Mays served as Professor of Education and Coordinator of Graduate Studies in Education. He taught Philosophy and Research in Education at TSU up until he was promoted to his first administrative appointment as Director of Institutional Research and Development.

Beginning in August 1968, Mays held several positions at Fisk University, including Executive Assistant to the president, head of the Department of Education, and Director of the Division of Social Sciences. In July 1975, he accepted an appointment as Associate Vice President of Academic Affairs and Research for The University of Tennessee's (UT) statewide administration. At the time of this appointment, Mays was the only African American to hold a position at that level at a major state research university in the South. In that position, Mays played a major role in the approval of all academic and research programs as well as all professional school programs on four UT campuses.

Mays was a key participant in the dismantling of segregated programs in the state's higher education system, including the states' graduate schools, the schools of law, medicine, dentistry, pharmacy and veterinary medicine. Many of today's professionals in those areas received scholarships due, in part, to Mays' efforts in implementing federal court orders.

From Fall 1987 to Winter 1992, Mays was on loan from UT to serve Tennessee as Deputy State Education Commissioner. Among his many responsibilities he conducted a study of dropouts from public schools in Tennessee, which led to legislation that called for a large increase in before and after school programs at public elementary schools in Tennessee and established a state level Dropout Prevention Center for the purpose of working with local school districts and citizen-led Dropout Prevention Task Forces.

During that same period, Mays also served as chairman of a state-wide task force to reverse the near "disappearance" of African-American students in college teacher preparation programs. His leadership as task force chairman established a legislative approved minority Teacher Fellows Program and Special State Grant Program (now known as Diversity Grants) for non-traditional students to enter teacher preparation programs at colleges and universities in Tennessee. He had a major role in refining the Tennessee Comprehensive Assessment Program (TCAP) in grades 3-8 and worked with UT Professor Dr. William Sanders in developing the Value-Added Assessment program.

In November 1992, Mays was appointed Senior Vice Chancellor for Academic Affairs and Strategic Planning for the Tennessee Board of Regents, with the additional responsibility for implementing court-ordered desegregation programs at the Board of Regents' 20 colleges and universities. In January of 1997, Mays left the Board of Regents to return to TSU and served almost 10 years as Distinguished Professor of Education and five years as Director of the Geier Fellows Program, later named the Maxine Smith Fellows Program.

During his career Mays received many awards and honors. His scholarly research, consultations, lectures and publications have brought wide acclaim. In 2002, Mays was named a National Visionary Leader by the Camille Cosby and Renee' Poussaint National Project for the Identification of Visionary African-American leaders. He was one out of 50 African-American leaders in the United States chosen that year. On October 19, 2005, Mays was recognized by Fisk University for his accomplishments and lifetime contributions to education. A videotape of his contributions to education was placed in the Fisk University Library.

From March 2002 to March 2006, Mays served part-time as Distinguished Professor in Post-Retirement Research, working with students engaged in doctoral research. Although officially retired, Mays volunteers his time reviewing State legislative issues in education including minority teacher issues, lottery scholarships, and the dropout problem in public schools, of which Mays says, based on his experience, requires constant and continuing attention less the children fail.

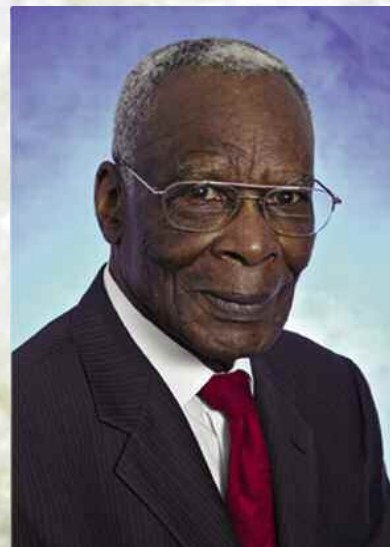


1964-2012

THE FORTY-EIGHT YEAR LEGACY OF DISTINGUISHED AND SCHOLARLY RESEARCH LEADERSHIP

## Dr. Calvin O. Atchison *(Retired)*

VICE PRESIDENT FOR RESEARCH AND DEVELOPMENT,  
TENNESSEE STATE UNIVERSITY



Soon after Dr. Calvin Atchison came to Tennessee A&I College in 1953, a research study which he began while in Charlotte, NC, was published. President Dr. Walter S. Davis learned about the publication and expressed an interest in helping Atchison to return to study in order to complete his degree.

Dr. Davis had a vision for the college to become not only a number one teaching institution but a research institution as well. Federal funds given because of its land grant share were insufficient to realize the expected status of a research institution. Dr. Davis recognized that the college had to position itself to earn a greater share of the federal funds. He encouraged Atchison to attend meetings in Washington whenever there was an opportunity to meet federal officials and have them know more about Tennessee A&I College. In 1958, Atchison was appointed Coordinator of Graduate Studies and Research for the School of Education. His responsibility was to work with the Dean of Education and his department heads to assist faculty to become involved in grant writing and project developments.

During the late 1950s, the Commissioner of Education for the State of Tennessee requested that Tennessee A&I College enter into a state-wide competition to conduct a research study for a report to be made at the 1960 White House Conference on Children and Youth. President Davis assigned that responsibility to Atchison. The theme for the conference was "The Values We Hold". When the study was completed, Davis took Atchison to make a presentation to the Tennessee Legislature. The report became a significant part of the State of Tennessee's report to the National Conference, and Atchison was selected to attend the conference as a delegate from Tennessee.

During the 1960s, Atchison was appointed to chair the first self study for accreditation by the Southern Association of Colleges and Schools. The administrative structure for the college was reorganized, and Atchison was appointed Acting Director of Development pending affirmation by the accreditation agency. Dr. Charles Fancher, Dean of Faculty, was appointed to complete the study.

President Lyndon B. Johnson's War on Poverty gave Tennessee State University the opportunity to use its faculty and resources to conduct special projects and training programs. Atchison worked with Dr. Nebraska Mays on numerous projects and research studies. Atchison wrote a proposal for a summer pre-college program and a number of high schools graduates were brought to the campus for an eight-week training program. The following year Upward Bound became a federal program. Title III served as the launching pad for Tennessee State University to become fully involved in federal relations. The University was appointed to serve as the coordinating institution for a group of developing institutions in order to send a package proposal for the first year of funding. Dr. Frederick Patterson appointed me to prepare the report for Washington.

After being appointed Vice President for Research Development, it was now time for the University to position itself to solicit and manage private funds. Atchison wrote the charter for the Tennessee State University Foundation. He is the lone surviving charter member of the Foundation. He retired from the University in 1986 and served as Executive Director of the Foundation until 1989.

Prior to coming to Tennessee, Atchison served as a school psychologist for the Charlotte City Schools in Charlotte, NC from 1949 – 1953, He received his Ed.D. in psychology from Indiana University in Bloomington in 1958.

In 1968, following 14 years of service with TSU, Atchison, professor of psychology, began his second career the University in the area of institutional advancement. The need for institutional advancement – student services, academics, development and business – was an outgrowth of TSU's 1968-1969 Self-Study conducted by Dr. Atchison. Subsequently, President Andrew Torrence appointed Dr. Atchison to the Acting Director for Development post which included the responsibility for managing sponsored research. Federal funds to the University at that time had been concentrated in the areas of agriculture and home economics, which had been awarded to TSU from the U.S. Department of Agriculture since 1967. In 1972, Atchison was appointed Vice-President for Research and Development and served in this capacity through 1986.





## Dr. John M. Mallette, Sr. *(Deceased)*

FORMER ASSOCIATE VICE-PRESIDENT FOR RESEARCH AND DEVELOPMENT,  
TENNESSEE STATE UNIVERSITY

John Michael Mallette graduated from Xavier University with a B.S. degree in 1954. He then attended Texas Southern University and received his M.S. in zoology in 1958. From 1957 through 1958, he was a research technician with the University of Texas Dental Units. From 1958-59, he was an instructor in zoology at Texas Southern University. He studied at Pennsylvania State University from 1959 – 1962, and he received his Ph.D. in zoology in September 1962.

From September 1962 to 1970, Mallette was employed as an Associate Professor and was promoted to Professor of Biological Sciences and Chairman of Graduate Studies and Research with Tennessee State University. In 1971, he was named Teacher of the Year at Tennessee State University.

In 1979, Mallette began serving as Associate Vice-President for Research and Development, under Dr. Calvin Atchison. In that position, he made significant accomplishments, including the establishment of an official protocol for conducting research at TSU, and the initiation of compensation for faculty summer research efforts.

Mallette had a distinguished career as a researcher, serving in such positions as President of the Tennessee Academy of Science, and was listed in *World's Who's Who in Science* and the *American Men of Science*. He was well-versed in the responsibilities of sponsored research, serving as a consultant to the National Institutes of Health, the Department of Health, Education and Welfare, and the National Science Foundation. His affiliation with these federal agencies led to increased funding in research at the University.

In 1971, Mallette became Director of the Joint Allied Health Center between Meharry Medical College and Tennessee State University. He worked part-time with the University of Tennessee at Nashville beginning in 1968, and in September 1974, he became a full time Professor of Biological Sciences. In June 1975, he was named Vice Chancellor for Academic Affairs with The University of Tennessee at Nashville. He began directing graduate students in research in 1962.

Mallette was a consultant to several organizations, and he received several grants, including awards from the Gulf Oil Company, Standard Oil Foundation, National Science Foundation (NSF) Undergraduate Research Participation Program, and the National Institute of Health.

Mallette was an active member of many community affiliations and served as a member of the Board of Directors for the Catholic Charities of Tennessee. He was a member of the Board of Directors for the Middle Tennessee Social Action Committee, the People United for the Restoration of the Environment, the National Conference of Christians and Jews, and Samaritan's Incorporated.

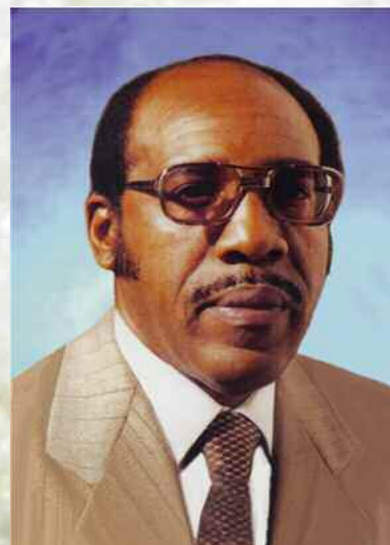
Mallette was a Fellow of the Tennessee Academy of Science and a Fellow of the New York Academy of Science. He was a member of the American Association of University Professors, and during 1967-68 he served as President of the Tennessee State Chapter. He was also a member of the American Zoological Society, the American Association for the Advancement of Science, the American Institute of Biological Sciences and the National Institute of Science. He was also a member of Sigma Xi. His publications appeared in several journals including *Experimental Cell Research*, *American Zoologists*, *Science*, *Tennessee Academy of Science*, *Growth and Development*, *BioScience*, and *Survivalists*.

Mallette was the recipient of many honors. In 1960-61, The National Foundation-Pennsylvania State, made him a Pre-Doctoral Fellow, and in 1965 he was Alumnus of the Year at Xavier University, in New Orleans. On Dec. 28, 1965, a paper he delivered at the University of California, Berkeley, was chosen as one of the most outstanding and newsworthy presenter at the American Association for the Advancement of Science. In June 1967, he attended the First International Congress of the Transplantation Society in Paris, France. He was accepted as a Grants Associate with the National Institutes of Health in April 1969. In 1970, he was listed in *Outstanding Educators in America*, *Personalities of the South*, and *Community Leaders in America*. He was a Fellow of the American Association for the Advancement of Science and appeared in the *Dictionary of International Biography* throughout the 1970s.



## Dr. Edward L. Risby, Sr. *(Retired)*

DEAN FOR SCHOOL OF GRADUATE STUDIES AND RESEARCH,  
DIRECTOR FOR OFFICE OF SPONSORED RESEARCH,  
DEPARTMENT CHAIR FOR BIOLOGY AND PROFESSOR  
TENNESSEE STATE UNIVERSITY



Dr. Edward Risby, who was employed at Tennessee State University (TSU) from 1978-1990, was instrumental in laying the foundation which culminated in the approval of the doctoral program in biology. During his tenure at TSU, Risby was Professor and Department Head of Biology, Program Director for Minority Biomedical Research Program (MBRS), and Director of the Research Instrumentation at Minority Institutions grant. Risby expanded the Biology Department's potential and capabilities through the renovations of McCord and Harned Hall, which resulted in expanded teaching and student research training facilities. After facility expansion, Risby successfully recruited research-oriented faculty in neuroscience, molecular biology, and expanded teaching and modern research instrumentation.

Risby attended the Extramural Associates Program at the National Institutes of Health (NIH), and upon returning to TSU continued in facilitating the expansion of the science curriculum and research. He wrote the first proposal for the Research Centers in Minority Institutions (RCMI) award at TSU, funded through NIH, under the directorship of Dr. Sidney McNairy. This RCMI grant award led to the development of the Center of Excellence for BioBehavioral Research on Health, which allowed for the hiring of new faculty. It also allowed for the establishment of an independent Institutional Office of Sponsored Research, which enhanced faculty and student research support and participation. This Center of Excellence Award, along with expanded faculty and research facilities, positioned the Department of Biological Sciences in 1985 to formulate and submit the proposal for the Ph.D. program through The University to the Tennessee Board of Regents for review and approval for implementation.

From 1986-1990, Risby also served as the Dean of the School of Graduate Studies and Research, and Director of the Center of Excellence for Bio-Behavioral Research on Health, Title III Program, and Health Careers Opportunity Programs (HCOP). Dr. Michelle Thomas and Dr. James Campbell provided invaluable assistance in the development of the RCMI and Ph.D. proposals, respectively.

Risby wrote over 25 refereed publications on biomedical research. He received several honors and awards including the George Henry Penn Award for best dissertation in his graduating class at Tulane University, Who's Who in Science, Lane College Service Award, Tennessee State University Service Award, Meharry Medical College Achievement Award, and the Million Dollar Research Club at Tennessee State University.

Risby is a member of the Millionaire Club. His note-worthy achievements in research at TSU include generating grant awards above \$3 million in support of research and undergirding the development of research programs and facilities that positioned the University to offer the Ph.D. program in biology.

After leaving Tennessee State University, Risby went to Meharry Medical College, where he played a major role in the development of Meharry's Ph.D. program. He managed the securing of Tennessee medical licensing of visiting physicians (MMC) deemed essential to effectuate the merger. Risby generated more than \$20 million in federal research dollars for both Meharry and TSU.





## Dr. Robert F. Newkirk, Sr.

PROFESSOR, DEPARTMENT OF BIOLOGICAL SCIENCES IN COLLEGE OF  
AGRICULTURE, HUMAN, AND NATURAL SCIENCES  
TENNESSEE STATE UNIVERSITY

Robert F. Newkirk received his M.S. in biology in 1968 from Virginia State University, where he served as an instructor on the faculty from 1967 – 1968. He earned his Ph.D. in physiology in 1972 from Colorado State. He returned to Virginia State University to teach in 1972 and later rose to the rank of Associate Professor. He served on the faculty of VSU for six years. He received further research training and experiences at the Marine Biological Laboratory (Woods Hole, MA), Meharry Medical College, and the University of Illinois Medical Center (Chicago).

Newkirk is a professor of biology at Tennessee State University (TSU), where he teaches and conducts research in neurobiology. He has served as Program Director of the Minority Biomedical Research (MBRS) Program, Minority High School Student Research Apprentice Program (MHSSRAP), a summer program for high school students; the Research Centers in Minority Institutions (RCMI) Program, the Research Infrastructure in Minority Institutions (RIMI) Programs, and the National Science Foundation (NSF) Historically Black Colleges and Universities Undergraduate Program (HBCU UP). These programs supported biomedical research for faculty, postdoctoral fellows, graduate, undergraduate and high school students.

Newkirk is coauthor on 16 papers published in refereed scientific journals, the first one of these was published with the world renowned Dr. Victor P. Whittaker, father of “Synaptosomes.” He is a member of the TSU Million Dollar Club for Research, and he has mentored more than a dozen students to the Master’s degree and five of these have continued on to the Ph.D., two for M.D. degrees, and all to successful careers. In 2012, Newkirk completes 32 years of faithful service to Tennessee State University.

Newkirk served as Director of the Office of Sponsored Research from 1990-1991. At this time, sponsored research continued to be supported through TSU’s Research Centers for Minority Institutions (RCMI) grants program awarded through the National Institutes of Health with Newkirk as the director. During his tenure, Newkirk maintained the administration of the program and aided faculty in soliciting additional funding for the university’s research endeavors.



## Dr. Nathaniel Pugh, Jr.

VICE PRESIDENT FOR PLANNING AND INSTITUTIONAL EFFECTIVENESS  
SUFFOLK COUNTY COMMUNITY COLLEGE



Nathaniel Pugh, Jr., Ph.D. is Vice President for Planning and Institutional Effectiveness at Suffolk County Community College, in Long Island, NY. He received his Ph.D. from the University of California at Berkeley in 1974. He held part-time positions as Associate Professor in the School of Health Systems, College of Engineering, and Senior Research Scientist at The Georgia Institute of Technology in Atlanta, GA, from 1980 to 1984. Pugh served as Dean of the School of Graduate Studies and Research and Professor of Educational Administration at Tennessee State University (TSU) in Nashville, Tennessee from July 1991 – August 1992.

During his tenure at TSU, Dr. Pugh addressed issues that were foremost for the School of Graduate Studies and Research that included strengthening admissions policy between admissions to graduate school vs. admissions to a graduate program; the length of time a graduate student could matriculate in a graduate program before currency of a program would expire and a student would be required to retake the course for credit toward the master's or doctorate degree; and finding additional funds to support graduate students in the pursuit of their graduate education and research interest.

Dr. Pugh continued with the efforts that had already been established by former research directors for research and sponsored programs at TSU. He provided stimulating leadership for researchers on campus and encouraged faculty to pursue funding opportunities related to their research interests and related initiatives from various funding agencies.

Pugh has a very extensive research career. He was Assistant to the President and Associate Professor of Educational Leadership and Research, Georgia Southern College, Statesboro, GA, from August 1984 to December 1992. He was Scholar in Residence for the Institute of Higher Education at the University of Georgia, in Athens, from 1997 – 2000. June 2000. He served as Vice President for Academic Affairs and Professor of Psychology at Fort Valley State University in Fort Valley, GA, from 1992 – 1996. He also served as Assistant Vice President for Institutional Research and Professor of Education at Clark Atlanta University, from 2000 – 2006. He was Senior Consultant for The Atlanta Higher Education Group, Stone Mountain, GA, from 2006 to 2010.





## Dr. Maurice Mills *(Deceased)*

FORMER DIRECTOR, OFFICE OF SPONSORED RESEARCH  
 PROFESSOR, DEPARTMENT OF CHEMISTRY  
 TENNESSEE STATE UNIVERSITY

**D**r. Maurice Mills attend Texas College in Tyler, Texas, where he received his B.S. in Chemistry in 1960. He earned his Ph.D. in Physical Organic Chemistry at Howard University in Washington, DC in 1972.

Mills devoted his life to Historical Black Colleges, in order to help educate his community, and increase the number of minorities in the field of science. He started his career as a high school teacher and coach at Mayflower and Tatum ISD schools.

While there, he was awarded for his outstanding football coaching career as an Offensive Coordinator and Championship wins.

Mills started his college career as an Associate Professor of the Department of Chemistry at Prairie View A&M University from 1973–1975. He later became Head of the Department of Chemistry from 1975–1978. During his tenure at Prairie View A&M, he was cited for outstanding research growth in Chemistry. After receiving news that his father was ill, he moved to Marshall, TX and took a position at Wiley College as Professor and Division Chair of Science and Mathematics from 1978–1989. There, he was cited for producing one of the “Top 25 Science and Technology Students” in the nation by the White House Initiative on HBCUs.

In 1990–1991, Mills was a Professor of Chemistry at Tyler Junior College. In 1991–1992, he was the Professor and Head of the Department of Chemistry at Jarvis Christian College in Hawkins, Texas. In 1992, he accepted a position as Professor in the Department of Chemistry and Director of the Office of Sponsored Research at Tennessee State University in Nashville. He was awarded an Extramural Associate Award through the National Institutes of Health that same year. During his tenure, from 1992 – 2003, he set a record by increasing funding from \$8.6 million in 1992 to \$41.6 million in 2003. Through the concerted efforts of Mills and his administrative staff, the number of proposals funded increased, establishing meaningful partnerships with research institutions and industry, recruitment of outstanding research faculty, establishment of a strong research environment, and re-tooling the senior level faculty with new research ideas and initiatives.

Mills was instrumental in building a research center for the University. He initiated mini grants to faculty from funds from National Institutes of Health to get involved in research. He initiated the idea for research incentive awards and started the Million Dollar Club, which recognizes researchers for successfully receiving a million dollars or more in funding in any given.

Mills returned to the East Texas area in 2006 and accepted a position as Chair of the Division of Arts and Sciences at Jarvis Christian College in Hawkins, Texas, where he served until 2008. He ended his career at Texas College in Tyler, Texas working as a Professor of Chemistry in 2009.

Throughout Mills’ career, he had many achievements and received several honors. In 1984, he was the first African-American chemist to receive the Fulbright Award, which allowed him the opportunity to teach at the University of Zambia in South Central Africa in 1986. He was also awarded the United Negro College Fund (UNCF) Distinguished Scholar Award. In 1989, he received a citation for Excellence in Science and Technology from the Congressional Commission on Science and Technology. In 1997, he received the Distinguished University Service Award (Kudos).

In 2002, along with other faculty members from Tennessee State University, Mills went to South Africa and helped develop one of the University’s science and technology departments. In 1999, the Office of Sponsored Research was awarded a grant under his directorship that allowed researchers at Tennessee State University’s Center for Automated Space Science to be the first ever to discover a planet outside of our own solar system.



## Dr. Marcus W. Shute

VICE PRESIDENT FOR RESEARCH AND SPONSORED PROGRAMS,  
CLARK ATLANTA UNIVERSITY



Marcus W. Shute, P.E., Ph.D., became the Vice President for Research and Sponsored Programs at Clark Atlanta University (CAU) in May 2008. Prior to joining CAU, Dr. Shute served as the first Vice President for Research and Sponsored Programs at Tennessee State University (TSU) from 2003-2008, where he was responsible for developing and implementing the vision and strategic plan for the research enterprise. He led the completion of a new state-of-the-art 62,000 sq. ft. research facility at TSU, developed and revised policies and processes for research administration, and was responsible for more than \$6.5M in funding from federal initiatives and research contracts during his tenure as VP, including \$2M to establish the Nanoscience and Biotechnology Core Laboratories and Research Programs at TSU.

Dr. Shute was also the CEO and Founder of Shute Enterprises, Inc., a scientific, technical and business consulting firm specializing in optical and wireless communications. In addition, Dr. Shute served as Vice President of Advanced Technologies at Luxcore Networks, Inc., where he was responsible for developing technology solutions to enable Luxcore's next generation optical internetworking systems. He previously served as Vice President of Engineering, where he was charged with building a world-class engineering organization to design, develop and produce Luxcore's products.

Dr. Shute began his 25+ year career in research and development at Bell Laboratories, of AT&T and now Lucent Technologies, Inc., in Murray Hill, NJ, and subsequently Norcross, GA. He was recognized for sustained technical contributions in his areas of expertise by the appointment to Distinguished Member of Technical Staff, an honor reserved for the top five percent of the technical population at Bell Laboratories. Dr. Shute initially conducted research and development activities on the evaluation of fiber properties and characterization of fibers and radiation-hardened fibers. He led several development projects related to optical fiber technology, including the \$70M Tactical Fiber Optic Cable Assembly, which was used in the Patriot Missile System in Operation Desert Storm, the Shipboard Optical Fiber Cable Project and the Fiber Optic Guided Missile project. Dr. Shute led the effort to develop, fabricate and qualify linear optical fiber amplifiers for analog and digital video transmission systems and was responsible for the development of the Reliability Assurance Program for the Optical-Application Specific Integrated Circuits program, including dense wavelength division multiplexing devices. Dr. Shute later served as a technical consultant and provided system performance analyses for several major wireless service providers. In addition, he led teams to deploy new wireless technology, and optimize the performance of voice and data wireless systems.

Dr. Shute earned a Bachelor of Science in Mechanical Engineering degree from Tennessee State University as University Scholar, becoming the first student to graduate with a cumulative grade point average of 4.0 out of 4.0; the S.M. degree in Materials Science and Engineering from the Massachusetts Institute of Technology in Cambridge, MA, and the Master of Science and Doctor of Philosophy degrees in Mechanical Engineering from the Georgia Institute of Technology in Atlanta, GA. He is a registered Professional Engineer (Mechanical) in the state of Georgia.

Dr. Shute has received numerous awards including the 1994 Black Engineer of the Year Award for Most Promising Engineer by U.S. Black Engineer magazine, the 1999 Golden Torch Award for Engineering Excellence by the National Society of Black Engineers, the Council of Outstanding Young Engineering Alumni Award from the Georgia Institute of Technology, the 2005 NTA Technical Achiever of the Year Award - Engineering by the National Technical Association, and Senior Member of the Institute of Electrical and Electronics Engineers. Dr. Shute has an interest in becoming a mission specialist on future space shuttle and space station missions and was a finalist in the astronaut class of 2000 to the NASA Mission Specialist Astronaut Program. He is a member of The Honor Society of Phi Kappa Phi, Pi Tau Sigma Mechanical Engineering Honor Society, the Omega Psi Phi Fraternity, Inc., and an All-American USA Masters Track and Field athlete.

Dr. Shute is a widely published and recognized subject matter expert in optical communications, polarization phenomena, wireless communications, and materials science. He has presented numerous technical papers as an invited lecturer and taught several short courses in his areas of expertise. He holds several patents and has patents pending in the areas of optical fiber design and characterization, polarization phenomena, optical fiber amplifiers, and optical networking. Dr. Shute is a leader in the scientific community and is an active member in several professional organizations.





## Dr. Maria Thompson

PROVOST AND VICE PRESIDENT FOR ACADEMIC AFFAIRS  
STATE UNIVERSITY OF NEW YORK (SUNY) AT ONEONTA

**M**aria Thompson, Ph.D. serves as provost and vice president for academic affairs at the State University of New York (SUNY) at Oneonta. Early in her career she was an instructor at SUNY Oneonta before moving on to the University of Kentucky as assistant professor. In 1998, Thompson returned to her alma mater, Tennessee State University, where served in various positions in research administration culminating in a promotion to vice president of Research and Sponsored Programs where she oversaw \$47 million in externally funded projects annually, which is, to date, the highest total in TSU history.

Dr. Thompson was awarded over \$1 million by National Science Foundation (NSF) to create the Tennessee State University Interdisciplinary Graduate Engineering Research (TIGER) Institute which will be a state-of-the-art graduate-level research facility that will provide infrastructure for research in the areas of advanced scientific visualization, smart sensor networking, and materials science and engineering.

She approaches her responsibilities with a student-centered perspective and thus developed the university scholarship model The Scholar in U (TSU) Experience which is a multi-year interdisciplinary program that immerses undergraduate students in enhanced learning that contributes to their intellectual, professional, and personal growth. TSU has used the model to leverage existing resources to create “grand rounds” that include undergraduate research, study abroad, service learning, industry internships, and enterprise leadership. This highly successful model has been published and presented nationally and it has received funding from federal and state agencies.

Recognizing and advocating that well-developed students are the result of well-developed faculty, Thompson created the Research Enterprise Enhancement Model (REEM©) as a structured, systematic approach to effectuating research mentorship for faculty at all career levels. She received funding from the NSF to pilot her REEM© model as a means of advancing the careers of women faculty in science, technology, engineering and mathematics (STEM).

Thompson is a third-generation graduate of Tennessee State University. She received a Bachelor of Science degree from TSU and a Master of Science degree from the Ohio State University. She earned her doctorate in textile science and textile economics from the University of Tennessee, Knoxville in 1994. She was selected for and completed the National Council of University Research Administrators (NCURA) Leadership Development Institute in 2005 and the Millennium Leadership Initiative sponsored by the American Association of State Colleges and Universities in 2010. Also, she completed the prestigious Institute for Educational Management at Harvard University in 2011.



# Dr. Rubye P. Torrey

FOUNDER OF RESEARCH DAY AT  
TENNESSEE STATE UNIVERSITY, 1979

Dr. Rubye Mayette Prigmore Torrey is Assistant Vice President for Research and Professor of Chemistry (Emeritus), Tennessee Technological University (TTU) in Cookeville, Tennessee. While active in this capacity, Dr. Torrey worked with faculty to develop proposals, and kept faculty apprised of agencies with available funds compatible with their research interests.

Dr. Torrey grew up in East Tennessee in the town of Sweetwater. She attended Swift Memorial Junior college and earned both her Baccalaureate and Master of Science degrees at TSU with honors. Dr. Torrey earned her doctoral degree in radiation-electroanalytical chemistry at Syracuse University in Syracuse, New York. After receiving her doctorate, Dr. Torrey did post-doctoral research at Brookhaven National Laboratory in Long Island, New York in the Mass Spectrometry Division. At TSU, she established a research laboratory in gaseous ion chemistry with funds from the Atomic Energy Commission. Dr. Torrey was invited to be a Visiting Chemist at the National Bureau of Standards (now the National Institute of Standards & Technology). She has held professorships in chemistry at TSU, the University of Tennessee-Nashville, and TTU.



## HOW RESEARCH DAY BEGAN

A new president, Dr. Frederick Humphries, came to Tennessee State University in 1975; shortly after his arrival, many faculty committees were established. One such committee was a small university-wide Research Committee (“Committee”) whose duty was to work with Dr. Calvin Atchison, the Vice President of Research and Sponsored Programs. The Committee mainly reviewed proposals before they were submitted to an agency for funding. Dr. Rubye Torrey, who had received a continuation grant from the Atomic Energy Commission (in year 5+), was chosen to represent the College of Arts & Sciences on the university-wide Committee. Dr. Robert Hudson, Dean of the College of Arts and Sciences, then asked Dr. Torrey to establish and chair such a committee for the College of Arts and Sciences. The following faculty made up the committee: Dr. Richard Hogg, Biological Sciences; Dr. Jacqueline Martin, Biological Sciences; Dr. Harold Mitchell, Speech Therapy; Dr. Ernest Rhodes, Social Sciences; Dr.

Dr. Torrey was very concerned that the research experience be an intricate part of the training of all students. Furthermore, she was concerned over the fact that those students who participated in research did not have a platform to present their findings. She had tried on previous occasions to get University funding to take analytical chemistry students to meetings and to visit the then National Bureau of Standards (now The National Institute of Standards and Technology/“NIST”) — home of the measurement standards that are in use—to no avail. Dr. Torrey suggested to the College of Arts and Sciences Research Committee that they host a university-wide “Research Day” in an effort to give students a platform and proper environment for presenting their research findings. Each presenter must have a faculty sponsor-mentor, and a panel of appropriate judges would be assembled. First, second, and third prizes would be awarded in the Graduate and Undergraduate Divisions. Attire would be professional; a time-keeper would be employed, plus all other aspects of a session at a national professional meeting.

There were no funds available in the College of Arts and Sciences for such a function. Dr. Torrey approached TSU President Humphries who confirmed the fact that there were no funds in the University for such a function; however, he gave Dr. Torrey permission to solicit funds for the event in the name of the University. Dr. Torrey solicited funds from First American National Bank, Third National Bank and Citizens Savings Bank, all of whom responded very favorably, but there was still not enough to cover event expenses and the financial awards to the students. Everyone who attended received a souvenir—a six-inch ruler/letter holder with the name of the University on it and Research Day, 1979. The Committee members gave the prize money out of their pockets. “Research Day” was successful!

Due to the reviews received and the interest created, Dr. Torrey presented her future plans for expanding the program and requiring students to attend a research session for class credit. The second year (April, 1980), those recommendations were implemented and the program was expanded to cover two days. In that same year, Dr. Torrey applied for and received a grant from the National Science Foundation—designing a program to increase the population of students majoring in chemistry, physics, and mathematics. Since she was the Director of the grant, known as the “Technologically-Assisted Physical Science” program (“TAPS”), she served as consultant to the Research Day Committee until she left the university in 1983 to go to NIST.

Dr. Torrey is extremely pleased and honored that the “seed” of Research Day planted in 1979 has strongly flourished in the annual event of the University-Wide Research Symposium.



# PRESENTATION SCHEDULES

## Oral Presentations

**Monday, March 26, 2012**

SESSION A: GRADUATE ENGINEERING

All Presentations will be in the Research and Sponsored Programs Building Room 163

9:00	GE1	<b>SAFETY EFFECTIVENESS EVALUATION OF MEDIAN CABLE RAIL SYSTEMS IN TENNESSEE</b> Emaasit, Daniel*; Advisor, Dr. Deo Chimba. Department of Civil and Environmental Engineering
9:15	GE2	<b>EVALUATION OF THE IMPACT OF UNSCHEDULED ROAD WORKS TO TRAFFIC INCIDENTS IN TENNESSEE (CASE STUDY: NASHVILLE, TN)</b> Kutela, Boniphace*; Advisor Dr. Deo Chimba. Department of Civil and Environmental Engineering
9:30	GE3	<b>DEVELOPMENT OF DECISION FUSION SOFTWARE SYSTEM FOR AIRCRAFTS STRUCTURAL HEALTH MONITORING</b> Mikhail, Maged*, Saleh Zein-Sabatto, and Mohammad Bodruzzaman; Advisor, Dr. Saleh Zein-Sabatto, Department of Electrical Engineering
9:45	GE4	<b>A BODE PLOT CHARACTERIZATION OF ALL STABILIZING CONTROLLERS FOR MIMO SYSTEMS</b> Kallakuri, Sirisha*; Advisor, Dr. Lee-Hyun Keel. Department of Electrical and Computer Engineering
10:00	GE5	<b>DESIGN AND IMPLEMENTATION OF A LABVIEW / EDUCATIONAL CONTROL PRODUCTS INTERFACE</b> Stratton, Timothy*; Advisor, Dr. Lee-Hyun Keel. Department of Electrical and Computer Engineering
10:15	GE6	<b>ASSESSMENT AND DEVELOPMENT OF A VIRTUAL AND AUGMENTED REALITY BASED ASSEMBLY DESIGN SYSTEM</b> Adas, Husam *, Stephanie Starling; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering
10:30 – 10:45		<b>BREAK</b>
10:45	GE7	<b>ENHANCING THE CLASSIFICATION ACCURACY OF IP GEOLOCATION</b> Maziku, Hellen*, and Sachin Shetty; Advisor, Dr. Sachin Shetty, Department of Electrical and Computer Engineering
11:00	GE8	<b>VISUALIZING GEOLOCATION OF SPAM EMAIL</b> Muallem, Asmah*, and Sachin Shetty; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering
11:15	GE9	<b>AN INTEGRATED MACHINE LEARNING AND CONTROL THEORETIC MODEL FOR MINING CONCEPT-DRIFTING DATA STREAMS</b> Mukkavilli, Sai Kiran*; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering
11:30	GE10	<b>NETWORK TRAFFIC ANALYSIS FOR DATABASE SECURITY OF MOBILE DEVICES</b> Turner, LaRhonda*; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering
11:45	GE11	<b>A CASE STUDY OF ALTERNATIVE UNINTERRUPTIBLE SOLAR POWER SUPPLY FOR A DATA CENTER SERVER FARM</b> Tesfaye, Mekbib*; Advisor, Dr. Satinderpaul Devegan. Department of Electrical and Computer Engineering
12:00	GE12	<b>THE IMPLEMENTATION OF QUALITY FUNCTION DEPLOYMENT AND COMPUTER AIDED DESIGN IN SEAT COMFORT DESIGN AND ANALYSES</b> Amer, Saed*; Adviser, Dr. Landon Onyebueke. Department of Mechanical and Manufacturing Engineering

## Oral Presentations

**Tuesday, March 27, 2012**

SESSION B: GRADUATE SCIENCE I

9:00	GS13	<b>IDENTIFYING STRATEGIES FOR ENHANCING SWITCHGRASS QUALITY FOR USE AS A BIOENERGY FEEDSTOCK</b> Abimbola, Allison *, and Jason de Koff; Advisor, Dr. Jason de Koff. Department of Agricultural and Environmental Sciences
9:15	GS14	<b>GOAT MEAT MARKETING: AVAILABILITY AND CONSUMPTION PATTERNS IN THE METROPOLITAN NASHVILLE AREA</b> Favors, Delicia*; Advisors, Dr. Enefiok Ekanem, Dr. Surendra Singh and Dr. Barbara Canada, Department of Agricultural Sciences and Cooperative Extension
9:30	GS15	<b>AN ASSESSMENT OF THE IMPACT OF ANTI-DUMPING TARIFFS ON U.S. SHRIMP IMPORTS</b> Pongo, Clarence*; Advisor, Dr. Enefiok Ekanem. Department of Agricultural and Environmental Sciences
9:45	GS16	<b>THE PREVALANCE OF ANTIBIOTIC RESISTANT ENTEROCOCCUS IN POULTRY</b> A. Brown*, A. Kilonzo-Nthenge, and Deborah Long. Department of Family and Consumer Sciences
10:00	GS17	<b>DE NOVO TRANSCRIPTOME SEQUENCING OF THE GUINEA FOWL PANCREAS</b> Darris, Carl*, James Tyus, Gary Kelley, and Samuel Nahashon; Advisor, Dr. Samuel Nahashon. Department of Agricultural and Environmental Sciences
10:15	GS18	<b>ENHANCED UTILIZATION OF SELENOCYSTEINE IN CHICKENS USING A DIRECT-FED PROBIOTICS AND PREBIOTICS FORMULA</b> Dixon, Beverly*, Samuel Nahashon, Agnes Kilonzo-Nthenge; Advisors, Dr. Samuel Nahashon and Agnes Kilonzo-Nthenge. College of Agriculture, Human and Natural Sciences

\*Denotes Presenter

All abstracts can be found at [www.tnstate.edu/research](http://www.tnstate.edu/research)

# PRESENTATION SCHEDULES

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10:30 – 10:45	<b>BREAK</b>
10:45	<b>GS19 INFLUENCE OF DIRECT-FED MICROBIALS ON MECHANISMS OF PHOSPHORUS ABSORPTION AND METABOLISM IN CHICKENS</b> Donkor, Joseph* and Samuel Nahashon; Advisor, Dr. Samuel Nahashon. Department of Agricultural and Environmental Sciences
11:00	<b>GS20 TWO-DIMENSIONAL GEL ELECTROPHORESIS EVALUATION OF THE PROTEOME OF BROILER CHICKENS DURING ADIPOSE TISSUE ACCRETION</b> Kelley, Gary*, Sam Nahashon, Xiaofei Wang, Fur-Chi Chen, and Ann Stewart-Bohannon; Advisors, Dr. Samuel Nahashon, Dr. Xiaofei Wang and Dr. Fur-Chi Chen. College of Agriculture, Human and Natural Sciences
11:15	<b>GS21 CHARACTERIZATION OF PROTEINS ASSOCIATED WITH ADIPOSE TISSUE ACCRETION IN BROILER CHICKENS</b> Kimathi, Boniface*, Gary Kelley, Ann Stewart, Samuel Nahashon, Fur-Chi Chen and Xiaofei Wang; Advisors, Dr Samuel Nahashon, Xiaofei Wang and Fur-Chi Chen. College of Agriculture, Human and Natural Sciences.
11:30	<b>GS22 INFLUENCE OF PROBIOTICS AND PREBIOTICS ON MECHANISMS OF CHOLESTEROL METABOLISM AND OBESITY IN BROILER CHICKEN</b> Kuppachi, Sri Harsha* and Samuel Nahashon; Advisor, Dr. Samuel Nahashon. Department of Agricultural and Environmental Sciences
11:45	<b>GS23 EVALUATION OF LYSINE REQUIREMENT OF THE FRENCH GUINEA FOWL BROILER</b> Nelson, Kiimya*; Advisor, Dr. Samuel Nahashon. Department of Agricultural and Environmental Sciences

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## Oral Presentations

Tuesday, March 27, 2012

SESSION C – GRADUATE SCIENCE II

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All Presentations will be in the Research and Sponsored Programs Building Room 163

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1:00	<b>GS24 SOFT TISSUE MOBILIZATION AND TRIGGER POINT THERAPY FOR TENSION HEADACHES: A REVIEW OF RESEARCH EVIDENCE</b> Cheatham, Lee Ann*, Garcia, Jessie*, Goodwin, Sarah*, and Shaver, Bryan*; Advisor, Dr. Ronald De Vera Barredo. Department of Physical Therapy
1:15	<b>GS25 DOES ESTROGEN HAVE IMMUNOMODULATORY EFFECTS ON PREGNANT WOMEN DIAGNOSED WITH MULTIPLE SCLEROSIS</b> Brown, Amber*, Kimberly McNair, Reneé Rawson, and Turner Sibley; Advisor, Edilberto Raynes, MD. Department of Physical Therapy
1:30	<b>GS26 BEYOND THE LYRICS PART I: A RELATIONAL/HISTORICAL ANALYSIS OF AFRICAN AMERICAN ENGLISH AND HIP HOP FROM 1965 -1989</b> Flatt, Daniel*, Prather Lauren, McCullough Chareva; Advisors, Dr. Iris Johnson Arnold and Dr. Owen Johnson. Department of Speech Pathology
1:45	<b>GS27 MECHANISMS FOR SALT TOLERANCE AND SUSCEPTIBILITY IN TOMATO</b> Nveawiah-Yoho, Peter*, Suping Zhou, and Roger Sauve; Advisors, Dr. Suping Zhou and Dr. Roger Sauve. Department of Agricultural Sciences.
2:00	<b>GS28 PD-CATALYZED NEW ORGANIC TRANSFORMATION FOR DIRECT AROYLATION, AND AMINATION REACTIONS</b> Liu, Kwei-Yu*; Advisor, Dr. Mohammad Al-Masum. Department of Chemistry
2:15 – 2:30	<b>BREAK</b>
2:30	<b>GS29 THE EFFECT OF SPECIFIC FORMS OF HERB MARINATION ON THE REDUCTION OF CAMPYLOBACTER JEJUNI POPULATIONS ON CHICKEN</b> Yorke, Richard*; Advisor, Dr. Fur-Chi Chen. Department of Food and Consumer Science
2:45	<b>GS30 EVALUATION OF OPTIMUM CALCIUM AND PHOSPHORUS REQUIREMENTS OF THE FRENCH GUINEA FOWL BROILER</b> Puckett, Quinton*, and Samuel Nahashon; Advisor, Dr. Samuel Nahashon. Department of Agricultural and Environmental Sciences
3:00	<b>GS31 COMPARATIVE ANALYSES OF THE GLUCOSE-DEPENDENT INSULINOTROPIC POLYPEPTIDE EXPRESSED IN THE AVIAN HYPOTHALAMUS</b> Tyus, James*; Advisor, Dr. Samuel Nahashon. Department of Agricultural Sciences; Department of Biological Sciences.
3:15	<b>GS32 EFFECTS OF LOW FAT VS A HIGH FAT DIET ON EXPRESSION OF FGFR3, IGFBP2, CCL4 AND GREM1 IN BROILER CHICKENS</b> Bohannon-Stewart, Ann,* Gary Kelley, Joseph Donkor, Boniface Kimathi, Carl Darris, James Tyus, Breyonna Jarrett, Rhia Nelson, Shatira Wilson, Samuel Nahashon, Xiaofei Wang. Advisors, Samuel Nahashon, and Dr. Xiaofei Wang, College of Agriculture, Human and Natural Sciences
3:30	<b>GS33 COMPARISON OF ULNAR COLLATERAL LIGAMENT RECONSTRUCTION REHABILITATION PROGRAMS: A LITERATURE REVIEW</b> Wright, Cory*, Jason Controy, Craig Strickland, Chad Gosselin, and Jason Rath, and Derek Charles. Advisor, Derek Charles. Department of Physical Therapy

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# P R E S E N T A T I O N   S C H E D U L E S

## Oral Presentations

Wednesday, March 28, 2012

### SESSION D – GRADUATE SCIENCE III

All Presentations will be in the Research and Sponsored Programs Building Room 163

9:00	GS34	<b>CRITICAL THINKING DISPOSITIONS OF GEORGIA AGRICULTURAL EDUCATORS</b> Parks, Clarissa* and John C. Ricketts; Advisor, Dr. John C. Ricketts. Department of Agricultural and Environmental Sciences
9:15	GS35	<b>VERTICAL INTEGRATION IN BROILER INDUSTRY: TENNESSEE BROILER INDUSTRY</b> Bukari, Foaziatu*; Advisor: Dr. Surendra Singh, Department of Agricultural and Environmental Sciences.
9:30	GS36	<b>ASSESSING THE HEAT TOLERANCE OF PIGEON PEA (CAJANUS CAJAN (L.) MILLSPAUGH)</b> Okekeogbu, Ikenna*, Suping Zhou, and Sarabjit Bhatti; Advisor, Dr. Suping Zhou. Department of Agriculture and Environmental Sciences
9:45	GS37	<b>STUDY ON THE BIOCHEMICAL AND PHYSIOLOGICAL PROPERTIES FOR SALT AND DROUGHT TOLERANCE IN TOMATO WILD SPECIES</b> Palmer, Marsha*, Roger Sauvé, Suping Zhou, and Sarabjit Bhatti; Advisor, Dr Suping Zhou. Department of Agriculture and Environmental Sciences
10:00	GS38	<b>FUNCTIONAL STUDY OF ALUMINUM-RESPONSIVE GENES IN TOMATO USING REVERSE GENETIC APPROACHES</b> Sangireddy, Sasikiran*; Advisor, Suping Zhou. Department of Agriculture, Human and Natural Resources
10:15 – 10:30		<b>BREAK</b>
10:30	GS39	<b>SIGNALING AND GENETIC STUDIES OF CHROMOBACTERIUM VIOLACEUM</b> Trabue, Sydnee*, Terrence L. Johnson and Anthony Ejiofor; Advisors, Dr. Terrence L. Johnson and Dr. Anthony Ejiofor. Department of Biological Sciences
10:45	GS40	<b>MANAGEMENT OF CHERRY LEAF SPOT IN FLOWERING CHERRY (PRUNUS L. SPECIES)</b> Joshua, Jacqueline*; Advisor, Dr. Margaret T. Mmbaga. Department of Biological Sciences
11:00	GS41	<b>THE EFFECTS OF HYPERICUM ON MAMMALIAN CANCER CELLS</b> Farrukh, Faryal*, E. Lewis Myles and Leigh Arino de la Rubia; Advisors, Dr. E. Lewis Myles <sup>1</sup> and Dr. Leigh Arino de la Rubia <sup>2</sup> . 1. Department of Biological Sciences, 2. Center of Excellence for Learning Sciences
11:15	GS42	<b>EFFECT OF VIOLACEIN EXTRACTED FROM DIFFERENT CHROMOBACTERIUM VIOLACEUM STRAINS ON CANCER CELL GROWTH</b> Mehta, Toral *, E. Lewis Myles and Terrance L. Johnson; Advisor, E. Lewis Myles. Department of Biological Sciences
11:30	GS43	<b>ANALYSIS OF PROTEIN PHOSPHATASE WITH EF HAND 1 TRANSCRIPT IN CHICKENS</b> Donkor, Joseph* and Xiaofei Wang; Adviser, Xiaofei Wang. Department of Biological Sciences
11:45	GS44	<b>THE SYNERGISTIC ACTION OF CHRONIC ETHANOL AND REACTIVE OXYGEN SPECIES ON INSULIN SIGNALING IN HYPERTENSIVE VASCULAR SMOOTH MUSCLE CELLS</b> Williams, Sparkle D.* and Benny Washington; Advisor, Dr. Benny Washington, Department of Biological Sciences

## Oral Presentations

Wednesday, March 28, 2012

### SESSION E – UNDERGRADUATE SCIENCE

1:00	US1	<b>EFFECTS OF PLANTING DATE, DENSITY, AND VARIETY ON LEAF PHOTOSYNTHESIS, STOMATA CONDUCTANCE, SOIL RESPIRATION, AND LEAF AREA INDEX OF PIGEONPEA</b> Wilson, Corie*; Advisor, Dr. Dafeng Hui. Department of Biological Sciences
1:15	US2	<b>THE GROWTH INHIBITION EFFECT OF CAMELLIA SINENSIS ON HUMAN COLON TUMOR CELL LINES COLO 320 AND HT 29</b> Johnson, Jamiell M.*, Charla L. Juniel and E. Lewis Myles. Advisor, Dr. E. Lewis Myles Department of Biological Sciences
1:30	US3	<b>BEYOND THE LYRICS PART II: A RELATIONAL/HISTORICAL ANALYSIS OF AFRICAN AMERICAN ENGLISH AND HIP HOP/RAP MUSIC FROM 1990-2012</b> Love Baker, Cierra*, Lanier Jeanna*, Phillips Lauren*; Advisors, Dr. Iris Johnson Arnold and Dr. Owen Johnson. Department of Speech Pathology
1:45	US4	<b>EXPOSURE TO TRIBUTYL TIN ALTERS THE SECRETION OF INTERFERON GAMMA FROM HUMAN NATURAL KILLER CELLS</b> Reid, Jacqueline* and Margaret Whalen; Advisor, Margaret Whalen. Department of Chemistry

## Oral Presentations

Wednesday, March 28, 2012

### SESSION F – UNDERGRADUATE ENGINEERING

2:15	UE6	<b>REVIEW OF INCIDENT TRANSPORTATION EMERGENCY EVACUATION SYSTEMS FOR POPULATED AREAS</b> Housel, Heather*; Advisors, Dr. Deo Chimba and Dr. Sachin Shetty. Department of Civil and Environmental Engineering and Department of Electrical Engineering
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## P R E S E N T A T I O N   S C H E D U L E S

2:30	UE7	<b>STUDY OF EMERGENCY EVACUATION STRAGIES FOR TENNESSEE STATE UNIVERSITY</b> Walker, Cory*, Advisors, Dr. Deo Chimba and Dr. Sachin Shetty. Department of Civil and Environmental Engineering and Department of Electrical
2:45	UE8	<b>ANALYSIS OF IP AND DNS TRAFFIC FOR IMPROVED CLOUD NETWORK SECURITY</b> Nelson, Dwight*; Advisors, Dr. Tamara Rogers, Department of Computer Science, Dr. Sachin Shetty, Department of Electrical and Computer Engineering
3:00	UE9	<b>RECONFIGURABLE PLATFORM FOR REAL TIME WIRELESS TRANSMISSION OF MULTIMEDIA TRAFFIC</b> Zlibut, Cornel*, Liang Hong and Sachin Shetty; Advisors, Dr. Liang Hong and Dr. Sachin Shetty. Department of Electrical and Computer Engineering
3:15	UE10	<b>ASSESSING SOFTWARE AND PROTOCOL VULNERABILITIES IN ROUTERS FOR SECURE CLOUD COMPUTING</b> Luna, Nicholas* and Hellen Maziku; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering
3:30	UE11	<b>BIRDS OF A FEATHER (BOF), ANOMALY DETECTION USING TIME SERIES ANALYSIS IN ELECTRONIC MEDICAL RECORDS (EMRS)</b> Shamsuddin, Mostafa*; Advisors, Dr. Bradley Malin and Dr. Sachin Shetty. Department of Biomedical Informatics and Department of Electrical and Computer Engineering
3:45	UE12	<b>CONTROL SYSTEM DESIGN FOR AND SIMULATION OF A MICRO-TURBINE ROTOR DRIVE SYSTEM</b> Jameson, Noel Jordan*; Advisor: Dr. Hamid Hamidzadeh. Department of Mechanical and Manufacturing Engineering
4:00	UE13	<b>DESIGN PARAMETERS THAT AFFECT SEAT COMFORT AND EXPERIMENTAL VALIDATION</b> White, Kamisha*, Charity Iweorah, Michael Onyebueke ; adviser, Dr. Landon Onyebueke. Department of Mechanical and Manufacturing Engineering
4:15	UE14	<b>IMPULSIVE STATE FEEDBACK CONTROL OF MARKOVIAN SWITCHING LINEAR STOCHASTIC SYSTEMS</b> Jameson, Noel Jordan*, M.J. Knap, L.H. Keel, and S. Sathananthan; Advisor: Dr. S. Sathananthan. Department of Mechanical and Manufacturing Engineering

## Poster Presentations

**Thursday, March 29, 2012 from 9:00 A.M. – 12:00 P.M.**

### GRADUATE POSTERS

GRP1	<b>CHARACTERIZATION OF NALIDIXIC ACID-RESISTANT ISOLATES OF ERWINIA TRACHEIPHILA FOR GROWTH AND VIRULENCE</b> Mason, Sean N.*, Caleb Kersey & C. Korsi Dumenyo; Advisor, Dr. Dumenyo. Department of Agricultural & Environmental Sciences
GRP2	<b>COUPLING MICROALGAE PRODUCTION TO WASTE TREATMENT AND CO2 MITIGATION</b> Fadeyi, Omowunmi*, Marie Blacksmith, Derric Lee; Advisor, Dr. Kudjo Dzantor. Agricultural and Environmental Sciences
GRP3	<b>ENHANCING OF CELLULOSIC BIOMASS FEEDSTOCK PRODUCTION THOUGH ARBUSCULAR MYCORRHIZAL FUNGI SYMBIOSES</b> Moore, Virginia*, Janiel Jackson, Harold Pettigrew; Advisor, Dr. E. Kudjo Dzantor, Department of Agricultural Sciences
GRP4	<b>THE EFFECT OF INCOME GROWTH AND FOOD CONSUMPTION PATTERN IN DEVELOPING COUNTRIES ON U.S. AGRICULTURAL EXPORT</b> Giwa, Damilola* and Enefiok Ekanem; Advisor, Dr. Enefiok Ekanem. Department of Agricultural and Environmental Sciences
GRP5	<b>TENNESSEE'S AGRICULTURAL PRODUCERS: PRODUCTION RISK MANAGEMENT AWARENESS</b> Towns, Danielle R. H.* Advisor, Dr. E. Ekanem and Dr. S. Singh. Department of Agricultural and Environmental Sciences
GRP6	<b>TOBACCO USE AMONG TENNESSEANS AND STRATEGIES FOR CHANGE</b> Novotny, Meggan L.*; Advisor, Dr. Jan Emerson. Center for Prevention Research
GRP7	<b>OCCURRENCE OF ENDOPHYTIC MICROORGANISMS IN FLOWERING DOGWOOD AND THEIR POTENTIAL APPLICATIONS</b> Lawrence, Shanieek* and Margaret T. Mmbaga; Advisor, Dr. Margaret T. Mmbaga. Department of Agricultural and Environmental Sciences
GRP8	<b>RESISTANCE TO POWDERY MILDEW IN FLOWERING DOGWOOD PLANTS</b> Parikh, Lipi*, M.T. Mmbaga, Guorong Zhang; Advisor, Dr. M.T. Mmbaga. Department of Agricultural and Environmental Sciences
GRP9	<b>PRODUCTION OF VOLATILE COMPOUNDS BY POTENTIAL BIOLOGICAL CONTROL BACTERIA COLLECTED FROM FLOWERING DOGWOODS</b> Rotich, Emily*, Margaret T. Mmbaga, and Mu Zheng; Advisors, Dr. Margaret T. Mmbaga <sup>1</sup> and Dr. Mu Zheng <sup>2</sup> . <sup>1</sup> Department of Agricultural Sciences, <sup>2</sup> Department of Chemistry.
GRP10	<b>OPTIMIZING BIOSENSOR PERFORMANCE THROUGH ANTIBODY DESIGN AND SELECTION</b> Darris, Carl*, Samuel Nahashon and Fur-Chi Chen; Advisors, Dr. Samuel Nahashon and Fur-Chi Chen. Department of Agricultural and Environmental Sciences
GRP11	<b>STUDENT ACHIEVEMENT IMPACT OF GEOCACHING INTEGRATION IN AN AGRISCIENCE LESSON PLAN</b> Hendrix, Rachel* and John Ricketts; Advisor, Dr. John Ricketts. Department of Agriculture and Environmental Sciences



# P R E S E N T A T I O N   S C H E D U L E S

<b>GRP12</b>	<p><b>CRITICAL THINKING DISPOSITIONS AND TRUSTS IN SOURCES OF INFORMATION ABOUT GENETICALLY MODIFIED FOOD RISKS: AN ASSESSMENT OF BACCALAUREATE STUDENTS</b> Towns, Darnell R. H.*; Advisors, Dr. John C. Ricketts and Dr. Enefiok Ekanem. Department of Agricultural and Environmental Sciences</p>
<b>GRP13</b>	<p><b>HYDROLOGY AND SOIL BIOLOGY OF CEDAR GLADE ECOSYSTEMS</b> Cartwright, Jennifer*, Bill Wolfe, Dafeng Hui, Tom Byl, Terrance Johnson, and Kudjo Dzantor; Advisors, Dr. Bill Wolfe, U.S. Geological Survey; Dr. Dafeng Hui and Dr. Terrance Johnson, Department of Biological Sciences; Dr. Tom Byl, Department of Environmental Engineering; and Dr. Kudjo Dzantor, Department of Agricultural and Environmental Sciences</p>
<b>GRP14</b>	<p><b>EFFECT OF DIETARY CALORIC CONCENTRATION ON REGULATORS OF FAT DEPOSITION IN BROILER CHICKENS</b> Bohannon-Stewart, Ann,* Gary Kelley, Joseph Donkor, Boniface Kimathi, Carl Darris, James Tyus, Breyonna Jarrett, Rhia Nelson, Shatira Wilson, Samuel Nahashon, Xiaofei Wang; Advisors, Samuel Nahashon and Dr. Xiaofei Wang. College of Agriculture, Human and Natural Sciences</p>
<b>GRP15</b>	<p><b>IDENTIFICATION OF SINGLE-NUCLEOTIDE POLYMORPHISMS IN PROMOTER REGIONS OF GENES FGFR3, GREM1, CCL4, AND IGFBP2 IN CHICKENS</b> Bohannon-Stewart Ann,* Xiaofei Wang, Advisor, Xiaofei Wang. Department of Biological Sciences</p>
<b>GRP16</b>	<p><b>THE EFFECT OF BUTYLTINS AND A FLAME RETARDANT ON MITOGEN-ACTIVATED-PROTEIN-KINASE KINASE KINASES IN HUMAN NATURAL KILLER CELLS</b> Celada, Lindsay* and Margaret M. Whalen; Advisor, Dr. Margaret M. Whalen. Department of Biological Sciences</p>
<b>GRP17</b>	<p><b>3D-QSAR TOPOMER COMFA STUDIES ON 10-N-SUBSTITUTED ACRIDONE DERIVATIVES</b> Ajala, Adeayo*; Advisor, Dr. Cosmas Okoro. Department of Chemistry</p>
<b>GRP18</b>	<p><b>ASYMMETRIC TRIFLUOMETHYLATION OF CYCLIC B-DICARBONYL COMPOUND.</b> Laradji, Amine*; Advisor, Dr. Cosmas O. Okoro. Department of Chemistry</p>
<b>GRP19</b>	<p><b>PREPARATION, STRUCTURAL AND SPECTROSCOPIC CHARACTERIZATION OF COBALT(II) COMPLEXES WITH PNP LIGANDS</b> Goni, Abdul*, Tasneem Siddiquee, Olisa Menakaya and Taylor Capadona; Advisor, Dr. Tasneem Siddiquee. Dept. of Chemistry</p>
<b>GRP20</b>	<p><b>SYNTHESIS AND CHARACTERIZATION OF TRANSITION-METAL BASED NANOPARTICLES AT ROOM TEMPERATURE</b> Menakaya, Olisa*, Taylor Cappadona, Abdul Goni, and Tasneem Siddiquee; Advisor, Dr. Tasneem Siddiquee. Dept of Chemistry</p>
<b>GRP21</b>	<p><b>THE BROMINATED FLAME RETARDANT, TETRABROMOBISPHENOL A, DECREASES SECRETION OF TUMOR NECROSIS FACTOR ALPHA FROM HUMAN NATURAL KILLER CELLS</b> Bennett, Ericka* and Margaret Whalen: Advisor, Margaret Whalen. Department of Chemistry</p>
<b>GRP22</b>	<p><b>4, 4'-DICHLORODIPHENYLTRICHLOROETHANE (DDT) AND TRICLOSAN (TCS) DECREASE TUMOR-CELL-BINDING CAPACITY AND CELL-SURFACE PROTEIN EXPRESSION OF HUMAN NATURAL KILLER CELLS</b> Brown, Tasia*, Felicia Udoji, Tamara Martin; Advisor, Dr. Margaret M. Whalen. Department of Chemistry</p>
<b>GRP23</b>	<p><b>EXPOSURE TO TRIBUTYLTIN ALTERS THE SECRETION OF TUMOR NECROSIS FACTOR ALPHA FROM HUMAN LYMPHOCYTES</b> Hurt, Kelsi* and Margaret Whalen; Advisor, Margaret Whalen. Department of Biological Sciences* and Dept. of Chemistry</p>
<b>GRP24</b>	<p><b>EXAMINING THE RELATIONSHIP BETWEEN GRADE RETENTION AND SCHOOL DROPOUT AMONG LOW SOCIOECONOMIC STUDENTS</b> Brooks, Calisha*; Advisor, Dr. Marie Hammond. Department of Psychology</p>
<b>GRP25</b>	<p><b>CLICKER METHODOLOGY EFFECTS AND DEPTH OF PROCESSING</b> Davis, Justin*; Advisor, Dr. Marie Hammond. Department of Psychology</p>
<b>GRP26</b>	<p><b>EMOTION REGULATION AND COPING</b> Harlinger, Mary*; Advisor, Dr. Marie Hammond. Department of Psychology</p>
<b>GRP27</b>	<p><b>EFFECTS OF TEACHER ATTITUDES ON THE USE OF SWPBS INTERVENTION CONCEPTS TO IMPROVE STUDENT BEHAVIOR IN SCHOOL CLASSROOMS</b> Newby, Kenya*; Advisor, Dr. Marie Hammond. Department of Psychology</p>
<b>GRP28</b>	<p><b>TUTORING IN HBCUS: ADEQUATE REPRESENTATION OF AFRICAN AMERICAN STUDENTS?</b> Raman, Janani*; Advisor, Dr. Marie Hammond. Department of Psychology</p>
<b>GRP29</b>	<p><b>THE EFFECT OF STEREOTYPE THREAT ON AFRICAN AMERICAN COLLEGE STUDENTS' ATTITUDES TOWARD SEEKING MENTAL HEALTH TREATMENT</b> Scott, Angela*; Advisor, Dr. Marie Hammond. Department of Psychology</p>
<b>GRP30</b>	<p><b>THE RELATIONSHIP BETWEEN BODY IMAGE AND SOCIAL FUNCTIONING</b> Sellers, Amy*; Advisor, Dr. Marie Hammond. Department of Psychology</p>
<b>GRP31</b>	<p><b>THE CORRELATION OF OPTIMISM AND SELF-CONFIDENCE IN ACHIEVEMENT AMONG HBCU STUDENTS IN AN INTRODUCTORY PHYSICS COURSE</b> Williams, Kalandra*; Advisors, Dr. Marie Hammond and Dr. Orville Bignall. Department of Psychology, and Department of Physics and Mathematics</p>

## P O S T E R P R E S E N T A T I O N S

<b>GRP32</b>	<p><b>IDENTIFYING VOCATIONAL IDENTITY CONCERNS OF FIRST GENERATION MINORITY COLLEGE STUDENTS USING MY VOCATIONAL SITUATION</b> Lynch, Jeremy*; Advisor, Dr. Marie Hammond. Department of Education, Psychology</p>
<b>GRP33</b>	<p><b>EXPLORING JOB SATISFACTION AMONG ELEMENTARY EDUCATORS IN MADISON COUNTY, ALABAMA PUBLIC AND PRIVATE SCHOOLS</b> Upchurch, Daniel*; Advisor, Dr. Marie Hammond. Department of Psychology</p>
<b>GRP34</b>	<p><b>THE EVOLUTION OF AUTISM RESEARCH: A STUDY ASSESSING THE USE OF CALIBRATED SEVERITY SCORES AND THE SOCIAL RESPONSIVENESS SCALE WITH IMPLICATIONS FOR FUTURE DATA COLLECTIONS</b> Vehorn, Alison*; Advisor, Dr. Joan Popkin. Department of Psychology.</p>
<b>GRP35</b>	<p><b>COMPUTER SIMULATION BASED ANALYSIS OF THE USE OF TRANSIT IN EVACUATION</b> Ho Hung-Wai*; Advisor, Dr. Deo Chimba and Dr. Sachin Shetty. College of Engineering, Technology, and Computer Science</p>
<b>GRP36</b>	<p><b>ADVANCE AMBER WARNING TRAFFIC SIGNAL (AAWTS)</b> Perkins, Kenneth Spencer*; Advisor, Dr. Deo Chimba. Department of Civil and Environmental Engineering</p>
<b>GRP37</b>	<p><b>RESIDENCE TIME DISTRIBUTION MODEL FOR NON-IDEAL FLOW DERIVED FROM INDEPENDENT GAMMA DISTRIBUTIONS OF TRACER TRAVEL DISTANCE AND LINEAR VELOCITY</b> Embry, Irucka*, Roger Painter, and Tom Byl; Advisors, Dr. Roger Painter and Dr. Tom Byl. Department of Civil and Architectural Engineering</p>
<b>GRP38</b>	<p><b>WASTE WATER TREATMENT DESIGN FOR CURRENT FLOW RATES AND FUTURE PLANT EXPANSION</b> VandeWater, Grant*; Advisor, Dr. Roger Painter. Department of Civil and Architectural Engineering</p>
<b>GRP39</b>	<p><b>ATOMIC FORCE MICROSCOPE SENSITIVITY IN DETECTING FREQUENCY CHANGES IN CANTILEVER PROBES</b> Reynolds, Jonathan*; Advisors Dr. S.K. Hargrove, Dr. M. Malkani, S. Sutton. Dept of Computer and Electrical Engineering</p>
<b>GRP40</b>	<p><b>MACHINE LEARNING BASED SECURE IP GEOLOCATION</b> Biswal, Biswajit*; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering</p>
<b>GRP41</b>	<p><b>USING COMPRESSED SENSING TO ENHANCE ANOMALY DETECTION IN CLOUD COMPUTING</b> Gold, Kimberly*; Advisors: Dr. Sachin Shetty and Dr. Tamara Rogers. Department of Electrical and Computer Engineering</p>
<b>GRP42</b>	<p><b>ASSESSING VULNERABILITIES OF NETWORK APPLICATIONS IN CLOUD COMPUTING PLATFORM</b> Lenkala, Swetha Reddy; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering</p>
<b>GRP43</b>	<p><b>PRIMARY USER EMULATION ATTACKS IN COGNITIVE RADIO NETWORK - SECURITY MEASURES</b> Thanu, Meena* and Dr. Sachin Shetty; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering</p>
<b>GRP44</b>	<p><b>INTEGRATING BIM SOFTWARE AND A WEARABLE AUGMENTED REALITY SYSTEM FOR WEATHERIZATION ASSESSMENT</b> Henderson, Jamal*, S. Keith Hargrove, John Drew; Advisor, Dr. S. Keith Hargrove. Department of Mechanical &amp; Manufacturing Engineering</p>
<b>GRP45</b>	<p><b>EXAMINATION OF CURRENT LITERATURE TO DETERMINE THE BEST PROTOCOL FOR WHOLE BODY VIBRATION TO INCREASE BONE MINERAL DENSITY</b> Klomp, Michael*, Richardson, Daniel and Zelenock, Julie; Advisor, Dr. Deborah Edmondson, Department of Physical Therapy</p>
<b>GRP46</b>	<p><b>ARE THERE ASSOCIATIONS OF OBESITY RATES WITH CANCER RATES IN TENNESSEE FROM 2003-2010?</b> Foster, Maya* &amp; Julie Vu; Advisor, Dr. Janice Emerson. Center for Prevention Research, Department of Agricultural, Human, and Natural Sciences</p>
<b>GRP47</b>	<p><b>ACCESS NASHVILLE: THE PROGRAM AND THE COMMUNITY RESPONSE</b> Cox, Beth*, Sarah Goodwin; Advisor, Dr. Natalie Housel. Department of Physical Therapy</p>
<b>GRP48</b>	<p><b>AQUATIC THERAPY FOR FALL PREVENTION IN THE OLDER ADULT</b> Carlson, Lindsay*, Aaron Greear, Brad Ellis, Allison Lamb; Advisor, Dr. Natalie Housel. Department of Physical Therapy</p>
<b>GRP49</b>	<p><b>EFFECTIVENESS OF PREHABILITATION ON FUNCTIONAL OUTCOMES AFTER TOTAL KNEE ARTHROPLASTY: A LITERATURE REVIEW</b> Neilson, Kerrianna*, Robert Nelson, Benjamin Farmer, Sara Sizemore, Jacob Hamrick; Advisor, Dr. Kevin Lawrence. Department of Physical Therapy.</p>
<b>GRP50</b>	<p><b>EFFECTS OF SOCIAL SKILLS ENRICHMENT ON PRAGMATIC LANGUAGE AND SOCIAL COMPETENCE</b> Saliba, Jennifer*; Advisor Dr. Mary Dale Fitzgerald. Department of Speech and Hearing Sciences</p>
<b>GRP51</b>	<p><b>DISTINGUISHING BETWEEN TRANSFORMATIONAL AND SERVANT LEADERSHIP</b> Hernan, Karen*; Advisor, Dr. Rodney Stanley. Department of Public Administration and Urban Affairs</p>
<b>GRP52</b>	<p><b>TRANSCRIPTION: AN OVERLOOKED SET OF QUALITATIVE VARIABLES?</b> Zajdel, Joseph*; Advisor, Dr. Leigh Arino de la Rubia. Center of Excellence for Learning Sciences</p>
<b>GRP53</b>	<p><b>DEVELOPING A WEARABLE AUGMENTED REALITY SYSTEM FOR WEATHERIZATION ASSESSMENT</b> Drew, John*, Jamaal Henderson, S. Keith Hargrove; Advisor, Dr. S. Keith Hargrove. Department of Mechanical &amp; Manufacturing Engineering</p>

# POSTER PRESENTATIONS

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- GRP54**      **SYNTHESIS OF NANO-ZERO VALENT IRON IN SAND MATRIX AND IMPACT ON MICROBIAL COMMUNITY**  
Roland, Victor\*; Advisors, Dr. Tom Byl1 and Kudjo Dzantor2. 1 Department of Civil and Architectural Engineering and 2 Agricultural and Environmental Sciences
- GRP55**      **HOW DO SUCCESSFUL ACL INJURY PREVENTION PROGRAMS INFLUENCE THE YOUNG FEMALE ATHLETIC POPULATION, AND WHAT ARE THE COMMON BIOMECHANICAL THREADS BETWEEN THEM?: A REVIEW OF THE LITERATURE**  
Baird, Charlotte H.\*, Renee L. Berry, Thomas C. McClain, Kyle J. Todd. Advisor: Rosalyn Pitt, Department of Physical Therapy
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## Poster Presentations

**Thursday, March 29, 2012 from 12:30 P.M. – 3:30 P.M.**

### UNDERGRADUATE POSTERS

Poster Presentations will be in the Jane Elliott Hall, Auditorium

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- UGP1**      **DNA AMPLIFICATION OF INDIVIDUAL COTTON POLLEN GRAINS**  
Jackson, Rickey\*, A. Naseer Aziz, J.N. Jenkins, Jack C. McCarty, D.M. Stelly and S. Saha; Advisor, Dr. A. Naseer Aziz. Department of Agricultural and Environmental Sciences
- UGP2**      **INVESTIGATIONS ON THE HETEROTROPIC GROWTH OF MICROALGAE FOR USE IN ENVIRONMENTAL CLEANUP AND BIOFUEL PRODUCTION**  
Blacksmith, Marie\*, Deric Lee, Brittany Woodard, and Omowunmi Fadeyi; Advisor, Dr. E. Kudjo Dzantor. Department of Agricultural and Environmental Sciences
- UGP3**      **MICROALGAL IMMOBILIZATION FOR RESEARCH ON REMEDIATION AND BIOFUEL TECHNOLOGIES**  
Davidson, Chloe\*, VaShonda Allen, S. Azubike, and D. Hui; Advisor, E. Kudjo Dzantor. Department of Agricultural and Environmental Sciences
- UGP4**      **CHARACTERIZATION OF A BACTERIAL STRAIN WITH PUTATIVE CELLULOSIC ACTIVITY**  
Monk, Bria\*, Hui Li, Suping Zhou; Advisor, Dr. Suping Zhou. Department of Agricultural and Environmental Sciences
- UGP5**      **ISOLATION OF A BACTERIAL STRAIN WITH PUTATIVE CELLULOSIC ACTIVITY**  
Monk, Bria\*, Hui Li, Suping Zhou; Advisors: Dr. Suping Zhou and Dr. Terrance Johnson. Department of Agricultural and Environmental Sciences
- UGP6**      **ISOLATION OF BT AND CRY PROTEINS**  
Porter, Kadajah\*; Advisors, Dr. Anthony Ejiofor and Dr. Terrance Johnson. Department of Biological Sciences
- UGP7**      **A TIME COURSE STUDY OF NEUROFILIN-2 EXPRESSION IN THE POST-NATAL BRAIN OF RATS.**  
Jordan, Tierney S.\* and Brenda S. McAdory; Advisor, Dr. Brenda S. McAdory. Department of Biological Sciences
- UGP8**      **MICROWAVE ENHANCED CU-CATALYZED CROSS-COUPLED REACTION OF POTASSIUM ARYLTRIFLUOROBORATES AND ETHANOLAMINES**  
Cain, Laurance T.\*; Advisor, Mohammad Al-Masum. Department of Chemistry
- UGP9**      **MICROWAVE IRRADIATED PROCESS FOR OXAZOLIDINES, AND OXAZINANES SYNTHESIS FROM ALDEHYDES AND AMINOALCOHOLS IN THE PRESENCE OF AIR**  
Lott, Baillie W.\* and Nazanin Ghazialsharif; Advisor, Dr. Mohammad Al-Masum, Department of Chemistry
- UGP10**      **SYNTHESIS OF VARIOUS FLUORO SUBSTITUTED AROMATIC KETONES BY PALLADIUM-CATALYZED CROSS-COUPLED OF POTASSIUM ARYLTRIFLUOROBORATES AND AROYL CHLORIDES**  
Taylor, Kristen\*; Advisor, Mohammad Al-Masum. Department of Chemistry
- UGP11**      **EFFECT OF HIGH DOSES OF GENISTEIN ON OXIDATION OF ARACHIDONIC ACID**  
Dallaire, Sarah\*; Advisor, Dr. William Boadi. Department of Chemistry
- UGP12**      **EFFICIENCY OF QUERCETIN AND KAEMPFEROL ON IRON-INDUCED PEROXIDATION OF METHYL LINOLATE**  
Shafi, Ali\*; Advisor, Dr. Boadi, Williams. Department of Chemistry
- UGP13**      **SYNTHESIS OF GOLD NANOPARTICLES IN THE PRESENCE OF POLYSACCHARIDES: WHAT CAN TRIGGER THE REACTION?**  
Tyler, Lauren\*, Kiara Simmons, and Koen Vercruyssen; Advisor, Dr. Koen Vercruyssen. Department of Chemistry
- UGP14**      **ORGANOCHLORINE PESTICIDE, PENTACHLOROPHENOL, ALTERS THE SECRETION OF TUMOR NECROSIS FACTOR ALPHA FROM HUMAN NATURAL KILLER LYMPHOCYTES**  
Durham, Andrea\* and Margaret Whalen; Advisor, Margaret Whalen. Department of Chemistry
- UGP15**      **DIBUTYLTIN ALTERS SECRETION OF INTERFERON GAMMA FROM HUMAN NATURAL KILLER CELLS**  
Sledge, Alexis\* and Margaret Whalen; Advisor, Margaret Whalen. Department of Chemistry
- UGP16**      **PRELIMINARY OBSERVATIONS OF WIC-APPROVED SMALL GROCERY STORES**  
Gray, Valentino\*, Olisa Menakaya, Courtney Gipson, Veronica James, and Veronica Oates; Advisor, Dr. Veronica Oates. Department of Family and Consumer Sciences
- UGP17**      **NETWORK TRAFFIC ANALYSIS FOR CLOUD AUDITING**  
Smith, Shondalyn\*, Dr. Keesook Han (AFRL/RIGD); Advisors, Dr. Sachin Shetty. Department of Electrical and Computer Engineering and Dr. Tamara Rogers. Department of Computer Science
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# POSTER PRESENTATIONS

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<b>UGP18</b>	<b>COLLEGE STUDENTS KNOWLEDGE OF EXERCISE</b> Elmore, Reggie*and Valeria Matlock; Advisor, Dr. Valeria Matlock, Department of Health Performance and Sports Science
<b>UGP19</b>	<b>KNOWLEDGE OF HEAT RELATED ILLNESS RELATED TO SICKLE CELL TRAIT AMONG COLLEGE ATHLETES</b> Woods, Brandon*, and Valeria Matlock; Advisor: Dr. Valeria R. Matlock, Dept of Health Performance and Sports Science
<b>UGP20</b>	<b>AN ASSESSMENT OF NICHE MARKET POTENTIAL FOR TENNESSEE GINSENG FARMERS</b> Bass, Jaman I.*; Advisors, Dr. Enefiok Ekanem and Dr. Surendra Singh Department of Agricultural and Environmental

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## Poster Presentations

Thursday, March 29, 2012 from 9:00 A.M. – 12:00 P.M.

### FACULTY POSTERS

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<b>FP1</b>	<b>TWO BACTERIAL BIOCONTROL AGENTS REDUCE MACROPHOMINA ROOT ROT AND POWDERY MILDEW, AND PROMOTE PLANT GROWTH IN FLOWERING DOGWOOD</b> Mackasmiel, Lucas*, and Margaret Mmbaga; Advisor, Dr. Margaret Mmbaga. Dept of Agricultural and Environmental Sciences
<b>FP2</b>	<b>AMBROSIA BEETLE INSECTICIDE AND BIOPESTICIDE TRIALS</b> Oliver, Jason*, Michael Reding, Christopher Ranger, Peter Schultz, Nadeer Youssef, James Moysenko, and Alicia Bray. Department Agriculture and Environmental Sciences, USDA-ARS, and Virginia Tech
<b>FP3</b>	<b>FURAZOLIDONE-INDUCED CARDIOMYOPATHY IN BROILER CHICKENS</b> Nahashon, Samuel*, and Thea Boatswain. Department of Agricultural and Environmental Sciences.
<b>FP4</b>	<b>WALNUT TWIG BEETLE TRAP DEVELOPMENT: CAN IT SNIFF OUT THE TREE?</b> Bray, Alicia*1, Nadeer Youssef1, William Klingeman2, Jason Oliver1. 1Department of Agricultural and Environmental Sciences, Tennessee State University; 2University of Tennessee
<b>FP5</b>	<b>EFFICACY OF THYME OIL AGAINST SALMONELLA SPP ON CUCUMBERS</b> Kilonzo-Nthenge, Agnes * and Debora Long. Department of Family and Consumer Sciences
<b>FP6</b>	<b>AN OVERVIEW OF WATER QUALITY CONTAMINANTS IN MOUNTAIN CREEK, WARREN COUNTY IN TENNESSEE</b> Akuley-Amenyenu, Anonya*, Sarah Hovis and Sam O. Dennis. Department of Agriculture and Environmental Sciences
<b>FP7</b>	<b>THE LONG-HORNED BEETLES (CERAMBYCIDS) OF TENNESSEE</b> Youssef, Nadeer N.1, Jason B. Oliver1, Joshua P. Basham1, and William E. Klingeman2; 1Department of Agriculture and Environmental Sciences, Tennessee State University, 2University of Tennessee

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## Oral Presentations

Friday, March 30, 2012

### FACULTY

Oral Presentations will be in the Jane Elliott Hall, Auditorium

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<b>9:00</b>	<b>F1</b>	<b>TENNESSEE GOAT PRODUCERS: EXAMINING THE EXTENT OF MARKET REACH AND DISTRIBUTION METHODS</b> Ekanem, Enefiok*, Mary Mafuyai-Ekanem, Fisseha Tegegne and Surendra Singh Department of Agricultural and Environmental Sciences
<b>9:15</b>	<b>F2</b>	<b>WHAT FACTORS INFLUENCE FARMERS' DECISIONS TO PRODUCE SWITCHGRASS AS ENERGY CROP?</b> Tegegne, Fisseha*, K. Sanford, E. Ekanem, A. Wade and M. Mafuyi.
<b>9:30</b>	<b>F3</b>	<b>IDENTIFICATION OF BIOMARKERS AND GENES FOR TOLERANCE TO ABIOTIC STRESSES IN PLANTS</b> Zhou, Suping*, Roger Sauve, Sarabjit Bhatti. Department of Agricultural Sciences, College of Agriculture, Human and Natural Sciences, Tennessee State University
<b>9:45</b>	<b>F4</b>	<b>NEAR ISOMETRIC BIOMASS PARTITIONING IN CHINESE FOREST ECOSYSTEMS</b> Hui, Dafeng1,*, Jun Wang2, Weijun Shen2, Xuan Le1, Emeka Nwaneri1, Philip Ganter1, and Hai Ren2 1Department of Biological Sciences, Tennessee State University, Nashville, TN, USA; 2Key Laboratory of Vegetation Restoration and Management of Degraded Ecosystems, South China Botanical Garden, Chinese Academy of Sciences, Guangzhou, China
<b>10:00</b>	<b>F5</b>	<b>HOSPITAL ADMISSION MAY BE DRIVEN BY HOSPITAL BED CAPACITY IN SOME TENNESSEE COUNTY HOSPITALS</b> Johnson, Owen*, Department of Public Health, Health Administration and Health Sciences
<b>10:15</b>	<b>F6</b>	<b>NORTH NASHVILLE'S FORGOTTEN: A BRIEF SURVEY OF THE RESIDENTS AND BUSINESSES DISPLACED BY THE CONSTRUCTION OF INTERSTATE 40, 1922-1970</b> Williams, Learoetha*; Department of History, Geography, Political Science, and Africana Studies
<b>10:30</b>	<b>F7</b>	<b>CONTROLLER DESIGN AND THE GAUSS-LUCAS THEOREM</b> Knap, Michael*, Advisor, Dr. Lee Keel, and Dr. S.P. Bhattacharyya
<b>10:45</b>	<b>F8</b>	<b>GENDER AND BANLIEUE LANGUAGE</b> Todd, Teresa.* Department of Language, Literature and Philosophy

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Susan A. DeRiemer, Ph.D.

## Division of Nursing Day

THEME: "EXTENDING YOUR HEALING TOUCH THROUGH RESEARCH"

Dr. DeRiemer did her undergraduate work at UCLA in Biology and her doctoral work at Yale in Pharmacology working with Drs. Paul Greengard and Len Kacmarek on modulation of neuronal activity. She spent 3 summers at the Marine Biological Laboratory, Woods Hole developing histological techniques to map regeneration of nerve cells with Dr. Eduardo Macagno. Her postdoctoral work was done at the Max-Planck Institute for Biophysical Chemistry with Dr. Bert Sakmann on control of ion channel activity. She also worked with Dr. Rami Rahamimoff of the Hadassah Medical School on ion channels in intracellular organelles. She held an Assistant Professorship in the Department of Biological Sciences of Columbia University before moving to Nashville and Meharry Medical College where she is now a Professor in the Department of Professional & Medical Education. Her current research interests are in teaching communication and cultural competence in Medical School, geriatrics education, and increasing the number of minorities and women in the health and science pipeline. Recent projects include a series of conferences on Ethical Issues around HIV and Substance Abuse in Minority Populations, the activities of the Meharry Consortium Geriatric Education Center, and a joint project with the Metropolitan Nashville Public Schools' Health Career Academies.

### Monday, March 26, 2012 - James E. Farrell - Fred E. Westbrook Building, 118

8:00 am	<b>Registration and Continental Breakfast</b>
8:30 am	<b>Occasion</b> by Mrs. Deirdre Jones, Chairperson
8:45 am	<b>Welcome</b> Dr. Kathleen McEnerney, Dean – College of Health Science and Dr. Kathy Martin, Associate Dean, Division of Nursing
9:00 am - 9:30 am	<b>MSN and BSN Poster Presentations</b>
9:35 am - 11:15 am	<b>Concurrent Sessions</b>
11:15 am - 11:35 am	<b>Presentation by Sponsors</b>
11:40 am - 12:15	<b>Luncheon</b>
12:20 pm - 1:00 pm	<b>Address, Dr. Susan A. DeRiemer, Professor, the Department of Professional &amp; Medical Education Meharry Medical College</b>

### Monday, March 26, 2012 RSP Building, Basement Level

1:00 pm	<b>TIGER Institute Ribbon Cutting Ceremony, Dr. Maria Thompson, Dr. S. Keith Hargrove, Mr. Ronnie Brooks</b> <i>Principal Investigators</i>
	<b>Remarks and Tour</b>

The TIGER (TSU Interdisciplinary Graduate Engineering Research) Institute is the result of an infrastructure award from the National Science Foundation (NSF). Located on the ground floor of the Research & Sponsored Programs Building, several laboratories will conduct research in cyber-security, advanced visualization & computation, nano-materials, and energy systems, and currently has funding from NSF, Department of Homeland Security, and several corporations.



Jeri L. Lee, Ed.D., J.D.

## Psychology Day

Jeri L. Lee, Ed.D., J.D., Licensed Psychologist, Licensed Attorney, Licensed Professional School Counselor, and Licensed Teacher has taught at Tennessee State University since 2001, in the university setting since 1977, teaching at three of the universities granting her a degree, including: East Texas Baptist University, Texas Christian University and Tennessee State University, as well as teaching at Minot State University (North Dakota), Jacksonville College (Texas), Austin Peay State University, Meharry Medical College, Volunteer State Community College, and Trevecca University.

A member of American School Counseling Association since 2001 and of Tennessee Counseling Association since 1991, she currently serves on the TCA Ethics Committee. Past President of the Tennessee Psychological Association, she also served as Vice President, Legislative Chair, and Federal Advocacy Coordinator. She was Legislative Chair for Middle Tennessee Counseling Association. She has been in private practice as a psychologist for nine years and continues to provide psychological consultation services. She also serves on the Metro School Counseling Advisory Board.

Presently, she coordinates Tennessee State University's Professional School Counseling Program and teaches graduate students in the Department of Psychology, where she is a tenured Associate Professor.

### Tuesday, March 27, 2012 The Forum, Kean Hall

1:00 p.m. - 2:30 p.m.	<b>Posters Presentations</b> (posters judged from 11:00 a.m. to 1:00 p.m.)
2:30 p.m. - 3:00 p.m.	<b>Welcome</b> <b>Angela Scott</b> , GPSO President and <b>Ayesha Douglas</b> , ABPsi President
	<b>Introduction of Keynote Speaker</b> , Linda Guthrie, Ph.D., Chair, TSU Psychology Department
3:00 p.m. - 4:00 p.m.	<b>Keynote Address</b> , "Applying Evidence-Based Psychological Research to Avoid Malpractice" <b>Jeri L. Lee</b> , Ed.D., J.D., Assistant Chair, TSU Psychology Department
4:00 p.m. - 5:00 p.m.	<b>Panel Discussion</b> "Collaboration and Publishing" <b>Rosemary Jeffries</b> , Ph.D., Associate Professor; <b>Chris Blazina</b> , Ph.D., Professor; <b>Dave Shen-Miller</b> , Ph.D., Assistant Professor; <b>Aisha Armstrong</b> , M.S., TSU Class of 2009; <b>Lisa K. Battle</b> , M.S., Ph.D. candidate
5:00 p.m. - 6:00 p.m.	<b>Awards Ceremony</b>



## College of Health Sciences Day

**Iris Johnson Arnold** is an associate professor within the Department of Speech Language Pathology and Audiology. She received her bachelor's and master's degree from South Carolina State University and doctorate from The University of Memphis. Currently, she is leading a research group of undergraduate and graduate students investigating the relationship between African American English and Hip Hop music. Dr. Johnson Arnold is particularly proud of her leadership of the TSU Chapter of the National Student Speech Language and Hearing Association and works extensively with them to provide students with volunteer, research and travel opportunities. She was recently selected as a 2011-2012 President's Fellow and is working with Dr. S. K. Hargrove to investigate retention and recruitment variables. Nationally, she has served as an Executive Board Member and Convention Chair for the National Black Association of Speech Language and Hearing.



**Iris Johnson Arnold, Ph.D. Speaker**

**Wednesday, March 28, 2012**

### Schedule of Events

**Clement Hall, 165**

8:00 am – 9:00 am	<b>Registration and Mounting of Posters</b>
10:00 am – 12:00 noon	<b>Plenary Poster Session (for general public)</b>
12:00 noon – 1:00 pm	<b>Luncheon. Speaker Dr. Iris Johnson Arnold, Associate Professor, Department of Speech Language Pathology and Audiology, Tennessee State University</b>

## College of Engineering Day

John A. Hopkins is Director of Strategic Operations working out of the Office of the Executive Vice President of the University of Tennessee. He is also Director of Tennessee NSF and DOE EPSCoR programs, including the NSF Track I RII titled Tennessee Solar Conversion and Storage using Outreach, Research, and Education – TN-SCORE. These statewide programs are directed to building research infrastructure and collaborations within the state to make Tennessee more successful in competing for research funding. Dr. Hopkins was formerly Vice President of the UT Research Foundation, which manages the technology commercialization activities stemming from the research performed at UT's campuses. From 2003 to 2009, he served as UTRF Director of Technology Transfer and oversaw the development and implementation of technology evaluation and licensing processes in both its Knoxville and Memphis offices.

Prior to UTRF, Dr. Hopkins served as a faculty member at the UT Space Institute, where he contributed to a number of innovative technologies, leading to 11 US patents, and directly assisted in their commercial success. He helped develop and license laser-manufacturing technologies that were used in the world's first no-lube fifth wheel latches for over the road trucks, and has also been involved in more than ten start-up companies, including roles as founder, technology inventor, licensor of intellectual property, and business development support. Dr. Hopkins serves as a Director and Treasurer of the Tennessee Center for Research and Development, a non-profit company that supports emerging technologies in the Knoxville-Oak Ridge region, and he has served on the Executive Committee of the Innovation Valley Technology Council.

Dr. Hopkins received his B.S., M.S., and Ph.D. degrees in mechanical engineering from The University of Tennessee and was a NASA Pre-Doctoral Research Associate during his graduate program while supporting both ground and flight experiments for the First International Microgravity Laboratory (IML-1) space lab mission. Dr. Hopkins, is a licensed engineer in Tennessee, has authored or co-authored more than fifty technical papers, and received his MBA from the Owen Graduate School of Management at Vanderbilt University.



**John A. Hopkins, Ph.D., Speaker**

**Wednesday, March 28, 2012**

### Schedule of Events

**James E. Farrell - Fred E. Westbrook Building, 118**

12:00 pm - 1:00 pm	<b>Speaker, Dr. John Hopkins</b>
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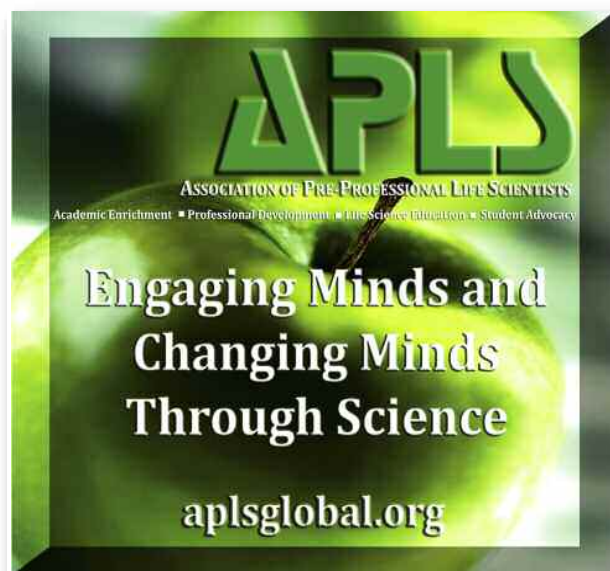
# APLS Day

## THE ASSOCIATION OF PRE-PROFESSIONAL LIFE SCIENTISTS

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**APLS** is a multi-disciplinary, multi-institutional professional organization focused on providing a more well-rounded college experience to students in the Life Sciences. Through academic enrichment, professional development, life science education and student advocacy, APLS seeks to become an important resource supplement to its members' undergraduate and/or graduate training. APLS membership includes students, faculty, staff and professionals at Tennessee State University, Middle Tennessee State University, Meharry Medical College, Vanderbilt University, Auburn University, as well as a host of high school, community and industry partners.

Those with an interest in the life sciences, technologies or research are encouraged to visit APLS at [www.aplsglobal.org](http://www.aplsglobal.org) or email us at [enrichment@aplsglobal.org](mailto:enrichment@aplsglobal.org).



**Thursday, March 29, 2012**

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### Schedule of Events

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#### Research and Sponsored Programs Building

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##### Nanoscience and Biotechnology Core Facility

9:00 am – 12:00 p.m.      **Laboratory and Technical Skills Training (Hands-on and Demos)**

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##### Conference Room 163

1:30 p.m. – 3:00 p.m.      **APLS Panel Discussion:  
"Transitioning from College to the Workplace: Strategies for Success"**

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##### Conference Room 107

3:00 p.m. – 4:00 p.m.      **APLS Professional Development Workshop Series:  
"Development of a Professional Portfolio for Effective Self-marketing"**

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##### Conference Room 163

4:30 p.m. – 5:30 p.m.      **APLS Business Meeting (members only)**

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**Friday, March 30, 2012** 12:00 P.M. – 2:00 P.M.

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## **Students Awards Ceremony**

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James E. Farrell - Fred E. Westbrook Building, 118

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**Welcome**                      **Mrs. Nannette C. Martin**, *Symposium Co-Chair*

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**Luncheon**

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**The Message**  
**from the President**    **Dr. Portia Holmes Shields**, *President, Tennessee State University*

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**Presentation**  
**of Awards**                      **Dr. Michael Busby**, *Interim Associate Vice President for Academic Affairs for Research and Sponsored Programs*

**Student Awards**  
**Research Mentor Award**  
**APLS Awards**

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**Acknowledgements and**  
**Closing Remarks**    **Dr. Carolyn Caudle**, *Symposium Co-Chair*

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**Adjournment**

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## Judges

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**Twum Ansah, Ph.D.** *Meharry Medical College*

**Anthony J. Baucum II, Ph.D.** *Vanderbilt University*

**Kyle L. Brown, Ph.D.** *Vanderbilt University Medical Center*

**Jacqueli Butler-Mitchell, DDS** *Integrity Dental Care - Smyrna*

**Xiwu Chen, MD, Ph.D** *Vanderbilt University*

**Sanika Chirwa, Ph.D.** *Meharry Medical College*

**Edgar S. Diaz-Cruz, Ph.D.** *Belmont University College of Pharmacy*

**Saudat A. Fadeyi, Ph.D.** *Meharry Medical College*

**James Farmer, Ph.D.** *US Geological Survey, Tennessee Water Science Center*

**Marcus C. Ferguson, Ph.D.** *Vanderbilt University School of Medicine*

**Robert Holt, Ph.D.** *Meharry Medical College*

**Sharon Horton-Jenkins, Ph.D.** *University of Phoenix - Nashville*

**Patricia McCarroll** *Fisk University*

**Mohammed A. Maleque, Ph.D.** *Meharry Medical College*

**Heinrich Matthies, Ph.D.** *Vanderbilt University Medical Center*

**Leah Miller, Ph.D.** *Vanderbilt University Medical Center*

**Armandla Ramesh, Ph.D.** *Meharry Medical College*

**Nona M. Setler-Logan, M.D.** *Nashville TN*

**Jimmy Sheats, II, DDS** *Sheats Endodontic Group*

**Terry L. Spurlin, DDS** *Nashville TN*

**Marilyn E. Thompson-Odom, Ph.D.** *Belmont University*

**Roberto Vanacore, Ph.D.** *Vanderbilt Medical Center*

**Roslynn Webb, M.D.** *Brentwood, TN*

**Windia Wilbert, DNP, RN, NEA-BC** *West Texas VA Health Care System (Retired)*

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## Million Dollar Club Members

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**Ronnie G. Brooks**, *Facilities Management*

**Dr. Michael Busby**, *Center for Excellence in Information Systems  
Engineering and Management*

**Mrs. Katari Coleman**, *Center of Excellence for Learning Sciences*

**Dr. Satinderpaul Devgan**, *College of Engineering, Technology, and  
Computer Science*

**Dr. Soumen N. Ghosh**, *Office of Business and Economic Research*

**Dr. Robert Hampton**, *Academic Affairs*

**Dr. S. Keith Hargrove**, *College of Engineering, Technology,  
and Computer Science*

**Dr. Pamela Hull**, *Center for Health Research*

**Dr. Baqar A. Husaini**, *Center for Health Research*

**Dr. Prem S. Kahlon**, *Department of Biological Sciences*

**Dr. Lee-Hyun Keel**, *Center for Excellence in Information Systems  
Engineering and Management*

**Dr. William Lawson**, *School of Arts and Sciences*

**Mrs. Mary Love**, *TRIO Programs*

**Mrs. Janice Lovell**, *Center of Excellence for Learning Sciences*

**Dr. Mohan Malkani**, *College of Engineering, Technology, and*

*Computer Science*

**Dr. Peter E. Millet**, *College of Education*

**Dr. E. Lewis Myles**, *Department of Biological Sciences*

**Dr. Robert F. Newkirk**, *Department of Biological Sciences*

**Dr. Barbara Nye**, *Center of Excellence: Basic Skills*

**Dr. Chinyere Onwubiko**, *College of Engineering, Technology,  
and Computer Science*

**Dr. Edward L. Risby**, *Graduate School and Office of Sponsored Research*

**Dr. Decatur B. Rogers**, *College of Engineering, Technology,  
and Computer Science*

**Dr. Lonnie Sharpe**, *Massie Chair of Excellence in  
Environmental Engineering*

**Dr. Amir Shirkhodaie**, *College of Engineering, Technology,  
and Computer Science*

**Dr. Marcus W. Shute**, *Research and Sponsored Programs*

**Dr. Willard Smith**, *Center for Excellence in Information Systems  
Engineering and Management*

**Dr. Jennifer Stewart-Wright**, *Center of Excellence for Learning Sciences*

**Dr. Maria Thompson**, *Division of Research and Sponsored Programs*

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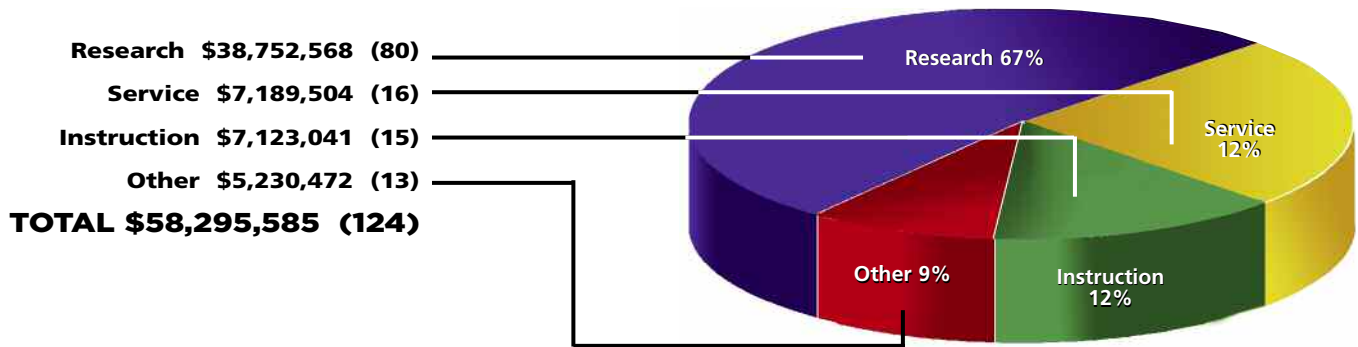
*Congratulations to the 28 members of the Million Dollar Club. This is an exclusive club populated by scholars who, due to their commitment to excellence, are on the cutting edge in research, teaching, and service. The steady increase in sponsored research and program support is a direct result of the million dollar projects awarded to these 28 distinguished scientists, engineers, and educators. Their efforts, although measurable in dollars, are immeasurable in terms of the positive impact their work has had on the University's ability to achieve its mission.*

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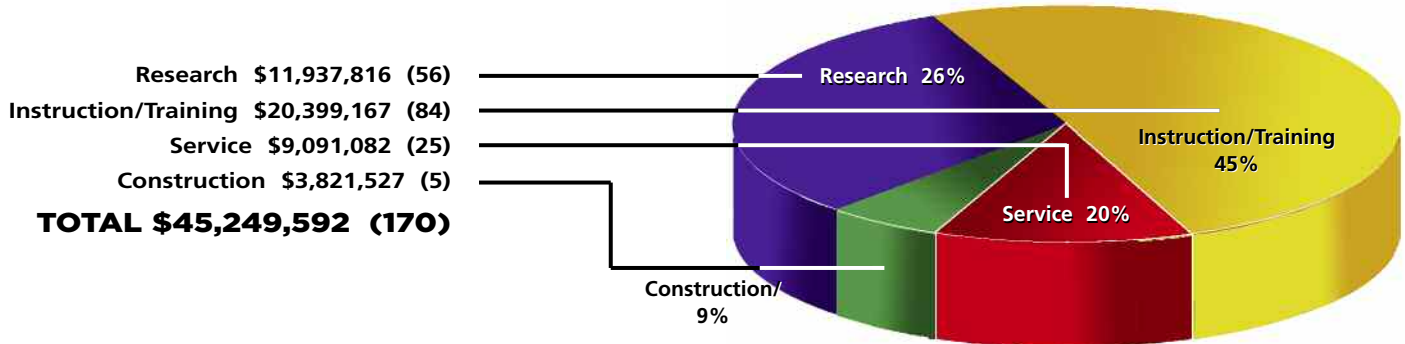


# Research and Sponsored Project Awards FY 2011

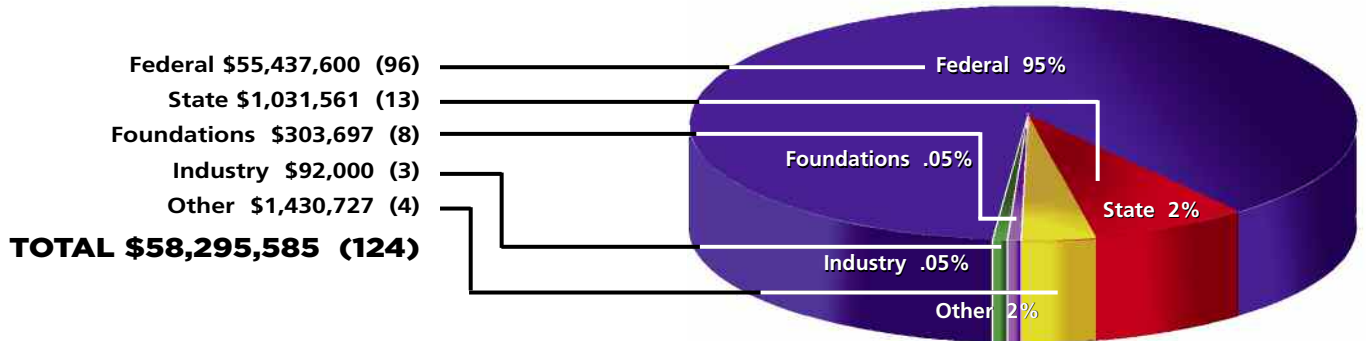
## SUBMISSIONS BY PROJECT TYPE



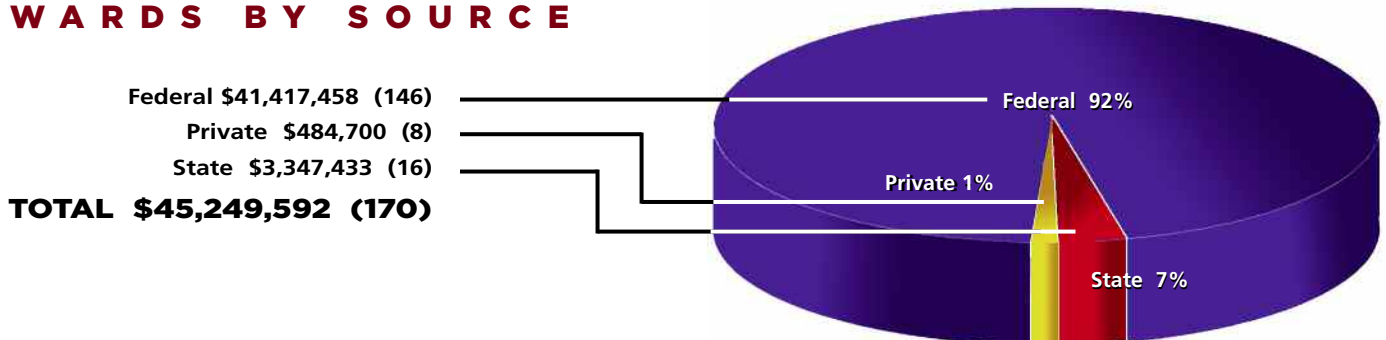
## AWARDS BY PROJECT TYPE



## SUBMISSIONS BY SOURCE



## AWARDS BY SOURCE



# Student Awards

## RESEARCH SYMPOSIUM 2011

### 33rd Annual University-Wide Research Symposium

Congratulations to our student researchers and faculty advisors for their winning entries in the oral and poster presentation competition during the research symposium. For 2011, there were 156 student authors and 17 faculty authors for oral presentations and posters.

#### **UNDERGRADUATE ORAL PRESENTATION - ENGINEERING I**

First Place	UE8	Paul Moore and Ashia Coleman
Second Place	UE1	Carlton Cobb, and Jameka Johnson
Third Place	UE3	Kyle Brook, Justin Haley, and Carleton Douglas

#### **UNDERGRADUATE ORAL PRESENTATION - ENGINEERING II**

First Place	UE11	Terrell Phillips
Second Place	UE17	Timothy Stratton
Third Place	UE15	Dwight Nelson

#### **UNDERGRADUATE ORAL PRESENTATION - SCIENCE**

First Place	US6	Warren Dean, V
Second Place	GE19	Teric Tibbs and Shantae Modena
Third Place	GE17	Marcus Pennington and Ashley Bradley

#### **GRADUATE ORAL PRESENTATION - ENGINEERING I**

First Place	GE9	Meena Thanu
Second Place	GE2	Isaac Lyatuu and Michael Knap
Third Place	GE3	Michael Knap

#### **GRADUATE ORAL PRESENTATION - ENGINEERING II**

First Place	GE16	McKenzie McNeal
Second Place	GE19	Jerry Sweafford
Third Place	GE17	Kevin Tyrell

#### **GRADUATE ORAL PRESENTATION - SCIENCE I**

First Place	GS7	James Tyus
Second Place	GS5	Thea Boatswain
Third Place	GS4	Jacqueline Joshua, and Lucas Mackasmiel

#### **GRADUATE ORAL PRESENTATION - SCIENCE II**

First Place	GS19	Erin Walden
Second Place	GS22	Sparkle Williams
Third Place	GS11	Thomas Dean, Joseph Kachelman, Nathan Philippi, and Charity Winters

#### **GRADUATE POSTER - ENGINEERING, TECHNOLOGY AND COMPUTER SCIENCE**

First Place	P7	Omari Boyd
Second Place	P41	Jonathan Reynolds and Adriane Parker
Third Place	P1	Abdalla Alsalah

#### **GRADUATE POSTER - PSYCHOLOGY AND HEALTH SCIENCE**

First Place	P51	Michelle Reece
Second Place	P42	Holly Beth Roach, Jessica Spivey, Kaitlyn Seaman, and Melanie Pond
Third Place	P34	Jonathan McAnulty, Stephen Blazer, and Jonathon Farmer

#### **GRADUATE POSTER - SCIENCE**

First Place	P48	James Tyus and Niesha Bonner
Second Place	P14	Carl Darris and Ashley Tinnon
Third Place	P12	Lindsay Celada

#### **UNDERGRADUATE POSTER - ENGINEERING, TECHNOLOGY AND COMPUTER SCIENCE**

First Place	P13	Thomas Holman and Kimberly Eakins
Second Place	P22	Gary Moore
Third Place	P33	Jonathan Smith

#### **UNDERGRADUATE POSTER - PSYCHOLOGY AND HEALTH SCIENCE**

First Place	P15	Asiya Jabeen, Vivien Casagrande, and Yaoguang Jiang
Second Place	P6	Rachel Connor
Third Place	P20	Cierra Love-Baker, Daniel Flatt, Jalesa Howard, Jeanna LaNier, Lauren Prather, Lauren Phillips, and Alex Gibbs

#### **UNDERGRADUATE POSTER - SCIENCE**

First Place	P38	Ashley West
Second Place	P26	Jacqueline Reid
Third Place	P30	Nadia Simmons



#### **2011 Research Mentorship Award Winner**

##### **Samuel Nahashon, Ph.D.**

Congratulations to Dr. Samuel Nahashon, Associate Professor, Department of Agricultural and Environmental Sciences in the College of Agriculture, Human, and Natural Sciences.

Dr. Nahashon was awarded this honor for serving as mentor/advisor to the greatest number of winning student research entries during the 33rd Annual University-Wide Research Symposium, 2011. Four of Dr. Nahashon's nine (9) student entries placed in the student research competitions. He received \$1,000 cash in recognition of his research mentorship.

#### **List of Dr. Nahashon's Winning Student Research Mentees**

##### **Graduate Oral Presentation-Science 1**

1st Place, James Tyus  
2nd Place, Thea Boatswain

##### **Graduate Poster Presentation-Science**

1st Place, James Tyus\*  
and Niesha Bonner

2nd Place, Carl Darris\*  
and Ashley Tinnon





# Qualified Students Welcome



The Center of Excellence in Information Systems Engineering and Management is an interdisciplinary research facility located on the Tennessee State University Main Campus in the Division of Research and Sponsored Programs Building. At the Center, TSU graduate and undergraduate students are presented with opportunities to participate in a genuine research environment. Major areas of research include:

- Astrophysics
- Advanced Control Systems and System Identification
- Applied Mathematics

If you would like more information please call:  
Dr. Michael R. Busby, Director  
Center of Excellence in Information Systems  
(615) 277-1601  
<http://coe.tsuniv.edu>



# College of Health Sciences

**Dr. Kathleen McEnerney, Dean**

## Enjoy Helping People?

*Apply your passion for health, healing, and service to others as you set your sights on careers in the health professions.*

*Experience outstanding clinical placements, learn from exceptional faculty, pursue your research investigations, and immerse yourself in TSU's challenging and accredited health-related academic programs that prepare you to achieve the same high pass rate on licensing examinations as our current students.*

*When you graduate, you'll be ready to take advantage of health care employment environments with opportunities in clinical practice, administration, teaching, and service at public and private hospitals, clinics, educational institutions, industries, and businesses.*

**Kathleen McEnerney, Dean**  
College of Health Sciences  
615-963-5924  
kmcenerney@tnstate.edu



## Academic Programs in Health Sciences

Cardio-Respiratory Care Sciences  
Dental Hygiene  
Healthcare Administration and Planning  
Health Sciences  
Health Information Management  
Nursing  
Occupational Therapy  
Physical Therapy  
Public Health  
Speech Pathology and Audiology  
Human Performance and Sport Sciences

## Clinic Services

Dental Hygiene Clinic - Main campus  
Speech Pathology and Audiology Clinic -  
Avon Williams campus



*Recognizing the*  
**MASSIE CHAIR OF EXCELLENCE**

Professorship of Engineering in the Environmental Disciplines  
Distinguished supporter of the  
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*Dr. Lonnie Sharpe, Jr. Chair*



The Massie Chair of Excellence is sponsored by  
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Office of Environmental Management



Current Staff

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 TENNESSEE STATE UNIVERSITY  
**CENTER for PREVENTION RESEARCH**  
 IMPROVING HEALTH THROUGH RESEARCH & COMMUNITY PARTNERSHIPS  
 College of Agriculture, Human and Natural Sciences



Post Doctoral Fellow  
 and 3 of 11 Current Students

**Mission:**

To conduct interdisciplinary research aimed at improving health outcomes and reducing health disparities.

**Goals Include:**

1. Conduct community-based, behavioral and health services research aimed at improving health outcomes and reducing health disparities.
2. Train undergraduate and graduate student research assistants in conducting prevention-related research.

**Current Grants Include:**



Funded by: USDA/NIFA



Funded by: National Cancer Institute

WWW.TNSTATE.EDU/PREVENTIONRESEARCH

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SUPPORTS THE 34TH ANNUAL  
 UNIVERSITY-WIDE RESEARCH SYMPOSIUM



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(Traditional and Online)

Bachelor of Science in Urban Studies

Minor in Nonprofit Management and Leadership

Minor in Sociology

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# TENNESSEE STATE UNIVERSITY

## College of Liberal Arts

*A broad education for achieving big dreams.*

### PROGRAMS

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Communications  
Criminal Justice  
English  
History  
Intelligence Studies  
Interdisciplinary Studies  
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Foreign Languages  
Geography  
Music  
Philosophy  
Political Science  
Teacher Certification  
Women's Studies

Major and minor programs in the College of Liberal Arts bring academic disciplines at the heart of a university education together with the challenges and opportunities facing today's students. By engaging with rich intellectual traditions, exploring global cultures, and developing vital career skills, Liberal Arts programs prepare their graduates for resilience and adaptability, lifelong learning, and leadership in a changing world.



The goals of the Annual Research Symposium, now in its 34th year, exemplify the educational philosophy and mission of the College, which seeks to elevate the life of the mind on campus, to promote authentic creativity, and to honor the unique gifts, interests, and goals of each student. In its presentation of both

student and faculty research, the Symposium also reflects the College's vision of a genuinely collaborative intellectual and creative community in which its faculty and students work, discover, and learn together.

The College is proud again this year to support the Annual Research Symposium and congratulates participating faculty and students on their vital contribution to the life of the University.



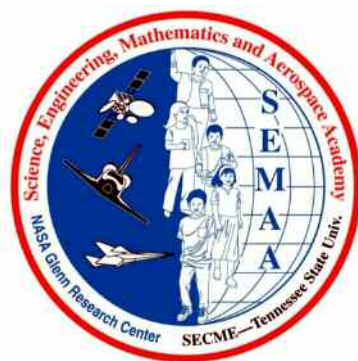
Gloria C. Johnson, Ph.D.  
Interim Dean

TENNESSEE STATE UNIVERSITY

# SEMAA PROGRAM

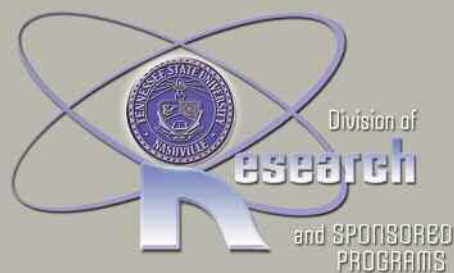
SCIENCE, ENGINEERING, MATHEMATICS AND AEROSPACE ACADEMY

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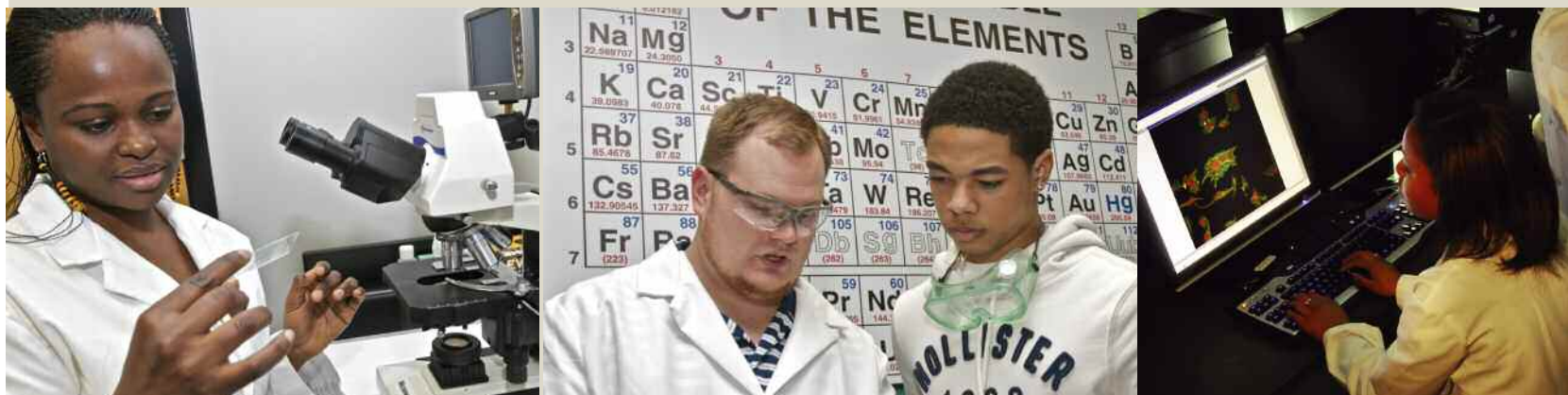


TENNESSEE  
STATE UNIVERSITY

# College of Agriculture, Human and Natural Sciences

Chandra Reddy, Ph.D.

Dean, Director of Research and Administrator of Extension



## ACADEMIC DEGREE OFFERINGS

### Department of Agricultural and Environmental Sciences

Bachelor of Science in Agricultural Sciences

Master of Science in Agricultural Sciences

Ph.D. - joint degree between Department of Agricultural and Environmental Sciences and Department of Biological Sciences

*Geospatial Information Systems (GIS) Graduate Certificate*

### Department of Biological Sciences

Bachelor of Science in Biology

Master of Science in Biology

### Department of Chemistry

Bachelor of Science in Chemistry

Master of Science in Chemistry

### Family and Consumer Sciences

Bachelor of Science in Early Childhood Education

Bachelor of Science in Family and Consumer Sciences with concentrations:

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## RESEARCH

Conducting a multi-million dollar research program:

Agriculture, Biology, and Chemistry projects in research laboratories at Nashville • The Research and Education Center at Nashville

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Center for Health Prevention Research, Nashville

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## CONTACT INFORMATION

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## College of Engineering

S. Keith Hargrove, Ph.D., *Dean*

### B.S. Degrees

Architectural Engineering

Civil Engineering

Electrical Engineering

Mechanical Engineering

Computer Science

Aeronautical and Industrial Technology

Mathematical Sciences

### M.S. Degree

Computer and Information Systems Engineering

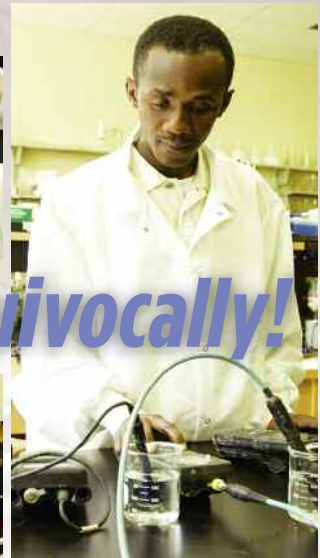
### Master of Engineering (M.E.) Degree

### Ph.D. Degree

Computer and Information Systems Engineering

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