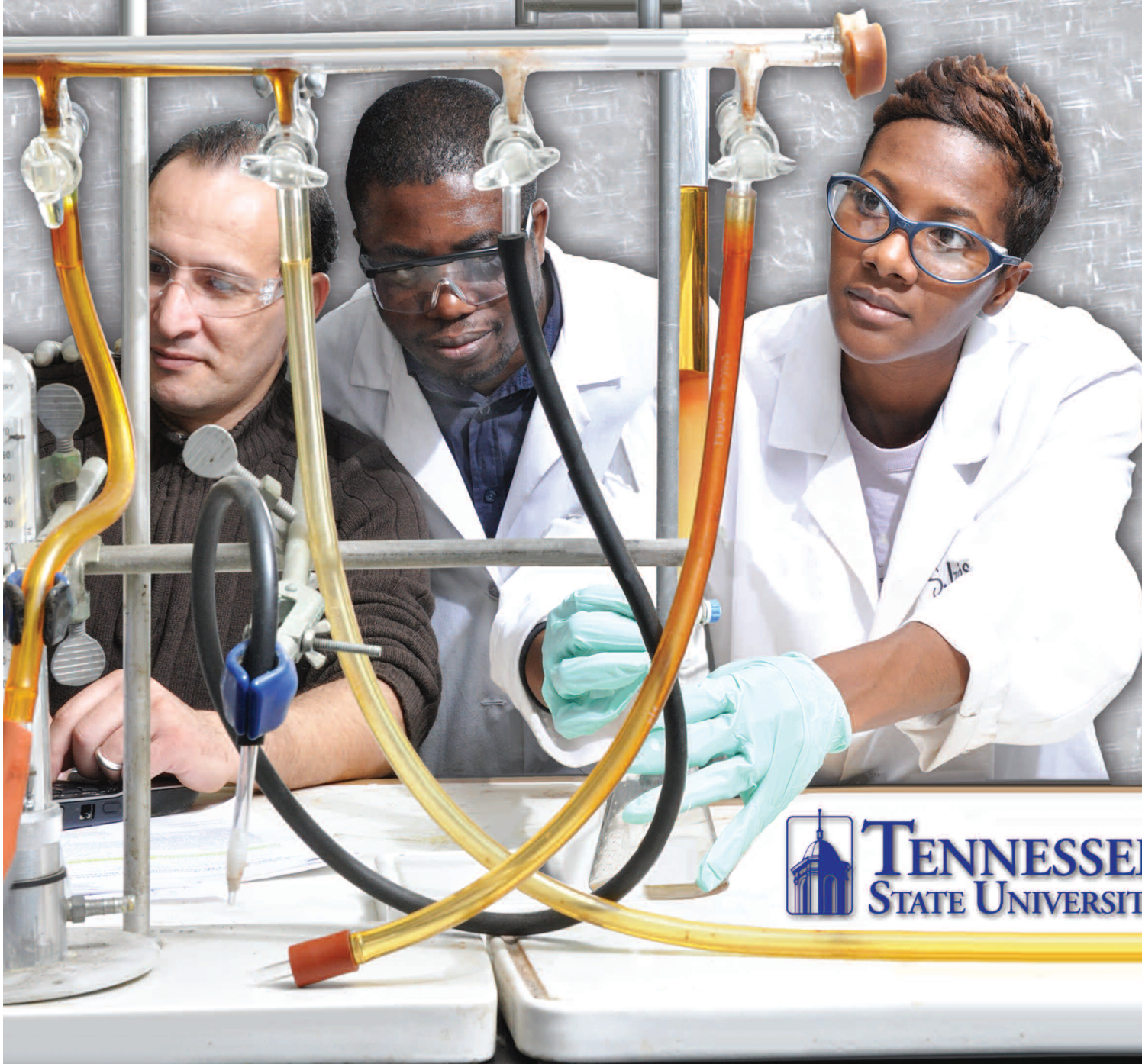


Research: Celebrating Excellence

35th Annual
University-Wide
Research Symposium
APRIL 1-5, 2013



**TENNESSEE
STATE UNIVERSITY**

TENNESSEE STATE UNIVERSITY

College of Liberal Arts

A broad education for achieving big dreams.

PROGRAMS

Art
Communications
Criminal Justice
English
History
Intelligence Studies
Interdisciplinary Studies
International Affairs
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 35th 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





Division of Research and Sponsored Programs

**35th Annual University-Wide Research Symposium
Official Symposium Program Booklet
Commemorative Issue**

*Research:
Celebrating Excellence*

Glenda Baskin Glover, Ph.D., J.D., CPA
University President

Millicent Lownes-Jackson, Ph.D.
Interim Provost and Executive Vice President for Academic Affairs

Jane Shaw-Jackson, Esq.
*Vice President for Administration
Senior Advisor to the President*

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

Cynthia Brooks
Vice President for Business and Finance

John Cade, Ed.D.
*Associate Vice President for Student Affairs
(Enrollment Management and Student Support Services)*

Dexter Samuels, Ph.D.
Associate Vice President for Student Affairs (Student Life)

Patricia Hairston
Interim Vice President for University Relations and Development

Nannette Carter Martin
Editor in Chief

Carolyn A. Caudle, Ph.D.
David E. Danner, J.D.
Contributing Editors



The 35th Annual University-Wide Research Symposium Booklet

April 2013 issue. This booklet is published by the Division of Research and Sponsored Programs and is published once a year.

Cover photograph by Vando L. Rogers, Nashville, TN. 2013. Graduate student researchers majoring in chemistry featured: Amine Laradji (left), John Apraku (center), and Shondra Gipson (right). Chemistry laboratory led by: Cosmas O. Okoro, Ph.D., Professor, Department of Chemistry

Copyright 2013 © Tennessee State University

2013 Research Symposium Committee

Jill Anderson, *College of Liberal Arts*

John Barfield, *Research and Sponsored Programs*

Sarabjit Bhatti, *College of Agriculture, Human, and Natural Sciences*

William Boadi, *College of Agriculture, Human, and Natural Sciences*

Celeste Brown, *Center of Excellence for Learning Sciences*

Reginald Cannon, *Research and Sponsored Programs*

Carter Catlin, *College of Agriculture, Human, and Natural Sciences*

Carolyn Caudle, *College of Agriculture, Human, and Natural Sciences,
(Symposium Co-chair)*

Sherry Crudup, *College of Agriculture, Human, and Natural Sciences*

David Danner, *Research and Sponsored Programs*

Phyllis Danner, *Research and Sponsored Programs*

Dollie Hodges, *College of Agriculture, Human, and Natural Sciences*

Christianna Howard, *APLS*

Michael Ivy, *College of Agriculture, Human, and Natural Sciences*

Kimberly Johnson, *College of Liberal Arts*

Owen Johnson, *College of Health Sciences*

Deborah Long, *College of Agriculture, Human, and Natural Sciences*

Mohan Malkani, *College of Engineering*

Nannette Martin, *Research and Sponsored Programs, (Symposium Co-chair)*

Reney McAtee, *College of Education*

Oscar Miller, *College of Public Service and Urban Affairs*

E. Lewis Myles, *College of Agriculture, Human, and Natural Sciences*

Yvonne Myles, *College of Agriculture, Human, and Natural Sciences*

Cosmas Okoro, *College of Agriculture, Human, and Natural Sciences*

Marilyn Parks, *Center of Excellence, Information Systems Engineering Management*

Belinda Patterson, *College of Health Sciences*

John Robinson, *College of Agriculture, Human, and Natural Sciences*

Moinuddin Sarkar, *College of Engineering, Physics and Astronomy*

David Shen-Miller, *Psychology*

Felita Smith, *Research and Sponsored Programs*

Andrea Tyler, *School of Graduate Studies and Research*

Corrine Vaughn, *Research and Sponsored Programs*

Abu Wahid, *College of Business*

Ex-Officio Members

Michael Busby, *Interim Associate Vice President for Academic Affairs
for Research and Sponsored Programs*

Gloria Johnson, *Interim Dean, College of Liberal Arts*

S. Keith Hargrove, *College of Engineering*

Brenda McAdory, *College of Agriculture, Human, and Natural Sciences,
(former Symposium Co-chair)*

Chandra Reddy, *Dean, College of Agriculture, Human, and Natural Sciences*

Dexter Samuels, *Associate Vice President for Student Affairs (Student Life)*

Michael Orok, *Dean, School of Graduate Studies and Research*

Valerie Williams, *Center of Excellence for Learning Sciences,
(former Symposium Co-chair)*



OFFICE OF
THE PRESIDENT

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



March 19, 2013

Dear Colleagues:

It gives me great pleasure to welcome each of you to the 35th Annual University-Wide Research Symposium, themed, "Research: Celebrating Excellence", here at Tennessee State University. I also want to extend a heartfelt welcome to our distinguished alumnus, Dr. S. Allen Counter ('65), Professor of Neurology for Harvard Medical School and Director of the Harvard Foundation, who has represented TSU well in his decades of international travels in the research service of humanity.

As we stride further, gracefully and strategically, into a fresh century, we must invoke the Tiger within us all. We must also reflect on our years of past progress while embracing the incredible opportunities shaping our future. This balance of enduring legacy and continuing excellence is embodied in the life and career of TSU alumnus Dr. Counter.

In this exciting information age where we take on a global perspective, I am pleased by the extent that our students and faculty embrace multi-disciplinary research and the advancement of technology in science, engineering, business, and the emerging humanities disciplines. This knowledge is transmitted to our students by the collaborative educational interactions and networking which this annual Symposium at TSU provides. Our students are offered a challenging and supportive arena for presenting their undergraduate and graduate research. I congratulate them all for their outstanding work.

The 2013 Symposium continues to serve as a bridge to the TSU family and broader community. It also provides an additional opportunity for me to reach out to faculty, students, alumni, and the community for innovative ideas and inspiration.

The TSU family is committed to promoting and encouraging student and faculty researchers, who are striving and blazing trails for the next generation of *Think, Work, and Serve* ambassadors.

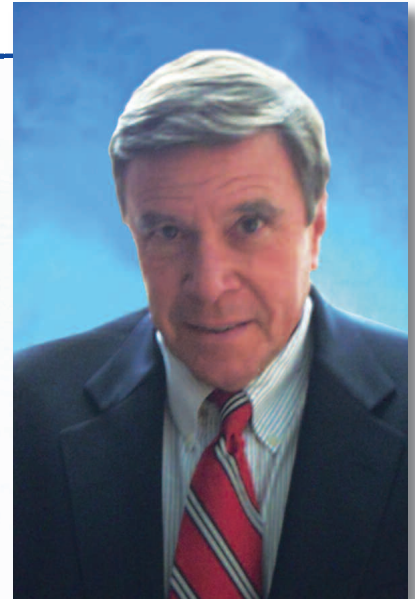
Sincerely,

Glenda Glover
President



OFFICE OF
THE VICE PRESIDENT

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



March 13, 2013

Dear Colleagues:

Welcome to the 35th Annual University-Wide Research Symposium at Tennessee State University.

The Symposium is comprised of a week of interdisciplinary presentations by student and faculty researchers seeking competitive awards for their research projects. Researchers from across the university spectrum experience a week of multi-disciplinary presentations wherein judges decide awards based on the category of research, and each working day of the Symposium features a speaker and a luncheon facilitating interdisciplinary networking.

During research week, we also celebrate the world-engaging contributions of our researchers, such as Tennessee State University alumnus and keynote speaker Dr. Allen Counter ('65), Professor of Neuroscience at Harvard University. Research is and must be a student-centered educational necessity at Tennessee State University in order to continue to deliver a world-class education for our graduates in a challenging and competitive 21st Century environment of global research as exemplified by Dr. Counter, who engages in international, interdisciplinary research as a professional explorer.

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 innovative legacy of our alumnus Dr. Counter.

As you confer and discuss the illuminating issues along this spectrum of knowledge during the research symposium, your dedicated efforts continue to animate and inspire our motto *Think, Work, and Serve*.

Sincerely,

Michael Busby, Ph.D.

Interim Associate Vice President for Academic Affairs
Office of Research and Sponsored Programs

Overview of Events

On-site Registration Schedule

Presentation Type	Location	Monday, April 1, 2013	Tuesday, April 2, 2013	Wednesday, April 3, 2013	Friday, April 5, 2013
Oral	RSP Building 1st Floor Lobby	8:30 am – 1:00 pm	8:30 am – 1:00 pm	8:30 am – 1:00 pm	8:30 am – 10:00 am
Poster	Jane Elliott Hall Lobby	1:00 pm – 4:00 pm	8:30 am – 1:00 pm		

MONDAY, APRIL 1, 2013

Nursing Day: James E. Farrell – Fred E. Westbrook Building, 118

7:30 a.m. – 1:00 p.m.	Poster session. Awards.
11:40 a.m. – 1:00 p.m.	Luncheon. Speaker, Pamela C. Hull, Ph.D.
9:00 a.m. – 12:30 p.m.	GRADUATE ENGINEERING I ORALS, RSP 163
9:00 a.m. – 1:00 p.m.	GRADUATE SCIENCE I ORALS, RSP 209
2:00 p.m.	OPENING CEREMONY AND PLENARY SESSION E. T. Goins Recital Hall, Performing Arts Center. Symposium Keynote Address – S. Allen Counter, Jr., D.M.Sc., Ph.D.

TUESDAY, APRIL 2, 2013

9:00 a.m. - 12:00 noon	GRADUATE ENGINEERING II ORALS, RSP 163
9:00 a.m. – 12:30 p.m.	GRADUATE SCIENCE II ORALS, RSP 209
12:30 p.m. – 4:30 p.m.	UNDERGRADUATE ORALS, RSP 163
Psychology Day: James E. Farrell-Fred E. Westbrook Building, 118, 1:00 p.m. – 7:00 p.m.	
2:00 p.m. – 5:30 p.m.	Poster Session. Faculty Research Blitz. Awards Ceremony.
6:00 p.m. – 7:00 p.m.	Speaker, Corrie Camalier, Ph.D.

Posters will be displayed in the Jane Elliott Hall Auditorium, April 2-4, 2013.

Overview of Events

WEDNESDAY, APRIL 3, 2013

Biology Day I: The E. T. Goins Recital Hall, Performing Arts Center

9:00 a.m. - 10:15 p.m. Speaker, Dannie Durand, Ph.D.

College of Health Sciences Day: Clement Hall 165

10:00 a.m. Plenary Poster Session (for general public)

12:00 noon - 1:00 p.m. Luncheon. Speaker, David Lehman, Ph.D., PT

10:30 a.m. - 11:45 a.m. GRADUATE EDUCATION, MEDICAL SCIENCES AND BUSINESS ORALS, RSP 163

College of Engineering Day: James E. Farrell-Fred E. Westbrook Building, 118

12:00 noon - 4:00 p.m. Luncheon. Speaker, Gregory D. Peterson, D.Sc.; Seminar

THURSDAY APRIL 4, 2013

9:00 a.m. - 11:30 a.m. POSTER SESSIONS AND JUDGING: GRADUATE AND FACULTY
Jane Elliott Hall Auditorium

Biology Day II: James E. Farrell-Fred E. Westbrook Building, 118

11:30 a.m. - 12:45 p.m. Speaker, Ricardo R. González Méndez, Ph.D.

1:00 p.m. - 3:00 p.m. POSTER SESSION AND JUDGING: UNDERGRADUATE
Jane Elliott Hall Auditorium

FRIDAY, APRIL 5, 2013

9:00 a.m. - 11:30 a.m. FACULTY ORALS; RSP 163

12:00 p.m. - 2:00 p.m. AWARDS LUNCHEON AND CLOSING CEREMONY
James E. Farrell-Fred E. Westbrook Building, 118
Luncheon.
Address, President Glenda B. Glover, Ph.D., J.D., CPA

Awards Ceremony

Adjournment

35TH ANNUAL UNIVERSITY-WIDE RESEARCH SYMPOSIUM

Research: Celebrating Excellence
Opening Ceremony and Plenary Session

MONDAY, APRIL 1, 2013

2:00 P.M. – 4:00 P.M.

E. T. GOINS RECITAL HALL, PERFORMING ARTS BUILDING

MISTRESS OF CEREMONIES, COREEN JACKSON, PH.D.
ASSOCIATE PROFESSOR, COMMUNICATIONS

PRELUDE.....ASHLEY MCFERREN, SOPRANO
DR. VICKI KING, PIANIST

TENNESSEE STATE UNIVERSITY “ALMA MATER”, *Laura M. Averitte, 1918*

WELCOME AND GREETINGSPRESIDENT GLENDA GLOVER
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 ADDRESSDR. S. ALLEN COUNTER, JR.
“SCIENTIFIC EXPLORATION: A REWARDING PURSUIT”
*Director of the Harvard Foundation
Professor of Neurology/Neurophysiology
Harvard Medical School/Massachusetts General Hospital
Professor of Neuroscience, Karolinska Nobel Institute, Stockholm, Sweden
Consul General of Sweden in Boston and New England
Knight of the Order of the Polar Star First Class*

REMARKS AND PRESENTATION OF AWARD.....DR. MICHAEL BUSBY

SPECIAL MUSIC.....ASHLEY MCFERREN, SOPRANO
DR. VICKI KING, PIANIST

“WHY DO THEY SHUT ME OUT OF HEAVEN?” *by Aaron Copland*

CLOSINGDR. CAROLYN CAUDLE
Research Symposium Co-chair

RECEPTION TO FOLLOW IN THE ROTUNDA

ASHLEY MCFERREN, SENIOR, Music Minor
DR. VICKI KING, ASSISTANT PROFESSOR of Music

KEYNOTE SPEAKER

S. Allen Counter, Jr., D.M.Sc., Ph.D.

Director, The Harvard Foundation of Harvard University

Professor of Neurology, Harvard Medical School

Neurophysiologist, Massachusetts General Hospital and Harvard Medical School

Dr. S. Allen Counter is a native of West Palm Beach, Florida. He entered Tennessee State University (then Tennessee Agricultural & Industrial State University) and received the Bachelor of Science degree in Biology and Audiology in 1965. Dr. Counter reflected, "I was inspired to pursue my career in biological sciences by Ms. Dorothy Exum [then Assistant Professor of Biology, TSU]." After earning his Ph.D. from Case Western Reserve University in 1979, and completing post-doctoral studies in Neurobiology at Harvard University, he joined the Harvard faculty of Biology (neurobiology). After several years of teaching undergraduate



Counter, "budding scientist" performs research while student at Tennessee A&I State University.

biology (pre-med) courses, graduate, and medical students, and creating a new neurobiology course at Harvard (Biology 128-Advanced Neurobiology), Dr. Counter was promoted to Associate Professor of Biology, and in 1981 was appointed to the professorial staff of the Harvard Medical School. He earned the Doctor of Medical Science (D.M.Sc.) degree from the Karolinska Institute in Stockholm, Sweden. In 1989, he was the recipient of the distinguished NAACP Image Award, and in 1994 the National Medical Association Hall of Fame Award. In 2003, Dr. Counter was appointed Visiting Professor of Neuroscience at the Karolinska Institute in Stockholm, Sweden. In 2004, Dr. Counter was appointed Consul General of Sweden in Boston and New England by the King of Sweden and the Swedish Ambassador to the U.S.

As a neurophysiologist and member of the

Harvard Medical School faculty (Neurology), Dr. Counter conducts both clinical and basic research studies on nerve and muscle physiology, auditory physiology, and neurophysiological diagnosis of brain-injured children and adults. Presently, his scientific research focuses on the neurobiological effects of lead and mercury exposure, magnetic resonance imaging of the auditory and vestibular (balance) systems and CNS, and multiple sclerosis (MS).

Dr. Counter is the founding Director of the Harvard Foundation, an agency established by the President and Deans of Harvard University in 1980 to improve intercultural understanding, equality, and peace among students, faculty, and the entire university community. The Harvard Foundation sponsors and conducts over 200 student and faculty programs each year that serve to inform the Harvard community on matters of culture, ethnicity, and international concerns.

Dr. Counter has published extensively in both cultural and scientific journals, including National Geographic and Scientific American. He has appeared on local and national television in numerous programs ranging from children's science shows ("3-2-1 Contact" and "Spaces") to talk shows. He is especially interested in increasing the scientific literacy of young people. To this end, he has presented talks and videos on science education to elementary, junior high, and high school students throughout the metropolitan Boston area and the nation. He has also lectured on topics in science, medical anthropology, ethics, and environmental health to scientists at Lawrence Livermore National Laboratories, to Fulbright Scholars, and internationally in, The People's Republic of China, Sweden,

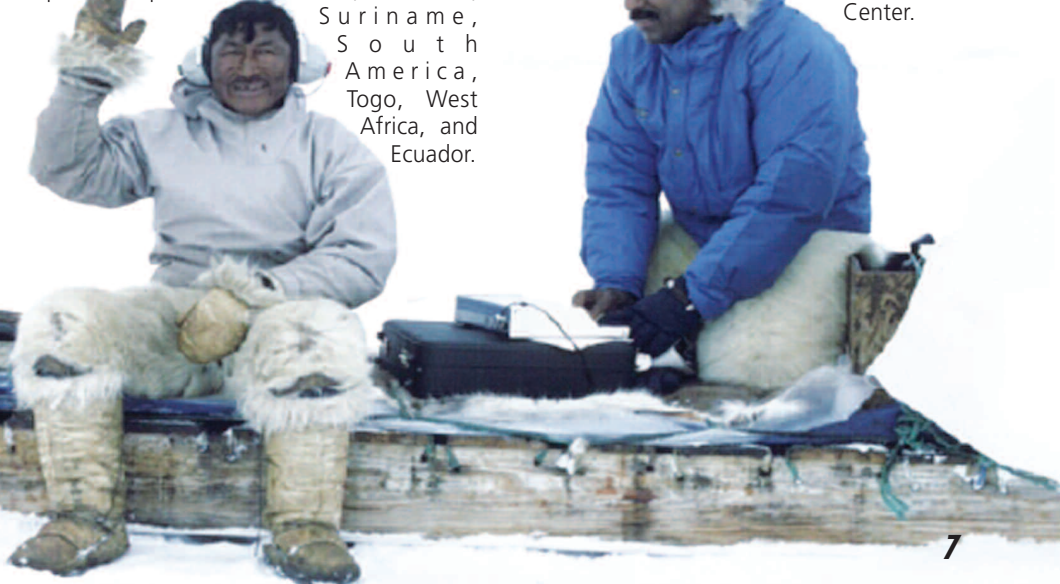
Suriname,
South
America,
Togo, West
Africa, and
Ecuador.



In addition to his scientific interests, he continues to work in the area of ethics in science and technology, nature conservation, and human rights at the international level. He has served as co-host of EcoForum, a nationally televised program on earth conservation. Dr. Counter has served as a member of the National Advisory Council of the National Institutes of Health and the National Institutes of Mental Health (appointed by the Secretary of Health and Human Services). Dr. Counter has also served as honorary Vice President of the Massachusetts Society for the Prevention of Cruelty to Children, and presently serves on boards of several organizations and institutions,

including the Crotched
Mountain
Rehabilitation
Center.

Arctic Exploration: In 1986, Dr. Counter traveled to the northernmost settlements in Greenland on a scientific mission and found the eightyn year-old Amer-Eskimo sons of North Pole discoverers Rear Admiral Robert E. Peary and Matthew A Henson. Background photo: Dr. Counter tests hearing of Inuit Eskimo hunter.



Dr. Rubye P. Torrey

Founder of Research Day at Tennessee State University, 1979

Dr. Rubye Mayette Prigmore Torrey, Founder of Tennessee State University's (TSU) "Research Day" in 1979, 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. She conducted Proposal Development Workshops for faculty and administrators and served as the Executive Officer for the federally regulated institutional committees on "The Use of Human Subjects in Research" and "The Use of Experimental Animals in Research." Dr. Torrey applied for and received a grant from two federal agencies for sponsoring a state-wide conference on "Human Subjects in Research" that included internationally acclaimed speakers. Under her guidance the campus Sigma Xi Club (a research honor society) became a valid chapter; Dr. Torrey launched a successful Inaugural Student Research Day at TTU in 2005.

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. Her Master of Science degree research was sponsored by the Tennessee Valley Authority, wherein she developed a chemical method for determining insipient spoilage in fruits and vegetables indigenous to the State of Tennessee. Dr. Torrey earned her doctorate degree in radiation-electroanalytical chemistry at Syracuse University in Syracuse, New York where she was elected to the Research Honor Society of Sigma Xi. 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.

Dr. Torrey has for many years reviewed and evaluated proposals for Federal government agencies such as the U.S. Department of Education and the National Science Foundation. Dr. Torrey has published articles in scientific journals and has been an invited speaker and workshop conductor at numerous professional conferences. She has also achieved the illustrious status of Emeritus membership in the American Chemical Society.



35 YEARS

Celebrating Excellence for



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. Rubye P. Torrey, Physical Sciences and chair of the committee.

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.



Oral Presentations

Monday, April 1, 2013

GRADUATE ENGINEERING I

9:00 am -12:30 pm Presentations will be in the Research and Sponsored Programs Building Room 163

9:00	GE1	SAFETY EFFECTIVENESS EVALUATION OF THE CABLE RAIL SYSTEMS IN TENNESSEE. Emaasit, Daniel*; Advisor, Dr. Deo Chimba. Department of Civil Engineering
9:15	GE2	TREATMENT OF COPPER, ZINC AND QUATERNARY AMMONIA COMPOUNDS WITH ZEOLITE-PERLITE-GRANULAR ACTIVATED CARBON® IN STORM-WATER FILTERS Hung-Wai Ho*, Advisor, Dr. Thomas Byl. Department of Civil and Environmental Engineering
9:30	GE3	STATISTICAL SCREENING OF SECONDARY CRASHES RESULTING FROM FREEWAY UNCONVENTIONAL VEHICLE INCIDENTS Boniphace, Kutela* and Deo Chimba; Advisor, Dr. Deo Chimba. Department of Civil Engineering
9:45	GE4	COMPARATIVE ANALYSIS OF FACTORS AFFECTING TRANSIT BUS CRASHES TO GENERAL TRAFFIC CRASHES McCummir, Kiara, and Deo Chimba. Advisor, Dr. Deo Chimba. Department of Civil Engineering.
10:00	GE5	COMPUTATIONALLY DETECTING INTERACTION SITES OF CYTOCHROME AND PHOTOSYSTEM I GREEN ENERGY Mishra, Pankaj*, Linda Emujakkporue and Wei Chen. Advisor, Dr. Wei Chen. Dept of Electrical and Computer Engineering
10:15	GE6	CLOUD COMPUTING BASED DETECTION SYSTEM TO DETECT MALICIOUS URLS Adas, Husam*; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering
10:30 – 10:45	BREAK	
10:45	GE7	DESIGN OF A DISTRIBUTED NETWORKED CONTROL SYSTEM FOR TURBINE ENGINE OPERATION Adedokun, Tayo* and Saleh Sabatto; Advisor, Dr. Saleh Zein-Sabatto. Department of Electrical and Computer Engineering.
11:00	GE8	BOUNDED STABILITY AND STABILIZATION VIA POWER SPECTRAL DENSITY ANALYSIS AND OPTIMAL CONTROL Tayo D. Adedokun*, Timothy F. Stratton; Advisor, Dr. Lee-Hyun Keel, Department of Electrical and Computer Engineering.
11:15	GE9	OPTIMUM TRANSMIT BEAMFORMING SCHEME FOR UNDERLAY COGNITIVE RADIO NETWORKS Bhattarai, Sudeep*, Liang Hong, Sachin Shetty. Advisors, Dr. Liang Hong and Dr. Sachin Shetty. Department of Electrical and Computer Engineering
11:30	GE10	SECURE IP GEOLOCATION FOR CLOUD AUDITING. Biswal, Biswajit*; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering
11:45	GE11	EVALUATING THE SECURITY OF QR CODE READER IN ANDROID SMARTPHONES. Gold, Kimberly*; Advisors, Dr. Sachin Shetty and Dr. Tamara Rogers. Department of Electrical and Computer Engineering.
12:00	GE12	MULTIVARIABLE CONTROLLER DESIGN WITH INTEGRITY. Sirisha Kallakuri*; Advisor, Dr. Lee Hyun Keel. Department of Electrical and Computer Engineering
12:15	GE13	DEVELOPMENT OF DECISION FUSION SOFTWARE SYSTEM FOR CRACK DETECTION FOR AIRCRAFTS STRUCTURAL HEALTH MONITORING Maged Mikhail* ; Advisor, Dr. Saleh Sabatto. Department of Electrical Engineering

GRADUATE SCIENCES I

9:00 am -1:00 pm Presentations will be in the Research and Sponsored Programs Building Room 209

9:00	GS1	SWITCHGRASS FOR BIOENERGY: OPTIMAL HARVEST TIMING FOR ENHANCED FEEDSTOCK QUALITY Allison, Abimbola*, and Jason de Koff; Advisor, Dr. Jason de Koff. Department of Agricultural and Environmental Sciences
9:15	GS2	SMALL FARM BENEFITS OF MEAT GOAT ENTERPRISE IN TENNESSEE Ezeadum, Azubuike*, Enefiok Ekanem, Mary Mafuyai-Ekanem and Surendra Singh; Advisors, Dr. Enefiok Ekanem and Dr. Surendra P. Singh. Department of Agricultural and Environmental Sciences.
9:30	GS3	STRUCTURE AND PERFORMANCE OF TENNESSEE BROILER INDUSTRY AND ITS PROSPECTS. Foaziatu Bukari*; Advisor, Dr. Surendra Singh, Department of Agricultural and Environmental Sciences
9:45	GS4	DEVELOPING A CONCEPTUAL MODEL FOR ASSESSING THE STRUCTURE AND COMPETITIVENESS OF THE TENNESSEE MEAT GOAT INDUSTRY. Denkins, M. Allen*, Enefiok Ekanem and Mary Mafuyai-Ekanem; Advisors, Dr. Enefiok Ekanem and Dr. Surendra P. Singh. Department of Agricultural and Environmental Sciences.
10:00	GS5	USE OF FLY ASH AS A GROWTH MEDIA IN SUSTAINABLE AGRICULTURE CROPS. DeGraphenreed, S*, A.E. Clardy and E.K. Dzantor. Advisor, Dr. E.K. Dzantor, Dept. of Agricultural and Environmental Sciences
10:15	GS6	USING A DIRECT-FED PROBIOTIC FORMULA TO ENHANCE THE GASTROINTESTINAL ABSORPTIVE PROPERTIES OF BROILER CHICKS, THEREBY IMPROVING PERFORMANCE AND FEED EFFICIENCY. Dixon, Beverly*, Samuel Nahashon, and Agnes Kilonzo-Nthenge. Advisors, Samuel Nahashon and Agnes Kilonzo-Nthenge. Department of Agricultural and Environmental Sciences
10:30 – 10:45	BREAK	
10:45	GS7	EVALUATION OF THE POTENTIAL FOR DIRECT-FED MICROBIALS TO ENHANCE UTILIZATION OF PHOSPHORUS IN BROILER CHICKENS. Donkor, Joseph* and Samuel Nahashon; Advisor, Dr. Samuel Nahashon, Department of Agricultural and Environmental Sciences

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

11:00	GS8	FACTORS INFLUENCING ETHNIC AND IMMIGRANT DEMAND FOR GOAT MEAT IN TENNESSEE Giwa, Damilola*, Enefiok Ekanem, Mary Mafuyai-Ekanem, Surendra Singh and Fisseha Tegegne; Advisor, Dr Enefiok Ekanem. Department of Agricultural Sciences
11:15	GS9	GOAT MEAT BUSINESS: AN OPPORTUNITY FOR INCREASING SMALL FARMER INCOME IN TENNESSEE Golkonda, Ravindra Bangari *, Enefiok Ekanem and Mary Mafuyai-Ekanem, Department of Agricultural Sciences
11:30	GS10	CHARACTERIZATION OF PROTEINS ASSOCIATED WITH ADIPOSE TISSUE ACCRETION IN BROILER CHICKENS. Kimathi, Boniface*, Samuel Nahashon, Xiaofei Wang, Garry Kelley and Ann Stewart; Advisors, Dr. Samuel Nahashon, Dr. Xiaofei Wang, Dr. Fur-Chi Chen, Department of Agriculture Sciences
11:45	GS11	THE ROLE OF MULTIPLE PROBIOTIC BACTERIA AND COMBINATION OF FRUCTO-OLIGOSACCHARIDE FOR HYPOCHOLESTEREMIA IN BROILER CHICKENS Sriharsha Kuppachi *: Advisor: Dr. Samuel Nahashon. Department of Agricultural Sciences
12:00	GS12	CHARACTERIZATION OF A BACTERIAL STRAIN FOR ITS ACTIVITY IN DEGRADING CELLULOSE AND PRODUCING BIOPOLYMER MATERIAL. Hui, Li*, Terrance Johnson, Koen Vercruysse, Suping Zhou; Advisors, Suping Zhou. Department of Agricultural Sciences; Koen Vercruysse, Department of Chemistry; Terrance Johnson, Department of Biological Sciences
12:15	GS13	ALUMINUM-INDUCED CHANGES IN TOMATO SEED DEVELOPMENT AND ASSESSMENT OF ACQUIRED AL-TOLERANCE. Okekeogbu, Ikenna*, Suping Zhou, and Sasikiran Sangireddy; Advisor, Dr Suping Zhou. Department of Agricultural Sciences
12:30	GS14	INHERITANCE OF POWDERY MILDEW RESISTANCE AND SCREENING FOR RESISTANCE MARKERS IN CORNUS FLORIDA Parikh, Lipi*, Margaret Mmbaga. Advisor, Dr. Margaret Mmbaga. Department of Agricultural Sciences
12:45	GS15	OPPORTUNITIES FOR MEAT GOAT PROCESSING IN TENNESSEE. Pongo, Clarence*, Enefiok Ekanem and Mary Mafuyai-Ekanem. Advisor, Dr. Enefiok Ekanem Department of Agricultural Sciences

Tuesday, APRIL 2, 2013 GRADUATE ENGINEERING II

9:00 am -12:30 pm Presentations will be in the Research and Sponsored Programs Building Room 163

9:00	GE14	NETWORK BANDWIDTH PROVISIONING FOR ENSURING SERVICE LEVEL AGREEMENT. Misra, Manu*. Advisor: Dr. Sachin Shetty, Department of Electrical Engineering
9:15	GE15	MINING CONCEPT DRIFTING NETWORK TRAFFIC IN CLOUD COMPUTING ENVIRONMENTS. Mukkavilli, Sai Kiran*; Advisor, Dr.Sachin Shetty. Department of Electrical and Computer Engineering
9:30	GE16	SECURE RADIO RESOURCE MANAGEMENT IN CLOUD COMPUTING BASED COGNITIVE RADIO NETWORKS. Khurram, Raza*, Advisor, Dr. Sachin Shetty. Department of Electrical Engineering
9:45	GE17	A TEST BED FOR NETWORKED CONTROL SYSTEMS. Stratton, Timothy F.*; Advisor, Dr. Lee-Hyun Keel. Department of Electrical and Computer Engineering.
10:00	GE18	DESIGN OF A CRACK DETECTION AND LENGTH ESTIMATION SYSTEM. Terrell, Kevin E.* and Saleh Zein-Sabatto. Advisor, Dr. Saleh Zein-Sabatto, Department of Electrical and Computer Engineering
10:15	GE19	EFFECT OF THE PRIMARY USER EMULATION ATTACK ON DELAYS IN A COGNITIVE RADIO NETWORK. Thanu, Meena*, and Sachin Shetty; Advisor, Dr. Sachin Shetty, Department of Electrical and Computer Engineering
10:30	GE20	DETECTION AND CLASSIFICATION OF DEFECTS ON METALLIC SURFACES USING IMAGE PROCESSING TECHNIQUES. Alsaiddi, Bashir* and Shirkhodaie, Amir; Advisor, Dr. Amir Shirkhodaie. Department of Mechanical and Manufacturing Engineering
10:45	GE21	MODELING OF PV/WIND/DIESEL HYBRID ENERGY SYSTEM FOR OPTIMUM PERFORMANCE AND SIZING Bello, Olumide*, Da'Janel Roberts-Smith; Advisor, Dr. Landon Onyebueke. Department of Mechanical Engineering
11:00	GE22	OPTIMIZATION OF AN INTEGRATED SOLAR-WIND-DIESEL GENERATOR HYBRID SYSTEM WITH STORAGE BANK. Eshete, Shimeles*; Advisor, Dr. Landon Onyebueke. Department of Mechanical and Manufacturing Engineering
11:15	GE23	WEATHERIZATION ASSESSMENT WITH AUGMENTED REALITY AND BIM: A SOLUTION TO ENERGY COST REDUCTION. Henderson, Jamal*, S. Keith Hargrove, John Drew; Advisor, Dr. S. Keith Hargrove. Dept of Mechanical & Manufacturing Eng.
11:30	GE24	DEVELOPMENT OF AN EFFICIENT MATHEMATICAL MODEL FOR LITHIUM ION BATTERIES (LIB) VIA ORTHOGONAL COLLOCATION. Staples, Christin*; Advisors, Roger Painter, Landon Onyebueke and S. Keith Hargrove. Dept of Mechanical and Manufacturing Engineering.
11:45	GE25	ROBUST HYBRID CONTROL OF NONLINEAR STOCHASTIC SYSTEMS WITH MULTIPLICATIVE NOISE UNDER MARKOVIAN SWITCHING. Stratton, Timothy*, Sivapragasam Sathananthan, and Lee-Hyun Keel; Advisor, Dr. Sivapragasam Sathananthan. Department of Physics and Mathematics.

Oral Presentations

Tuesday, APRIL 2, 2013

GRADUATE SCIENCE II

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

9:00	GS16	STRESS IN TOMATO ROOTS: A STUDY OF THE PHYSIOLOGICAL, BIOCHEMICAL AND MOLECULAR REGULATIONS. Sangireddy, S.*, I. Okekeogbu, S. Zhou, R. Sauve, S. Bhatti, Department of Agricultural Sciences, Tennessee State University. K. J. Howe, T. Fish and T. W. Thannhauser. Plant, Soil and Nutrition Research Unit, USDA-ARS, Ithaca, NY
9:15	GS17	VERTICAL FARMING AND URBAN DEVELOPMENT AROUND THE WORLD: THE SKY IS THE LIMIT. Sawyer, Trent* Allan and Enefiok Ekanem. Advisor, Dr. Enefiok Ekanem. Department of Agricultural Sciences
9:30	GS18	DEVELOPING ROOT GROWTH MODELS FOR SWITCHGRASS UNDER DIFFERENT LEVELS OF WATER DEFICITS. Zhuja Ye, * Suping Zhou and Roger J. Sauve. Advisors, Drs. Suping Zhou and Roger Sauve. Dept of Agricultural Sciences
9:45	GS19	EVALUATION OF GENE REGULATORS THAT CONTROL FAT DEPOSITION OF ABDOMINAL ADIPOSE TISSUE DURING EARLY DEVELOPING BROILER CHICKENS. Bohannon-Stewart, Ann,* Gary Kelley, Joseph Donkor, Boniface Kimathi, Carl Darris, James Tyus, Breyonna Jarrett, Samuel Nahashon, Xiaofei Wang; Advisors, Samuel Nahashon and Xiaofei Wang. Department of Agricultural Sciences and the Department of Biological Sciences
10:00	GS20	HYDROLOGY AND SOIL MICROBIOLOGY OF CEDAR GLADE ECOSYSTEMS. Cartwright, Jennifer*, William Wolfe, and Kudjo Dzantor; Advisor, Dr. Kudjo Dzantor. Department of Biological Sciences and Department of Agricultural Sciences
10:15 – 10:30 BREAK		
10:30	GS21	EFFECT OF VIOLACEIN EXTRACTED FROM DIFFERENT CHROMOBACTERIUM VIOLACEUM STRAINS ON GROWTH OF CANCER CELLS. Mehta, Toral*, E. Lewis Myles, Anthony O. Ejiofor and Terrance L. Johnson; Advisor, Dr. Terrance L. Johnson. Department of Biological Sciences.
10:45	GS22	ALTERED INSULIN SIGNALING INDUCED BY INCREASED REACTIVE OXYGEN SPECIES IN HYPERTENSIVE VASCULAR SMOOTH MUSCLE CELLS. Williams, Sparkle D*. Advisor, Dr. Benny Washington, Department of Biological Sciences.
11:00	GS23	EFFECTS OF SOIL ACIDITY AND FLY ASH ADDITION ON LEAF PHOTOSYNTHESIS OF BIG BLUESTEM AND EASTERN GAMAGRASS. Chih-Li, Yu ^{a*} , Dafeng Hui ^a , and E. Kudjo Dzantor ^b . ^a Department of Biological Sciences. ^b Department of Agricultural and Environmental Sciences; Advisors, Dafeng Hui and Kudjo Dzantor.
11:15	GS24	SYNTHESIS AND BIOLOGICAL STUDY OF 2, 9-PHENATHROLINE-1,10-DIALDEHYDE SCHIFF BASE DERIVED FROM DITHIOCARBAZATES. Arifuzzaman, Md. *, Karim, Mohammad R. * ¹ , Mirza, Aminul H. ¹ , Ali ,Mohammad A. ¹ , Siddiquee, Tasneem A.* and Dumenyo, C. Korsi ² . ¹ Department of Chemistry, ² Department of Agricultural and Environmental Sciences.
11:30	GS25	HEAVY METAL SEPARATION: ATOMIC ABSORPTION SPECTROSCOPY Menakaya, Olisa* and Dr. Tasneem Siddiquee; Advisor, Dr. Tasneem Siddiquee. Department of Chemistry
11:45	GS26	SODIUM NITRATE AND BISMUTH NITRATE ARE NEW NITRITE SOURCES IN PD-CATALYZED CROSS COUPLING CHEMISTRY. Saleh, Nabil*, and Mohammad Al-Masum; Advisor, Dr. Mohammad Al-Masum, Department of Chemistry
12:00	GS27	HYDROGENATION OF SMALL ORGANIC MOLECULES USING NICKEL-BASED NANOPARTICLES. Tyler, Lauren* and Danielle Howell; Advisor, Dr. Koen Vercruysse. Department of Chemistry
12:15	GS28	DETERMINING THE MECHANISM OF ACTION OF BACTERIAL BIOLOGICAL AGENTS ON POWDERY MILDEW SPORES IN CORNUS FLORIDA. Rotich, Emily*, M.T. Mmbaga and M. Zheng. Advisors, Dr. Margaret Mmbaga and M. Zheng.

Tuesday, April 2, 2013

UNDERGRADUATE

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

12:30	UG1	IMPROVING COMMUNICATIONS SPECTRUM EFFICIENCY VIA COGNITIVE RADIOS SYSTEMS. Henderson, Aaron*; Advisors, Dr. Liang Hong and Dr. Sachin Shetty. Department of Electrical and Computer Engineering
12:45	UG2	NETWORK TRAFFIC ANALYSIS ON HADOOP BASED CLOUD COMPUTING SYSTEM. Waled, Tayib*; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering
1:00	UG3	SOFTWARE DEFINE RADIO BASED REAL-TIME WIRELESS VIDEO TRANSMISSION. Zlibut, Cornel*, Advisors, Dr. Liang Hong and Dr. Sachin Shetty. Department of Electrical and Computer Engineering
1:15	UG4	PORTABLE LIGHT WEIGHT MULTIPURPOSE DEVICE TO NEGOTIATE OBSTACLES. White, Kamisha*, Knox, Jasmine; Advisor, Dr. Landon Onyebueke. Department of Mechanical and Manufacturing Engineering

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

1:30	UG5	AN ANALYSIS OF KONGLISH (KOREAN ENGLISH) IN K-POP MUSIC. Mendez, Natalia*, Tyler, Ashley* and Iris Johnson Arnold; Advisor, Dr. Iris Johnson Arnold. Department of Speech Pathology
1:45	UG6	REPRESENTATION OF THE BLACK FEMALE BODY IN POPULAR CULTURE: A BRIEF CONTENT ANALYSIS. Talbert, Britani*; Advisor, Dr. Barbara Kilbourne. Department of Sociology
2:00	UG7	UNDERREPRESENTED MINORITIES PERCEPTION OF AGRICULTURAL EDUCATION. Watson, Brittany* and John Ricketts. Advisor, Dr. John Ricketts. College of Agriculture, Human and Natural Sciences
2:15	UG8	CONSTRUCTION OF A MUTAGENESIS POPULATION OF FOXTAIL MILLET. Murphy, Arneshia*; Advisors, Drs. Suping Zhou and Dafeng Hui. College of Agriculture, Human & Natural Sciences
2:30	UG9	EFFECTS OF TRIBUTYL TIN EXPOSURES ON SECRETION OF INTERLEUKIN 6 FROM HUMAN IMMUNE CELLS. Mendez, Natalia*, Tyler, Ashley* and Iris Johnson Arnold; Advisor, Dr. Iris Johnson Arnold. Department of Speech Pathology
2:45	UG10	CHARACTERIZATION OF BACILLUS THURINGIENSIS STRAINS BY THEIR ANTIBIOTIC SENSITIVITY PROFILES. Platt, Derek*, Anthony Ejiofor, and Terrance Johnson; Advisors, Dr. Anthony Ejiofor and Dr. Terrance Johnson. Department of Biological Sciences
3:00	UG11	LITERATURE REVIEW OF BIOMASS TO BIOFUEL TECHNOLOGIES Burkett, Eon*; Advisor, Dr. Tasneem Siddiquee. Department of Chemistry
3:15	UG12	NON-ENZYMATIC DEGRADATION OF POLYSACCHARIDES USING L-ASCORBIC ACID. Greene, Ashley* and Koen P. Vercruysse; Advisor, Dr. Koen P. Vercruysse. Department of Chemistry
3:30	UG13	SELECTIVE HYDROGENATION OF MOLECULES CONTAINING ALKENE FUNCTIONALITIES USING POLYSACCHARIDE-STABILIZED NANOPARTICLES. Howell, Danielle* and Koen P. Vercruysse; Advisor, Dr. Koen P. Vercruysse. Department of Chemistry
3:45	UG14	REVIEW OF INCIDENT TRANSPORTATION EMERGENCY EVACUATION SYSTEMS FOR POPULATED AREAS. Housel, Heather*; Advisors, Dr. Deo Chimba and Dr. Sachin Shetty. Department of Civil and Environmental Engineering
4:00	UG15	EVALUATION OF STORMWATER FILTERS AT MAMMOTH CAVE NATIONAL PARK, KENTUCKY, 2011-12. McMillan, Sean ¹ , Ashley West ¹ , David Solomon ¹ , Roger Diehl ² , Victor Roland ^{1,3} , Irucka Embry ^{1,4} , Rick Toomey, III ⁵ , Acknowledgement - Thomas Byl ^{1,6} . ¹ Tennessee State University, Nashville, TN; ² University of Wisconsin, Madison, WI; ³ currently at Univ. of Arkansas, Fayetteville, AR; ⁴ currently at Tenn. Tech. University, Cookeville, TN; ⁵ MACA International Center for Science and Learning, Mammoth Cave, KY; ⁶ U.S. Geological Survey, Nashville, TN
4:15	UG16	THREE EXAMPLES OF CHEMICAL TRANSPORT IN STORM RUNOFF AT MAMMOTH CAVE NATIONAL PARK, KENTUCKY. West, Ashley ¹ , David Solomon ¹ , Sean McMillan ¹ , Hung-Wai Ho ¹ , Victor Roland ¹ , Irucka Embry ¹ , Rick Toomey ² , Roger Painter ¹ , Lonnie Sharpe ¹ , Dafeng Hui ¹ ; Advisor, Dr. Thomas Byl ^{1,3} . Civil & Environmental Engineering ¹ Tennessee State University, Nashville, TN, (VR currently at Univ. of Arkansas, Fayetteville, AR, IE currently at Tennessee Tech. University, Cookeville, TN); ² MACA International Center for Science and Learning, Mammoth Cave, KY; ³ U.S. Geological Survey, Nashville, TN

Oral Presentations Wednesday, April 3, 2013

GRADUATE EDUCATION, MEDICAL SCIENCES AND BUSINESS

10:30 am -11:45 am Presentations will be in the Research and Sponsored Programs Building Room 163

10:30	GEMB1	EMERGENCY EVACUATION PROCEDURES FOR HANDICAP STUDENTS, STAFF, AND FACULTY AT TENNESSEE STATE UNIVERSITY. Dichtel, Jessica*, Selina Fedd, Kim Morrow, Stephen Williams; Advisor, Dr. Dolores Mathis. Department of Teaching and Learning
10:45	GEMB2	COLLEGE STUDENT STRESSORS: A REVIEW OF FINDINGS BY TYPE OF QUALITATIVE METHOD. Ogunranti, Gbemileke*, Kayode Oke, Elliot Odigie, and Carrie Hurst; Advisor, Dr. Carrie Hurst. Dept of Business Administration
11:00	GEMB3	DO TRADITIONAL AND NON-TRADITIONAL COLLEGE STUDENTS DIFFER IN THEIR VIEWS OF SCIENCE? Zajdel, Joseph*, and Leigh Arino de la Rubia; Advisor, Dr. John Mark Hunter. Department of Teaching and Learning
11:15	GEMB4	MOTHER'S BODY ADIPOSITY INDEX: AN INDICATOR FOR CHILDHOOD OBESITY. Scott, Shari.* Maya Foster; Advisor, Dr. Janice Emerson. Center for Prevention Research
11:30	GEMB5	COMPARING PRE-SCHOOL AGED CHILDREN'S PHYSICAL ACTIVITY TO NASPE GUIDELINES IN A METRO NASHVILLE WIC POPULATION. Vance, Kayla.* Maya Foster; Advisor, Dr. Janice Emerson. Center for Prevention Research

Oral Presentations Friday, April 5, 2013

FACULTY

9:00 am -11:30 am Presentations will be in the Research and Sponsored Programs Building Room 163

9:00	F1	MOLECULAR TOOLS FOR GENETIC ANALYSIS OF ERWINIA TRACHEIPHILA, THE BACTERIAL PATHOGEN OF CUCUMBER WILT. Dumenyo, Korsi* and Sean N. Mason. Department of Agricultural and Environmental Sciences.
9:15	F2	PRODUCER PERCEPTION OF CONSUMER DEMAND FOR GOAT MEAT. Ekanem, Enefiok, Mary Mafuyai-Ekanem*, Surendra Singh, Fisseha Tegegne and Richard Browning, Jr. Department of Agricultural Sciences.
9:30	F3	MOLECULAR MECHANISMS OF AXON PRUNING IN THE CNS. McAdory, Brenda S.* ¹ , M. M. Riccomagno ² , J. G. Macopson ² , J. Shinn ² , M. G. Kazanietz ² , A. L. Kolodkin ² . ¹ Biological Sciences, Tennessee State University, Nashville, TN, ² Neuroscience, Johns Hopkins Medical Institute, Baltimore, MD

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

9:45	F4	A SURVEY OF RETENTION VARIABLES IN THE COLLEGE OF ENGINEERING. Johnson Arnold, Iris*, Tyler, Andrea*, Owen Johnson and Samuel K. Hargrove. College of Health Science, Graduate School and College of Engineering
10:00	F5	MEASUREMENTS OF RADON CONCENTRATIONS IN DIFFERENT WATER SOURCES IN JAMAICA. Bignall, Orville N. ^{1*} , Vincent Wright ² , Karla B. Ward-Hall ³ , Terreka S. Hart ⁴ , and Delano Chambers ² . ¹ Department of Mathematical Sciences, Tennessee State University, Nashville, TN. ² Northern Caribbean University, Mandeville, Manchester, Jamaica. ³ Department of Nuclear Engineering, University of Wisconsin Madison, Madison, WI. ⁴ Department of Life and Physical Sciences, Fisk University, Nashville, TN
10:15	F6	WEIGHT CHANGE IN HIGH SCHOOL STUDENTS DURING A COMPETITIVE PEDOMETER STUDY Housel, Natalie*, Jones, Timothy; Hughes, Emily and Starks, Dina from Hillwood High School. Dept. of Physical Therapy.
10:30	F7	A WOMAN'S TOUCH: A LOOK AT BLACK FEMALE INTIMACY IN PASSING AND THE WOMEN OF BREWSTER PLACE. Head, Naykishia D.* Department of Literature, Languages and Philosophy.
10:45	F8	INNOVATIVE APPROACHES TO NURSING EDUCATION: USING PEER-PEER LEARNING. Bompart, Carol*, Jacqueline Lewis, Elizabeth Knox. Department of Nursing.
11:00	F9	CHALLENGES FOR THE NURSERY GROWERS IN TENNESSEE: A SURVEY METHOD TO ASSESS THE EFFECTS OF THE ECONOMY ON SMALL BUSINESSES. Bhavsar, Hiren*, Ravindra Golkonda; Advisors, Dr. F. Tegegne, Dr. E. Ekanem and Dr. S.P. Singh, Department of Agricultural and Environmental Sciences
11:15	F10	SERVING TENNESSEE STATE UNIVERSITY WITH EXCELLENCE. Wilson, Seanne*; Advisor, Dr. Adrian Dexter Samuels, Division of Student Affairs and the College of Public Service and Urban Affairs.

Poster Presentations

FACULTY POSTERS

FP1	POLLEN GENOTYPING IN COTTON FOR GENETIC-LINKAGE ANALYSIS. Aziz, A.N. ^{1*} , J.N. Jenkins ² , Jack C. McCarty ² , D.M. Stelly ³ and S. Saha ² . ¹ Department of Agricultural and Environmental Sciences, Tennessee State University, ² USDA/ARS Genetics and Precision Agriculture Research Unit, Mississippi State, MS ³ Soil and Crop Science Department, Texas A&M University, College Station, TX.
FP2	FARMERS' PERSPECTIVES FOR GOAT ENTERPRISE IN TENNESSEE. Ekanem, Enefiok, Mary* Mafuyai-Ekanem and Zsa Zsa* Massey. Advisors, Dr. Enefiok Ekanem and Dr. Surendra Singh. Department of Agricultural and Environmental Sciences
FP3	GOMPERTZ-LAIRD MODEL PREDICTION OF OPTIMUM UTILIZATION OF CRUDE PROTEIN AND METABOLIZABLE ENERGY BY PEARL GREY GUINEA FOWL REPLACEMENT PULLETS. Samuel Nahashon*, Department of Agricultural and Environmental Sciences.
FP4	KINETIC PARAMETERS OF PHOSPHATASE: A QUANTITATIVE SYNTHESIS. Hui, Dafeng ^{a*} , Melanie A. Mayes ^b , and Gangsheng Wang ^b . ^a Department of Biological Sciences, Tennessee State University, ^b Environmental Sciences Division and Climate Change Science Institute, Oak Ridge National Laboratory, Oak Ridge, TN.
FP5	ASSESSMENT OF STORAGE METHODS FOR TREE BOLT BAIT PREPARATIONS USED AS TRAP ATTRACTANTS FOR WOOD-BORING INSECTS. Bray, Alicia M*, Jason Oliver, Nadeer Youssef, Vic Mastro, Christopher Ranger, Peter B. Schultz, and Michael E. Reding. College of Agriculture, Human and Natural Sciences
FP6	DIVERSITY OF WOOD-BORING BEETLES CAPTURED ON TRAPS BAITED WITH ETHANOL-INJECTED BOLTS FROM SINGLE OR MULTIPLE TREE SPECIES Oliver, Jason*, Christopher Ranger, Nadeer Youssef, Alicia Bray, Peter Schultz, Michael Reding, and Victor Mastro. College of Agriculture, Human and Natural Sciences
FP7	ASSESSING HBCU COLLEGE STUDENTS' ATTITUDES REGARDING OLDER ADULTS. Brown, Elizabeth*, Owen Johnson, and Terri Foxx. Department of Public Health, Health Administration and Health Sciences
FP8	COMPLEMENTARY, ALTERNATIVE, AND TRADITIONAL HEALTHCARE IN GENERAL INTEREST MAGAZINES WITH HIGH AFRICAN AMERICAN READERSHIPS – A CONTENT ANALYTIC STUDY. Chakravorty, Bonnie* and Elizabeth Brown. Department of Public Health, Health Administration and Health Science
FP9	IMPROVING THE HEALTH OF THE COMMUNITY: REDUCING UNINTENTIONAL INJURIES IN DRIVERS AND CHILD PASSENGERS Foxx, Terri*, A. Dexter Samuels and Sonja Revell. Department of Health Care Administration and Health Sciences.
FP10	ABSTRACT MOVING FROM A EURO CENTRIC APPROACH TO A CONSTRUCTIVIST MODEL; TRANSITIONING THROUGH CONCEPT MAPPING Knox, Elizabeth* and Carol Bompart. Department of Nursing
FP11	WATER QUALITY VARIABILITY IN TWO CREEKS DOMINATED BY NURSERY PRODUCTION IN THE COLLINS RIVER SUBWATERSHED Akuley-Amenyenu, Anonya*, Sarah Hovis, Aminul Chowdhury and Sam O. Dennis. Department of Agriculture and Environmental Sciences.

POSTER PRESENTATIONS

GRADUATE POSTERS

GRADUATE POSTER JUDGING THURSDAY APRIL 4, 9:00 -11:00

GP1	ECONOMIC POTENTIAL OF PRODUCING ETHANOL FROM SWITCHGRASS AND MISCANTHUS IN MID SOUTH REGION Bansal, Ankit*, P. Illukpitiya; Advisors, Surendra P. Singh, Fisseha Tegegne, Department of Agricultural and Environmental Sciences
GP2	SPECTROCHEMICAL ASSESSMENT OF TAP AND BOTTLE WATER FROM SELECTED MIDDLE TENNESSEE COUNTIES. Chowdhury, Aminul*, Anonya Akuley-Amenyenu and Sam O. Dennis; Advisor, Dr. Sam O. Dennis. Department of Agricultural and Environmental Sciences
GP3	POTENTIALS FOR COUPLING MICROALGAE BIOMASS PRODUCTION TO WASTEWATER TREATMENT AND BIOFUEL FEEDSTOCK PRODUCTION Fadeyi, Omowunmi*, and Kudjo Dzantor; Advisor, Dr. Kudjo Dzantor. Department of Agricultural and Environmental Sciences
GP4	FACTORS INFLUENCING DEMAND FOR GREENHOUSE PRODUCTS IN TENNESSEE. Golkonda,Ravindra Bangari *, Krisden Ingram; Advisors, Dr. F.Tegegne, Dr. E. Ekanem and Dr. S.P. Singh, Department of Agricultural and Environmental Sciences
GP5	THE PROTEOME AND MRNA EXPRESSION OF VIMENTIN IN THE ADIPOSE TISSUE OF BROILER CHICKENS. Stewart-Bohannon, Ann*, X. Wang, F. Chen, and S. Nahashon. College of Agriculture, Human and Natural Sciences.
GP6	ENHANCING CELLULOSIC HERBACEOUS PERENNIALS THROUGH ARBUSCULAR MYCORRHIZAL FUNGI SYMBIOSIS. Moore, Virginia*, Advisor, Dr. Kudjo Dzantor. Department of Agricultural Sciences
GP7	EFFECTS OF TRIBUTYL TIN EXPOSURES ON SECRETION OF INTERLEUKIN 1β FROM HUMAN IMMUNE CELLS. Brown, Shyrettha* and Margaret M. Whalen; Advisor, Dr. Margaret Whalen, Department of Chemistry
GP8	HIGH GLUCOSE INDUCES CELL DEATH OF CULTURED HYPERTENSIVE VASCULAR SMOOTH MUSCLE CELLS OF RAT THROUGH ERK 1 & 2 EXPRESSION. Byrd, Crystal and Benny Washington, Advisor, Department of Biological Sciences
GP9	HEXABROMOCYCLODODECANE ACTIVATES MITOGEN ACTIVATED PROTEIN KINASE IN HUMAN NATURAL KILLER CELLS. Cato, Anita*, E. Caroline Kibakaya, and Margaret M. Whalen; Advisor, Dr. Margaret M. Whalen. Department of Chemistry and Department of Biological Sciences
GP10	THE EFFECT OF TETRABROMOBISPHENOL A ON HUMAN NATURAL KILLER CELLS. Celada, Lindsay* and Margaret M. Whalen; Advisor, Dr. Margaret M. Whalen. Department of Biological Sciences
GP11	DETECTION OF UNIVERSAL STRESS PROTEIN IN STRAINS OF BACILLUS THURINGIENSIS. Fears, Letimicia*, Mailene King*; Advisors, Dr. Anthony Ejiofor and Dr. Terrance Johnson. Department of Biological Sciences
GP12	SYNTHESIS AND ANTIOXIDANT ACTIVITY DETERMINATION OF SOME FLUORINATED ACRIDONE DERIVATIVES. Apraku, John*. Advisors, Dr. Cosmas Okoro and Dr. William Boadi, Department of Chemistry
GP13	THE OXIDATION OR REDUCTION OF ORGANIC COMPOUNDS CHELATED BETWEEN A METAL AND POLYSACCHARIDE. Clark, Astiney*; Advisor, Dr. Koen Vercruysee Ph.D. Department of Chemistry.
GP14	C-ACYLATION OF 5-TRIFLUOROMETHYL-1,3-DIONE WITH SUBSTITUTED UNACTIVATED CARBOXYLIC ACIDS AND BENZOYL CHLORIDES Gipson, Shondra*, Advisors, Dr. Cosmas Okoro and Dr. William Boadi. Department of Chemistry
GP15	TRIBUTYL TIN (TBT)-INDUCED CHANGES IN CYTOKINE/CHEMOKINE SECRETION IN MICE. Hurd-Brown,Tasia*, Samuel Troy Pellom Jr., Margaret Whalen, Anil Shanker; Advisors, Dr. Margaret Whalen and Dr. Anil Shaker. Department of Chemistry and Department of Biochemistry and Cancer Biology
GP16	SYNTHESIS AND CHARACTERIZATION OF PHENANTHROLINE SUBSTITUTED SCHIFF BASES FROM 1,10-PHENANTHROLINE-2,9-DIALDEHYDE. Jaman, Zinia*, Advisor, Dr. Mohammad Karim. Department of Chemistry
GP17	EFFECT OF LOW DOSES OF QUERCETIN ON CARBONYLATION IN HEMOGLOBIN AND MYOGLOBIN. Johnson, Damitea*, Advisor Dr. William Boadi. Department of Chemistry
GP18	SYNTHESIS AND CHARACTERIZATION OF FLUORINATED SCHIFF BASES FROM 1,10-PHENANTHROLINE-2,9-DICARBALDEHYDE. Md. Anisur Rahman*; Advisor, Dr. Mohammad Karim, Department of Chemistry
GP19	HEALTH BEHAVIORS OF COLLEGE AGE AFRICAN-AMERICAN MALES: LOOKING AT GENDER CONSTRUCTS ON A DIVERSE SAMPLE Beavers, Mitchell*; Advisor, Dr. Maribeth Walker. Department of Psychology.
GP20	THE RELATIONSHIP BETWEEN PERCEIVED SOCIAL SUPPORT, PERCEIVED STRESS AND COPING SELF-EFFICACY IN RECENT IMMIGRANT COLLEGE STUDENTS. Berman, Amy B.*; Advisor, Dr. Marybeth Walker. Department of Psychology
GP21	THE PERCEIVED LEVELS OF BURNOUT AMONG COLLEGE PROFESSORS TEACHING AT TENNESSEE STATE UNIVERSITY. Brooks, Christopher*; Advisor, Dr. Maribeth Walker. Department of Psychology

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

GP22	THE IMPACT OF SCHOOL WIDE POSITIVE BEHAVIOR SUPPORT IMPLEMENTATION ON TEACHER EFFICACY. Darwin, Caryn*; Advisor Dr. Maribeth Walker. Department of Psychology
GP23	BRINGING DIVERSITY INTO PSYCHOLOGY PROFILING THE LIVES AND RESEARCH OF: DR. FRANCIS C. SUMNER, FATHER OF BLACK PSYCHOLOGY DR. INEZ B. PROSSER, MOTHER OF BLACK PSYCHOLOGY Greer, Darreon D.*; Advisor, Dr. Roosevelt Faulkner. Department of Psychology.
GP24	EXPLORING THE RELATIONSHIP BETWEEN SELF-ESTEEM, SOCIAL MEDIA USE, AND RISKY SEXUAL BEHAVIORS AMONG AFRICAN-AMERICAN COLLEGE STUDENTS. Hall, Denver*, Advisor, Dr. Maribeth Walker, Department of Psychology
GP25	AN INVESTIGATION OF RELIGIOSITY AND RELIGIOUS BEHAVIOR Harris-Wyatt, Georgetta*; Advisor, Dr. Maribeth Walker. Department of Psychology
GP26	FLOOR EFFECTS IN ASD DIAGNOSIS Jenkins, Kristeena*; Advisor, Dr. James Campbell. Department of Psychology.
GP27	A CHAIN REACTION: THE RELATIONSHIP BETWEEN SOCIAL SUPPORT AND SELF-ESTEEM AS A PREDICTOR OF ADDICTION IN HOMOSEXUALS LaDuke, Brittany*; Advisor, Dr. Maribeth Walker. Department of Counseling Psychology
GP28	EFFECTS OF TEACHER ATTITUDES ON THE USE OF SWPBS INTERVENTION CONCEPTS TO IMPROVE STUDENT BEHAVIOR IN SCHOOL CLASSROOMS. Newby, Kenya*, Advisor Dr. Maribeth Walker, Department of Psychology
GP29	EXAMINING THE ROLE OF AFRICAN AMERICAN COLLEGE STUDENTS' PERCEPTIONS OF OTHERS' COPING SKILLS ON STUDENTS' PERSONAL COPING AND PSYCHOLOGICAL WELL BEING Newman, Jacqueline A.*; Advisor, Dr. Maribeth Walker. Department of Psychology
GP30	AN INVESTIGATION OF TEACHERS RESPONSES TO BULLYING IN THE PUBLIC SCHOOL SYSTEM. Rice, Wanda*; Advisor, Dr. Maribeth Walker, Department of Psychology
GP31	BULLYING IN FEMALE ADOLESCENCE: CHARACTERISTICS OF BULLY AND TARGET/VICTIM ROLES THROUGH THE REPORTS OF ADOLESCENT GIRLS IN THOSE ROLES. Welsh, Lauren*; Advisor, Dr. Maribeth Walker. Department of Psychology
GP32	EXAMINING THE RELATIONSHIP BETWEEN CONFORMITY TO MASCULINE NORMS AND ATTITUDES TOWARD HELP-SEEKING AMONG AFRICAN AMERICAN MEN. Young, Teresa*; Advisor, Dr. Maribeth Walker. Department of Psychology
GP33	A COMPILATION OF STUDIES IN NEUROSCIENCE RESEARCH IMPLEMENTING NEUROSCIENCE RHYTHM-BASED INTERVENTIONS IN THE READING PROCESS. Driggins, Sylvia*; Advisor, Dr. Judith Presley, Department of Teaching and Learning
GP34	AN INVESTIGATION OF THE ROLES AND COMPLEXITIES EXPERIENCED BY STUDENTS ENROLLED IN A DUAL-LISTED COURSE. Duncan, Benjamin*, Leslie L. Duncan, Leigh Arino de la Rubia, Bethany L. Smith, Laura M. Benneyworth, Christopher Tasich; Advisor, Dr. John Mark Hunter. Department of Teaching and Learning.
GP35	PRONUNCIATION INTERVENTIONS FOR ENGLISH SPEAKERS LEARNING SPANISH. Risto, Angela*, Advisor, Nicole Kendall, Department of Teaching and Learning
GP36	A METHODOLOGY TO IDENTIFY FACTORS ASSOCIATED WITH PEDESTRIAN HIGH CRASH CLUSTERS USING GIS BASED LOCAL SPATIAL AUTOCORRELATION. Emaasit, Daniel*; Advisor, Dr. Deo Chimba. Department of Civil Engineering
GP37	THE IMPACT OF ABANDONED AND DISABLED VEHICLES TO FREEWAY INCIDENT DURATIONS. Boniphace, Kutela* and Deo Chimba; Advisor, Dr. Deo Chimba. Department of Civil Engineering
GP38	INDICATIONS OF OIL BIODEGRADATION AT A CRUDE OIL SPILL ON CLEAR CREEK, OBED WILD AND SCENIC RIVER NATIONAL PARK Spear, Loreal *, Jaala Brooks, Carlton Cobb, Brandon Cobb, Marquan Martin, Patrice Armstrong, Mike Bradley; Advisor, Tom Byl. Department of Civil and Environmental Engineering
GP39	NANO-SENSOR CONSTRUCTION AND CHARACTERIZATION FOR DETECTION OF LOW CONCENTRATIONS OF CHEMICAL VAPORS. Reynolds, Jonathan*; Advisors, Dr. S. Keith Hargrove, Dr. L. Ouyang, Dr. M. Malkani
GP40	PRELIMINARY DATA REGARDING ATTITUDES TOWARDS HPV AMONGST AFRICAN AMERICAN MOTHERS AND DAUGHTERS. Bond, Brea*; Advisors, Dr. Owen Johnson and Dr. Elizabeth Williams. Department of Public Health, Health Administration, and Health Sciences.
GP41	FACTORS INFLUENCING OCCUPATIONAL THERAPY STUDENTS ACROSS THE UNITED STATES TO PURSUE A CAREER IN MENTAL HEALTH. Allbaugh, Allison*; Advisor, Dr. Larry Snyder. Department of Occupational Therapy
GP42	THE THERAPEUTIC USE OF THE NINTENDO WII: A PRACTITIONER'S PERSPECTIVE. Bridges, Jessica*, Keegan McAllister, and David McGuire; Advisor, Dr. Larry Snyder. Department of Occupational Therapy
GP43	IS HOMELESSNESS CAUSED BY ONE DOMINATING FACTOR OR A COMPILATION OF FACTORS IN NASHVILLE, TN IN MALES AGED 30-50? Porter, Jessica*, Nima Lama, and Hollie Davis, Advisor Dr. Larry Snyder. Department of Occupational Therapy.

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

GP44	THE EFFECTS OF A THERAPEUTIC FIGURE SKATING PROGRAM ON BALANCE AND MOTOR COORDINATION OF CHILDREN WITH DEVELOPMENTAL DISABILITIES. Hardin, Bailie*; Advisor, Christine Watt, Department of Occupational Therapy
GP45	THE EFFECTS OF CONTEXTUAL PRIMING AND CUEING ON OCCUPATIONAL PERFORMANCE. Klope, Andrew*, Amber Wirtala, and Phillip Richmond; Advisors, Christine Watt and Dr. Larry Snyder. Department of Occupational Therapy
GP46	VISUAL MOTOR INTEGRATION AND HANDWRITING. Langford, Rachel*, Denise Gayle, and Latresha Pearce; Advisor, Dr. Larry Snyder. Department of Occupational Therapy
GP47	THE ATTITUDE AND KNOWLEDGE BASE REGARDING CARDIOPULMONARY RESUSCITATION IN OCCUPATIONAL THERAPY PROFESSIONALS IN MIDDLE TENNESSEE. Marple, Claire*, Olivia Brown, and Anna Haley; Advisor, Christine Watt. Department of Occupational Therapy
GP48	DEFINING OCCUPATIONAL THERAPY: ALLIED HEALTH CARE STUDENTS AS COMPARED TO OCCUPATIONAL THERAPY STUDENTS. Rogers, Lauren*, Cherise Longenecker, and Larielle Taylor; Advisor, Dr. Larry Snyder. Department of Occupational Therapy
GP49	ANIMAL INTERACTION AND ITS EFFECTS ON HUMAN VITAL SIGNS WITHIN THE GERIATRIC POPULATION. *Danielle Richardson, *Anne McGinn, and Ross Mckenzie; Advisors, Christine Watt and Larry Snyder. Dept. of Occupational Therapy
GP50	ATTITUDES OF OCCUPATIONAL THERAPY STUDENTS TOWARDS WORKING WITH PERSONS WITH HIV/AIDS: A COMPARISON STUDY. Sykes, Rachel*, Chelsea Fouch, and Lauren Williams; Advisor, Ms. Christine Watt. Department of Occupational Therapy
GP51	ROLE OF HIP MUSCULATURE STRENGTH IN FEMALES ATHLETES PRESENTING WITH PATELLOFEMORAL PAIN AND BENEFITS OF A STRUCTURED HIP STRENGTHENING PROGRAM. Alcorn, Michael*, Molly Foster, Courtland Murrell, Justin Phelps, and Brett Prentiss; Advisor, Dr. Deborah Edmondson. College of Health Sciences
GP52	BIOMECHANICAL FACTORS FROM THE LOWER EXTREMITY JOINTS ASSOCIATED WITH DEVELOPING ILIOTIBIAL BAND SYNDROME IN RUNNERS. Castleberry, Travis*, Jeff Cobble*, Joshua Orendorf*, Emily Stegeman*, and Jocelyn Woodason*; Advisors, Dr. Derek Charles and Dr. David Lehman. Department of Physical Therapy.
GP53	CAN ANODYNE LASER THERAPY IMPROVE THE SYMPTOMS OF DIABETIC PERIPHERAL NEUROPATHY SUCH AS PAIN LEVEL EXPERIENCED, LOSS OF BALANCE CONTROL, AND DECREASED BLOOD FLOW. Moye, Casey*, Dr. Kevin Lawrence, Brooks Parker, Russ Yates; Advisor, Dr. Kevin J. Lawrence. Dept of Physical Therapy
GP54	PHYSICAL THERAPY STANDARDIZED TESTS FOR DIAGNOSING MOTOR DELAYS IN CHILDREN. Maloney, Joshua*, Stegeman, Emily; Advisor, Dr. Natalie Housel, Department of Physical Therapy
GP55	A REVIEW OF RESEARCH EVIDENCE FOR DRY NEEDLING AND ISCHEMIC COMPRESSION INTERVENTIONS IN THE REDUCTION OF PAIN ASSOCIATED WITH MYOFASCIAL TRIGGER POINTS. O'Brien, Chris*, Sara Foster, Kayla Vance, Jonathan Brown, and Gena Thurston; Advisor, Dr. Ronald Barredo. Department of Physical Therapy
GP56	MOTOR RESPONSE PROGRAMMING AND MOVEMENT TIME IN CHILDREN WITH HEAVY PRENATAL ALCOHOL EXPOSURE. Pinner, Audrey A*; Robbins, Brad W*; Thompson, Whitney R*; Vaughn, Joshua A*; Walter, Tara L*; Advisor, Dr. Edilberto A Raynes. Department of Physical Therapy
GP57	PRESCHOOL TEACHERS' COMPLEX SYNTAX PRODUCTION IN THE CLASSROOM. Fisher, Jamie D.* ¹ , Charlene Saunders ² , Cassie Christian ² , Courtney Clayton ² , Helen Bell ² ; Advisors: C. Melanie Schuele ¹ and Iris Johnson Arnold ² . ¹ Department of Hearing and Speech Sciences, Vanderbilt University. ² Department of Speech Pathology & Audiology, Tennessee State University.

UNDERGRADUATE POSTERS JUDGING THURSDAY APRIL 4, 1:00-3:00

Poster Presentations will be in the Jane Elliott Hall, Auditorium

UP1	EXPERIENTIAL LEARNING OF BIOINFORMATICS TOOLS BY ANNOTATION OF A BACTERIAL GENOME. Monk, Bria*, Hui Li, Suping Zhou Advisor: Suping Zhou. Department of Agricultural Sciences
UP2	ECOPHYSIOLOGICAL PERFORMANCE OF PIGEONPEA IN NASHVILLE, TN: A THREE-YEAR FIELD EXPERIMENT. Porter, Kadijah*, Chih-Li Yu, Corie Wilson, Chloe Davidson, Advisors, Dr. Desh Duseja, Dr. Fisseha Tegegne, Dr. Dafeng Hui. College of Agriculture, Human, and Natural Sciences.
UP3	CHARACTERIZATION OF BACILLUS THURINGIENSIS ISOLATES BY ANTIBIOTIC SENSITIVITY AND SDS-PAGE PATTERN OF SOLUBILIZED CRYSTAL PROTEIN. Armstrong, Ebonie*, Erika Stanley, Advisors, Anthony O. Ejiofor and Terrance L. Johnson. Department of Biological Sciences
UP4	THE GENERATION OF GREEN FLUORESCENT PROTEIN TAGGED COLLAGEN IV. Dix, Jessica*, and Walker, Sha'Mere; Advisor, Dr. Michael Ivy. Department of Biological Sciences
UP5	COLLAGEN IV 7S DOMAIN EXAMINATION USING CASTANOSPERMINE. Fitzgerald, Johnathan*, Demetrius Sudduth, Billy Hudson, and Michael T. Ivy, Advisor, Michael T. Ivy, Ph.D. Department of Biological Sciences
UP6	DETECTING COPY NUMBER VARIATION IN CHICKEN GENE -LOC419112. Nelson, Rhia*, Xiaofei Wang; Advisor, Dr. Xiaofei Wang, Department of Biological Sciences
UP7	THE EFFECTS OF FLY ASH ON GERMINATION AND GROWTH OF BEAN SEEDS. Martin, K*, A.E. Clardy and E. K. Dzantor. College of Agriculture Human and Natural Sciences

*Denotes Presenter

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

UP8	EFFECTS OF DIBUTYLTIN EXPOSURES ON SECRETION OF INTERLEUKIN 1 BETA FROM HUMAN IMMUNE CELLS. Hopes, Simone* and Margaret M. Whalen; Advisor, Dr. Margaret Whalen. Department of Chemistry
UP9	EFFICIENT PROCESS FOR THE SYNTHESIS OF FLUORINE SUBSTITUTED AROMATIC KETONES. Islam, Tasfia*, Advisor, Dr. Mohammad Al-Masum. Department of Chemistry.
UP10	EFFECTS OF DIBUTYLTIN EXPOSURES ON SECRETION OF INTERLEUKIN 6 FROM HUMAN IMMUNE CELLS. Jefferson, Breia* and Dr. Margaret M. Whalen; Advisor, Margaret M. Whalen. Department of Chemistry.
UP11	ORGANIC POLLUTANTS: ANALYSIS AND DETECTION OF POLYCYCLIC HYDROCARBONS USING SPECTROSCOPIC METHODS. Johnson, Jerica*, Kerry Parchman, and Tiara, Thompson Advisor, Dr. William Y. Boadi Department of Chemistry
UP12	ANALYSIS AND DETECTION OF ORGANIC POLLUTANTS FROM MAMMOTH CAVE IN TENNESSEE. Parchman, Kerry* Jerica Johnson, Tiara Thompson, John Apraku, Advisor: Dr. William Boadi. Department of Chemistry
UP13	THE EXPLORATION OF MOLYBDENUM AND TUNGSTEN COMPLEXES AS CPCD PRECURSORS. Patton, Samuel* Moore, Joshua; Advisor, Dr. Joshua Moore – Department of Chemistry
UP14	CHARACTERIZATION OF YAMS USING SEM, IR AND RAMAN IMAGING TECHNIQUES. Pennington, Marcus*, Nsoki Phambu; Advisor, Dr. Nsoki Phambu. Department of Chemistry
UP15	CONSTRUCT AMINO ETHER DERIVATIVES BY MICROWAVE ENHANCED COPPER-CATALYZED CROSS-COUPPLING REACTION OF POTASSIUM ARYLTRIFLUOROBORATES AND ETHANOL AMINES. Quinones, Linda*; Advisor, Dr. Mohammad Al-Masum, Department of Chemistry
UP16	OXIDATION OF ALDEHYDE FUNCTIONALITIES USING POLYSACCHARIDE-STABILIZED GOLD NANOPARTICLES. Readus, Jade* and Koen P. Vercruysse; Advisor, Dr. Koen P. Vercruysse. Department of Chemistry
UP17	ANALYSIS AND DETECTION OF ORGANIC POLLUTANTS FROM THE MAMMOTH CAVE IN MIDDLE TENNESSEE BY UV-VIS AND GAS CHROMATOGRAPHY SPECTROMETRY. Thompson, Tiara*; Jerica Johnson, Kerry Parchman, John Apraku, Advisor, Dr. William Boadi. Department of Chemistry
UP18	MICROWAVE IRRADIATED PD-CATALYZED CROSS-COUPPLING REACTION OF POTASSIUM ORGANOTRIFLUOROBORATES WITH CARBOXYLIC ACID. Yeasmin, Sharia*, Advisor, Dr. Mohammad Al-Masum ^{1*} ¹ Department of Chemistry
UP19	CONCUSSION-RELATED NEUROCOGNITIVE FUNCTIONS AND EVENT-RELATED POTENTIALS IN UNDERGRADUATE STUDENTS: A PILOT STUDY. Hayes, Danicia*, Kiesa Kelly, Hajar Bousseksou, Jin Ziyang, Ashley Shelton; Advisor: Dr. Kiesa Kelly, Department of Psychology
UP20	DISTRIBUTIONS OF CALCIUM BINDING PROTEINS IN THE MEDIAL GENICULATE COMPLEX OF MACAQUE MONKEYS. Mendoza, Ileana*; Advisor, Dr. Lisa A. de la Mothe. Department of Psychology.
UP21	CONNECTIONS OF AREA 6d WITH FRONTAL CORTICAL AREAS IN THE MARMOSET MONKEY. Mitchell, Martina*, Cory Miller; Advisor, Dr. Lisa A. de la Mothe. Department of Psychology.
UP22	PERCEPTION OF ATTRACTIVENESS AMONG AFRICAN AMERICAN MEN AND WOMEN BASED ON CULTURAL AWARENESS AND ENVIROMENT Scales, Tiffany*, Martina Mitchell, and Kisha James; Advisor Dr. Mary Shelton. Department of Psychology.
UP23	THE INTERACTION OF DECISIVENESS, DECIDEDNESS, AND CHOICE IMPORTANCE ACROSS EDUCATIONAL COHORTS IN A SAMPLE OF UNDERGRADUATE STUDENTS. Zaire, LeAnne*; Advisor, Dr. Marie Hammond, Department of Psychology
UP24	IMPROVEMENTS TO THE RV WASTE-TRANSFER STATION DESIGN TO REDUCE CONTAMINATED STORM RUNOFF. Solomon, David* ¹ , Sean McMillan ¹ , Ashley West ¹ , and Lonnie Sharpe ¹ , Acknowledgement - Thomas Byl ^{1,2} . ¹ Tennessee State University, Nashville, TN; ² . U.S. Geological Survey, Nashville, TN
UP25	DESIGN AND DEVELOPMENT OF CANAL TRAVERSING DEVICE. Calhoun, James* and January Wisniewski, Advisor, Fenghui Uao. Department of Computer Science
UP26	DEVELOPMENT OF SECURE WEB BROWSER TO PROTECT SMARTPHONES FROM MALICIOUS WEBSITES. Miller, Ian*; Advisor, Dr. Sachin Shetty, Department of Electrical Engineering
UP27	A VAR SYSTEM FOR TEACHING & LEARNING IN MECHANICAL ENGINEERING. Morton, Benjamin W.*; Stephanie Starling, Advisors, Dr. Sachin Shetty, Dr. S.K. Hargrove. Department of Electrical Engineering
UP28	STUDY OF NAFION THIN FILMS FOR USE IN NANOSENSOR FOR EXPLOSIVE DETECTION. Mallard, Jonathan*, Thomson, Terrence*, Jonathan Reynolds; Advisors: Dr. Lizhi Ouyang. Dr. M. Malkani and Dr. S.K. Hargrove. Department of Physics and Math
UP29	LEADING CAUSES OF MORTALITY AMONG CHILDREN. Taylor, Pamela* and Brooks, Andrea; Advisor, Dr. Barbara Kilbourne and Robert S. Levine, MD, Meharry Medical College. Department of Sociology

The Research Symposium

The Annual University-Wide Research Symposium at Tennessee State University is celebrating 35 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 35 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); with current symposium chairs, Carolyn Caudle and Nannette Martin (2011-present).

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.

Celebrating Excellence for

35

Years

A Brief History

Celebrating Excellence for
35
Years

Nursing Day



Pamela Hull, Ph.D. Speaker

***“EVIDENCE-BASED PRACTICE:
 THE IMPERATIVE TO TRANSLATE RESEARCH IN
 CLINICAL PRACTICE”***

Pamela Hull, Ph.D., Assistant Professor, Vanderbilt University School of Medicine in the Department of Medicine, Division of Epidemiology

Prior to joining Vanderbilt faculty, Dr. Hull served as Associate Director of the Center for Prevention Research at Tennessee State University for seven years. She earned a Bachelor's degree in Sociology from Duke University, and a Masters and Ph.D. in Sociology from Vanderbilt University. Dr. Hull is a medical sociologist with expertise in the development and testing of behavioral interventions to promote cancer prevention behaviors in youth. Her

current research focuses on increasing HPV vaccine use, healthy eating, and physical activity among Hispanic and African American youth, using social marketing and new technology applications. Dr. Hull has over eight years of experience as an investigator conducting community-based participatory research, including designing and testing behavioral interventions using observational and randomized controlled study designs.

Schedule of Events

Monday, April 1, 2013 - James E. Farrell - Fred E. Westbrook Building, 118

7:30 am	Registration and Continental Breakfast
8:30 am	Occasion by Mrs. Deirdre Jones, Chairperson
8:45 am	Welcome Dr. Kathleen McEnerney, Dean – College of Health Sciences and Dr. Kathy Martin, Associate Dean – College of Health Sciences – Executive Director – Division of Nursing
9:00 am - 9:30 am	MSN and BSN Poster Presentations
9:35 am - 11:15 am	Concurrent Sessions
11:15 am - 11:35 am	Presentation by Sponsors
11:40 am - 12:15	Luncheon
12:20 pm - 1:00 pm	Speaker, Dr. Pamela C. Hull, Assistant Professor, Vanderbilt University School of Medicine, Department of Medicine, Division of Epidemiology



Corrie Camalier, Ph.D. Speaker

Corrie Camalier, Ph.D. Assistant Research Professor, Department of Neurological Surgery, Vanderbilt University Medical Center

Dr. Camalier received her Ph.D. in Neuroscience from Vanderbilt University in 2010. One of the main components of Dr. Camalier's research program centers on the neurobiological underpinning of emotion in humans. The recognition and regulation of emotion to guide appropriate responses is a part of everyday experience, and deficits are a common component of many developmental and mood disorders, including autism spectrum disorder, schizophrenia and depression. There is a growing appreciation that the neurobiological underpinnings of emotion may, in part, reside in deep brain structures such as the basal

ganglia. To pursue these questions, Dr. Camalier employs cutting edge techniques including microelectrode mapping and electrostimulation in the deep brain structures of humans. Such techniques are available in a neurosurgical setting during procedures for the treatment of movement disorders (e.g. Parkinson's) using deep brain stimulation. Through a better understanding of the basic structures that contribute to recognition and regulation of emotion in behavior, Dr Camalier's program aims to inform novel interventional strategies for treatment.

Schedule of Events

Tuesday, April 2, 2013 - James E. Farrell - Fred E. Westbrook Building, 118

2:00 p.m. – 4:00 p.m.	Poster Session (<i>posters will be judged from 2:00 p.m. – 3:00 p.m.</i>)
4:00 p.m. – 5:30 p.m.	Faculty Research Blitz
5:30 p.m. – 6:00 p.m.	Awards Ceremony
6:00 p.m. – 7:00 p.m.	Speaker, Corrie Camalier, Ph.D., <i>Assistant Research Professor, Department of Neurological Surgery, Vanderbilt University Medical Center</i>

Celebrating Excellence for
35
Years

Psychology Day

Celebrating Excellence for

35

Years

College of Health Sciences Day



David A. Lehman, Ph.D., P.T., Speaker

David A. Lehman, Ph.D., P.T., Associate Professor, Department of Physical Therapy, College of Health Sciences, Tennessee State University.

Dr. Lehman has been involved in academia for more than 20 years. He presently teaches the neuro-rehabilitation curriculum and research curriculum for the Tennessee State University Physical Therapy program. He has provided clinical services for people with all types of pathologies. He has worked throughout the country, in most physical therapy settings including acute care, rehab, long-term care, school systems, home health, and assisted living facilities. His most exciting clinical experience was providing services in most of these settings for a small

(fishing) community in rural Alaska.

Dr. Lehman has published and presented peer-reviewed research on improving the gait and balance of people with Parkinson's disease at national, regional, and local levels as well as led student research projects to national presentations and publication.

He has been a member of the American Physical Therapy Association (APTA) since 1987 and served on national level committees within the APTA.

Schedule of Events

Wednesday, April 3, 2013 - Clement Hall, 165

9:00 am – 10:00 am	Registration and Mounting of Posters
10:00 am – 12:00 noon	Plenary Poster Session (for general public)
12:00 noon – 1:00 pm	Luncheon. Speaker, Dr. David Lehman, Associate Professor <i>Department of Physical Therapy, College of Health Sciences,</i> <i>Tennessee State University</i>



Dannie Durand, Ph.D., Speaker

“What is Bio-Informatics?”

Dannie Durand, Ph.D., Associate Professor, Departments of Biological Sciences and Computer Science, Carnegie Mellon University

Dannie Durand’s research is in computational genomics, with a focus on the evolution of new genes via gene duplication, domain shuffling and horizontal transfer. She holds a BS degree in physics from Massachusetts Institute of Technology and MS and PhD degrees in computer science from Columbia University. Durand is the recipient of a David and Lucile Packard Foundation Science and Engineering fellowship and the Sloan Computational Biology

fellowship, Molecular Biology, Princeton University. In addition, she has served as an associate editor of the Transactions on Computational Biology and Bioinformatics Journal, and as chair of the 2005 Intelligent Systems for Molecular Biology, Phylogeny and Evolution. She has published a number of manuscripts and is co-author of the book, Comparative Genomics: Proceedings Lecture Notes in Computer Science/ Lecture Notes in Bioinformatics.

Schedule of Events

Wednesday, April 3, 2013 - The E. T. Goins Recital Hall of the Performing Arts Center

9:00 am	Welcome by Dr. Terrance Johnson, Chair <i>Department of Biological Sciences</i>
9:05 am	Registration and Mounting of Posters
9:10 am	Introduction of Speaker by Dr. Terrance Johnson
9:15 am	Speaker, Dr. Dannie Durand <i>Associate Professor, Departments of Biological Sciences and Computer Science Carnegie Mellon University, Pittsburgh, PA</i>
10:00 am	Presentation of Award

Celebrating Excellence for
35
Years

Biology Day I

Celebrating Excellence for

35

Years

College of Engineering Day



Gregory D. Peterson, D.Sc., Speaker

***"Engineering the Supercomputers of Tomorrow:
Engines of Discovery and Design"***

Gregory D. Peterson, D.Sc., Director of the National Institute for Computational Sciences (NICS), Professor in Electrical Engineering and Computer Science, The University of Tennessee, Knoxville

At NICS, Dr. Peterson is the principal investigator for the Kraken project, deploying the first petascale academic supercomputer that has provided the National Science Foundation (NSF) over 3 billion core hours for computational science and engineering researchers. Dr. Peterson is also co-principal investigator on the Extreme Science and Engineering Discovery Environment (XSEDE) project that provides a national cyberinfrastructure for NSF researchers.

For his research endeavors, Dr. Peterson has been able to publish extensively in peer-reviewed sources.

Dr. Peterson received his B.S. in Computer Science (1990), B.S. in Electrical Engineering (1990), M.S. in Computer Science (1992), M.S. in Electrical Engineering (1992), and the D.Sc. in Electrical Engineering (1994) from Washington University in St. Louis, Missouri.

Schedule of Events

Wednesday, April 3, 2013 James E. Farrell - Fred E. Westbrook Building, 118

12:00 noon	Welcome – Dr. S. Keith Hargrove, Dean, College of Engineering, TSU
12:05 pm	Occasion – Dr. Tamara Rogers, Associate Professor of Computer Science, TSU
12:10 pm	Introduction of Speaker – Dr. Ali Sekmen, <i>Head, Computer Science Department, TSU</i>
12:15 pm	Luncheon
12:40 pm	Speaker, Dr. Gregory D. Peterson, Professor, Electrical Engineering and Computer Science. Director, National Institute for Computational Sciences. The University of Tennessee, Knoxville
1:30 pm	Presentation of Award
2:00 pm – 4:30 pm	Engineering Seminar– Agricultural Information Technology Center (AITC) <i>"Fundamentals of High-performance Computing for Bioinformatics Applications"</i>



Ricardo R. González Méndez, Ph.D., Speaker

"Bio-Informatics in Medicine"

**Ricardo R. González Méndez, Ph.D., Professor of Radiological Sciences
and Director of the Medical Physics Division, University of Puerto Rico School of
Medicine in San Juan, Puerto Rico**

Dr. González Méndez began his distinguished career at the University of Puerto Rico in 1989. Prior to his appointment at UPR, he received the BS in Biology from the University of Puerto Rico (Mayagüez, PR) in 1978; completed a postdoctoral research fellowship with the Nuclear Magnetic Resonance Laboratories and Department of Anesthesia at the University of California, San Francisco in 1986; and received the Ph.D. in Biophysics from Stanford University in 1987.

In addition to his faculty and research posts at the UPR School of Medicine, González Méndez's ongoing research, professional experience and accomplishments in the academy have earned him advancement into prestigious higher administration posts; he has served as associate dean and associate provost of Academic Affairs and director of Academic Computing at the UPR Medical Sciences campus. He has also held external special appointments to the Environmental Protection Agency (EPA) Science Advisory Board (SAB) as a consultant, member, and sub-committee

chair.

González Méndez possesses a scholarly record of grantsmanship which dates back to 1992 and includes current research focusing on the prediction of molecular function and structure of proteins using the sequence, development of new MRI contrast agents, and the development of academic and research programs in Bioinformatics at minority institutions. In the early 2000s, he became affiliated with the world-renowned Pittsburgh Supercomputing Center and Carnegie Mellon University in the pursuit of his interest in bioinformatics research. During his time collaborating with the Center, he has helped generate multi-year funding from the National Institutes of Health (NIH) for training grants to establish bioinformatics programs at MARC (Minority Access to Research Careers) institutions spanning from 2002 through 2016. González Méndez's excellence in research has yielded many peer-reviewed journal publications and book chapters that are read widely in the international scientific community.

Schedule of Events

Thursday, April 4, 2013 - James E. Farrell - Fred E. Westbrook Building, 118

11:30 am	Welcome by Dr. Terrance Johnson, Chair, Department of Biological Sciences
11:35 am	Occasion
11:40 am	Introduction of Speaker by Dr. Terrance Johnson
11:45 am	Speaker, Dr. Ricardo R. González Méndez Professor of Radiological Sciences and Director of Medical Physics Division University of Puerto Rico School of Medicine, San Juan, Puerto Rico
12:40 pm	Presentation of Award

Celebrating Excellence for
35
Years

Biology Day II

Awards Luncheon and Closing Ceremony



Glenda Baskin Glover,
Ph.D., JD, CPA, *Speaker*

**President,
Tennessee State
University**

Dr. Glenda Baskin Glover began serving as President of Tennessee State University on January 2, 2013. She has advanced a five-point vision that includes: (1) academic progress and customer service, (2) fund raising and partnerships, (3) diversity and inclusion, (4) shared governance, and (5) business outreach.

Dr. Glover was formerly the Dean of the College of Business at Jackson State University in Jackson, Miss., where she led the College of Business throughout the accreditation process, and spearheaded the implementation of the nation's only Ph.D. in Business at an HBCU. She is a certified public accountant, an attorney, and is one of two African American women to hold the Ph.D.-CPA-JD combination in the nation.

Dr. Glover's educational development began as a student at Tennessee State University, where she majored in mathematics. After graduating with a Bachelor of Science degree, she pursued the Master of Business Administration at Clark Atlanta University. She then completed her doctorate in business from George Washington University, and later completed her law degree from Georgetown University.

Prior to joining Jackson State University, Dr. Glover served as Chairperson of the Department of Accounting at Howard University. Her past employment also includes positions as Senior Vice President and Chief Financial Officer of an engineering firm, a tax manager at a major public utility company, and an accountant with a Big-Four CPA firm.

Dr. Glover has been a corporate board member of three publicly traded corporations. These include Citigroup-Student Loan Corporation, American Learning Corporation and First Guaranty Bancshares. She served as Chair of the Audit Committee or Financial Expert on each Board. Dr. Glover also is a member of the Advisory Board of Regions Bank of Mississippi, and Chairman of the Board of Commissioners of the Jackson (Mississippi) Airport Authority.

Dr. Glover is the author of more than one hundred articles and papers, and is regarded as one of the nation's experts on corporate governance. She is a member of several professional, civic and non-profit organizations, and is the recipient of numerous awards and honors. She is married to Charles Glover, and they have two adult children, Attorney Candace Glover and Dr. Charles Glover, II.

Friday, April 5, 2013 12:00 P.M. – 2:00 P.M.
2013 James E. Farrell - Fred E. Westbrook Building, 118

Prelude, Tennessee State University "Alma Mater", *Laura M. Averitte, 1918* (Instrumental)

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

Invocation, Mr. John Barfield

The Luncheon

Presentation of Speaker, Dr. Michael Busby

The Address from the President, Dr. Glenda Baskin Glover,
President, Tennessee State University

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

- **Speaker Award** • **Student Awards** • **Research Mentor Award**
- **Million Dollar Club for Research Inductions and Awards**

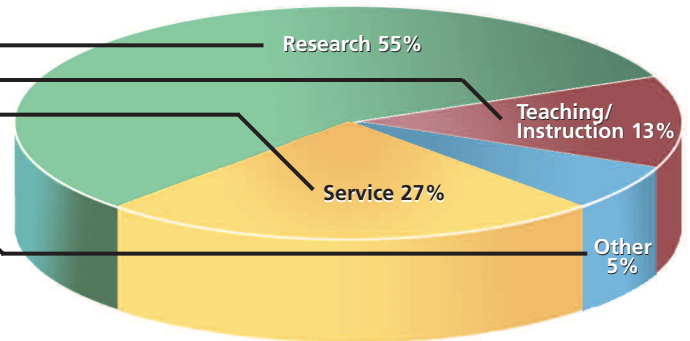
Acknowledgements and Closing Remarks, Dr. Carolyn Caudle, *Symposium Co-Chair*

Adjournment

Research and Sponsored Programs Project Awards FY 2012

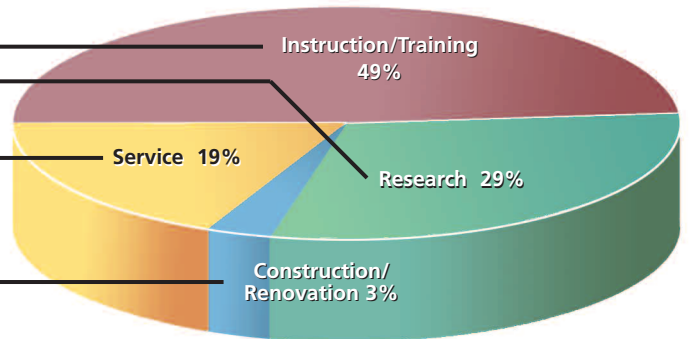
SUBMISSIONS BY PROJECT TYPE

Research	\$36,175,705	(72)
Teaching/Instruction	\$8,417,675	(23)
Service	\$17,456,046	(24)
Other	\$3,324,136	(15)
TOTAL	\$65,373,563	(134)



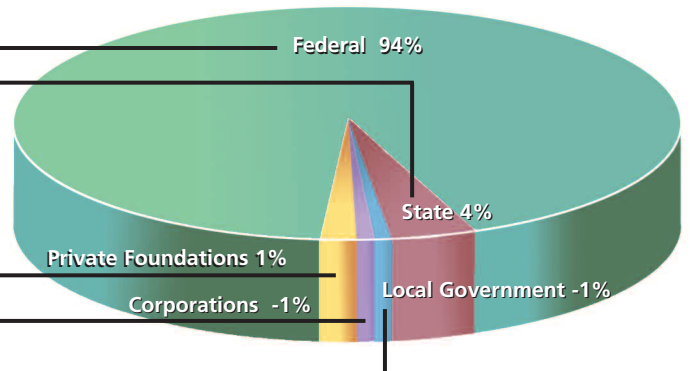
AWARDS BY PROJECT TYPE

Instruction/Training	\$23,680,457	(96)
Research	\$14,006,998	(96)
Service	\$9,199,131	(45)
Construction/Renovation	\$1,333,000	(2)
TOTAL	\$48,219,586	(239)



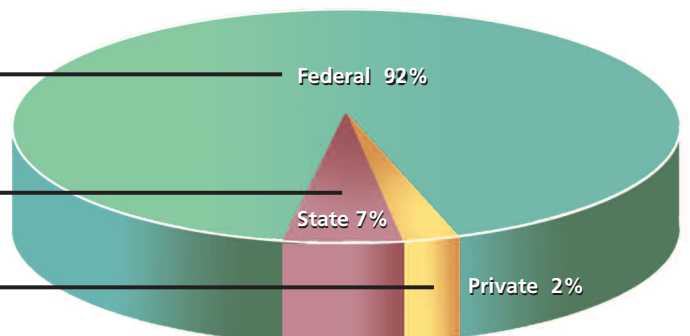
SUBMISSIONS BY SOURCE

Federal	\$61,737,194	(107)
State	\$2,818,998	(15)
Private Foundations	\$980,886	(8)
Corporations	\$215,000	(3)
Local Government	\$6,000	(1)
TOTAL	\$65,373,563	(134)



AWARDS BY SOURCE

Federal	\$44,323,481	(213)
State	\$3,167,561	(13)
Private	\$728,544	(13)
TOTAL	\$48,219,586	(239)



OFFICE OF THE VICE PRESIDENT FOR ACADEMIC AFFAIRS

"Committed to Excellence in Teaching, Research and Community Service"

Academic Units and Programs

- Center for Extended Education and Public Service
 - College of Agriculture, Human, and Natural Sciences
 - College of Business
 - College of Education
 - College of Engineering
 - College of Health Sciences
 - College of Liberal Arts
 - College of Public Service and Urban Affairs
 - Office of International Affairs
 - Office of Planning and Assessment
 - Research and Sponsored Programs
 - School of Graduate Studies and Research
 - Service Learning and Civic Engagement
 - University Libraries
 - University Honors Program
 - WRITE Center

Dr. Millicent Lownes-Jackson

*Interim Provost and Executive
Vice President for Academic Affairs*

615-963-5301

BIOINFORMATICS TRAINING

FOR STUDENTS, FACULTY AND RESEARCHERS
AT MINORITY SERVING INSTITUTIONS

Bioinformatics Summer Institute

June 18 – 28, 2013
Apply by: April 1, 2013

This two-week intensive training workshop provides a robust background in bioinformatics suitable for teaching and research. The first week of training focuses on the analysis of a gene and/or protein family. The second week focuses on assembling and analyzing data from next-generation sequencers.



Bioinformatics Internship

June 3 – August 2, 2013
Apply by: February 28, 2013

Through this program, participants will work directly with the Pittsburgh Supercomputing Center staff in Pittsburgh on a bioinformatics research project of the participants choosing. As a part of the internship, participants will attend the PSC's Bioinformatics Summer Institute.

For more information, or to apply, visit:
<http://biou.psc.edu/signup/>

Financial support in the form of lodging and transportation is available to eligible Bioinformatics Summer Institute and Bioinformatics Internship participants through the National Institutes of Health Minority Access to Research Careers (MARC) grant: T36-GM-095335



BioU  **Pittsburgh Supercomputing Center
Bioinformatics Education Center**

Pittsburgh Supercomputing Center, 300 S. Craig Street, Pittsburgh, PA 15213. Phone: 412-268-4960
biou.psc.edu www.psc.edu

Congratulations to the Newest Million Dollar Club Members

Million Dollar Club Celebrates Researchers Awarded \$1,000,000 or More Per Grant

Sandria Godwin



Sandria L. Godwin, Ph.D., R.D., L.D.N., Professor and Program Leader of Food Science, Nutrition and Health Team. Department of Family and Consumer Sciences, College of Agriculture, Human and Natural Sciences, Tennessee State University (TSU).

Dr. Godwin, a graduate of Kansas State University (BS, MS, Ph.D.) in Manhattan, Kansas, has received over \$11 million in external funding since joining the faculty of Tennessee State University in 1982. Specializing in research that directly improves consumers' lives, her work has been featured on National Public Radio, the Jay Leno Show, the John Tesh Show, and in dozens of magazines and newspapers. In addition to publishing extensively in refereed journals, Dr. Godwin has authored numerous publications and educational programs intended for the public. She was inducted into The Agriculture and Home Economics Hall of Fame at TSU in 2009. Dr. Godwin has also been recognized with the Leader Award from the American Association of Family and Consumer Sciences, the TSU Blue and White Award for Research and Creative Arts, TSU Researcher of the Year, the Distinguished Research Award from the College of Human Ecology at Kansas State University, the Partner Award from the Metropolitan Action Commission, and the Community Health Hero Award from the Metropolitan Nashville (Davidson County) Health Department.

Landon Onyebueke



Landon Onyebueke, Ph.D., Professor. Department of Mechanical Engineering, College of Engineering, Tennessee State University (TSU).

Dr. Onyebueke has proven to be one of the College of Engineering's most productive researchers. His research and publications are in the areas of modeling and simulation, design methodologies including probabilistic and axiomatic design methods, engineering systems design and analysis. He has received grants from the U.S. Navy to conceptualize, design and manufacture an umbilical retract mechanism. He received the distinguished research award from TSU's Research and Sponsored Programs (2001). He has received grants from the Boeing Company almost all the years he has been at TSU. One of the research projects resulted in a joint U.S. patent between Boeing and TSU (US Patent no. US 6,947,875 B2) and is titled "Apparatus and Method for Virtual Accommodation." His most recent accomplishment was the development of a "Seat Comfort Design Tool" for the design of airplane seats, ejection seats and office chairs, a project funded by Boeing. He is currently funded by the Boeing Company for research in energy harvesting and storage systems; and has received awards from NASA, US Navy, Boeing Company, and TSU. Dr. Onyebueke is a Boeing Welliver Fellow. He received his MS and Ph.D. degree in Mechanical Engineering from the Institut National Polytechnique de Lorraine (INPL), France (1989); and his BS in Mechanical Engineering from the University of Ibadan, Nigeria.

Valerie Williams



Valerie Gail Williams, B.E., M.B.A., Interim Director. Center of Excellence for Learning Sciences (COE-LS), Tennessee State University (TSU).

Ms. Williams has over 15 years of experience in business operations and research administration, and previous experience as a chemical and environmental engineer. She began her research roots at Vanderbilt University as a student working in the biomedical engineering lab. In May 1995, she received her BE in Chemical Engineering from Vanderbilt University. Later, she received her M.B.A. from Tennessee State University with an emphasis in operations management. Professionally, Ms. Williams has actively participated with the National Council of University Research Administrators (NCURA) since 2007; currently serving as a committee chair on the NCURA Region III Board. Ms. Williams has worked at TSU as an adjunct professor in the College of Business since January 2005; a year later, she joined the University as an associate investigator performing research within the COE-LS. In August 2007, she was promoted to associate director assuming responsibility for business operations and compliance management of a \$10 million dollar research center. In August 2011, Ms. Williams was named Interim Director of the COE-LS, adding to her duties the responsibility of securing external funding and establishing research partnerships. Under her leadership, the COE-LS has secured in excess of \$2 million in new external funding via grants and contracts.

Mr. Ronnie G. Brooks
Facilities Management

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

Dr. 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. Sandria Godwin
*College of Agriculture,
Human, and
Natural Sciences*

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. Landon Onyebueke
College of Engineering

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*

Ms. Valerie Williams
*Center of Excellence for
Learning Sciences*

Celebrating Excellence for
35
Years

Million Dollar Club Members

Congratulations to the 31 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 30 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.

Judges

Dr. Carmen April, *Foot & Ankle Healthcare Center*
Dr. Anthony J. Baucum, *Vanderbilt University*
Dr. Kyle Brown, *Vanderbilt University*
Dr. Xiwu Chen, *Vanderbilt University*
Dr. Christopher F. Cummings, *Vanderbilt University*
Dr. Carl Darris, *Vanderbilt University*
Dr. Edgar Diaz-Cruz, *Belmont University*
Dr. Conrad Douglas, *Priest Lake Dental*
Dr. Christopher S. English, *Vanderbilt University*
Dr. Saudat A. Fadeyi, *Meharry Medical College*
Dr. Hugh M. Fentress, *Fisk University*
Dr. Robert G. Holt, *Meharry Medical College*
Dr. Sharon Horton-Jenkins, *University of Phoenix-Nashville*
Dr. Justus Ike, *Fisk University*
Dr. Prem Kahon, *TSU (Professor Emeritus)*
Dr. Ewa A. Kowal, *Vanderbilt University*
Dr. Mohammed A. Maleque, *Meharry Medical College*
Dr. Diana Marver, *Meharry Medical College*
Dr. Jacqueline Mitchell, *Integrity Dental Care*
Dr. Mukul Mittal, *Meharry Medical College*
Dr. Sekou Molette, *Top Flight Medical*
Dr. Brittany Mortensen, *Vanderbilt University*

Dr. Evangeline Motley-Johnson, *Meharry Medical College*
Dr. Shyamali Mukherjee, *Meharry Medical College*
Dr. Robert F. Newkirk, *TSU (retired)*
Dr. Sheila Peters, *Fisk University*
Dr. Lei Qian, *Fisk University*
Dr. Aramandla Ramesh, *Meharry Medical College*
Dr. Tanu Rana, *Meharry Medical College*
Dr. Monica Sangster, *Dentistry*
Dr. Saleh M. Sbenaty, *Middle Tennessee State University*
Dr. Nona M. Setler-Logan, *Correct Care Solutions*
Dr. LaMonica Stewart, *Meharry Medical College*
Dr. Angela Southwell, *Associated Children's Dentistry*
Dr. Thyneice Taylor, *Vanderbilt University*
Dr. Marilyn Thompson-Odom, *Belmont University*
Dr. Roberto Vanacore, *Vanderbilt University*
Dr. Catherine Wakeman, *Vanderbilt University*
Dr. Michael Watson, *Fisk University*
Dr. Robert Wingfield, *Fisk University*
Dr. Eric Wood, *Associated Children's Dentistry*
Dr. Letha Woods, *Meharry Medical College*
Dr. Eugenia M. Yazlovitskaya, *Vanderbilt University*

APLS Day

THE ASSOCIATION OF PRE-PROFESSIONAL LIFE SCIENTISTS

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 or email us at enrichment@aplsglobal.org.



Student Awards

34TH ANNUAL UNIVERSITY-WIDE RESEARCH SYMPOSIUM 2012

Congratulations to our student researchers and faculty advisors for their winning entries in the oral and poster presentation competition. For 2012, there were 133 student authors and 15 faculty authors for oral and poster presentations.

Graduate Oral Presentation – Graduate Engineering

First Place	GE 6	Husam Adas and Stephanie Starling
Second Place	GE12	Saed Amer
Third Place	GE 7	Hellen Maziku

Graduate Oral Presentation – Science

First Place	GS31	James Tyus
Second Place	GS37	Marsha Palmer
Third Place	GS40	Jacqueline Joshua

Undergraduate Oral Presentation – Engineering

First Place	UE12	Noel Jordan Jameson
Second Place	UE13	Kamisha White
Third Place	UE10	Nicholas Luna

Undergraduate Oral Presentation – Science

First Place	US4	Jacqueline Reid
Second Place	US3	Cierra Love Baker, Jeanna Lanier, and Lauren Phillips
Third Place	US5	Jasmine C. Parham

Graduate Poster Presentation – Engineering

First Place	GRP37	Irucka Embry
Second Place	GRP54	Victor Roland
Third Place	GRP42	Swetha Reddy Lenkala

Graduate Poster Presentation – Science

First Place	GRP10	Carl Darris
Second Place	GRP22	Tasia Brown
Third Place	GRP23	Kelsi Hurt

Graduate Poster Presentation – Psychology

First Place	GRP29	Angela Scott
Second Place	GRP26	Mary Harlinger
Third Place	GRP28	Janani Raman

Undergraduate Poster Presentation

First Place	UGP10	Kristen Taylor
Second Place	UGP14	Andrea Durham
Third Place	UGP15	Alexis Sledge

Oral Presentations

1st place	\$250
2nd place	\$100
3rd place	\$ 50

Poster Presentations

1st place	\$150
2nd place	\$ 75
3rd place	\$ 25



**2012 Research Mentorship
Award Winner
Margaret Whalen, Ph.D.**

Congratulations to Dr. Margaret Whalen, Professor, Department of Chemistry in the College of Agriculture, Human, and Natural Sciences.

Dr. Whalen was awarded this honor for serving as mentor/advisor to the greatest number of winning student research entries during the 34th Annual University-Wide Research Symposium, 2012. Five of Dr. Whalen's seven (7) student entries placed in the student research competitions. She received \$1,000 cash in recognition of her research mentorship. Dr. Whalen was also the inaugural winner in 2010.

List of Dr. Whalen's Winning Student Research Mentees

**Undergraduate Oral
Presentation–Science**
1st Place, Jacqueline Reid

**Graduate Poster
Presentation–Science**
2nd Place, Tasia Brown*,
Felicia Udoji, and Tamara Martin

3rd Place, Kelsi Hurt

**Undergraduate Poster
Presentation–Science**

2nd Place, Andrea Durham
3rd Place, Alexis Sledge



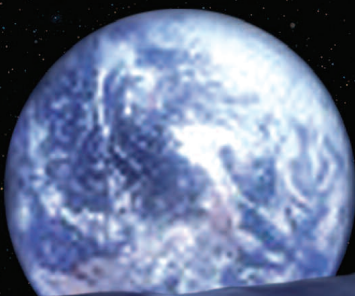
Qualified Students Welcome



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

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.



Academic Programs in Health Sciences

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

Clinic Services

Dental Hygiene Clinic – Main Campus
Speech Pathology and Audiology Clinic – Avon Williams Campus
Tennessee State University
College of Health Sciences
Box 9639
3500 John A. Merritt Blvd.
Nashville, TN 37209
Dr. Kathleen McEnerney, Dean
615-963-5924
kmcenerney@tnstate.edu
Dr. Kathy Martin, Associate Dean
615-963-5251
kmartin3@tnstate.edu

School of Graduate Studies & Research



We offer Doctoral, Master and Graduate Certificate Programs

With a total enrollment of approximately 2,000 students, the School of Graduate Studies and Research at Tennessee State University (TSU) offers twenty-two master degrees, seven doctoral programs, and six graduate certificate programs. In addition to our broad range of programs, many graduate courses at TSU are offered in the evenings and weekends. Other programs are offered entirely online. This long-standing practice allows us to accommodate the needs of working adults and non-traditional students. TSU students have access to high quality faculty who have acquired globally relevant research expertise and are prepared and willing to share their experiences.

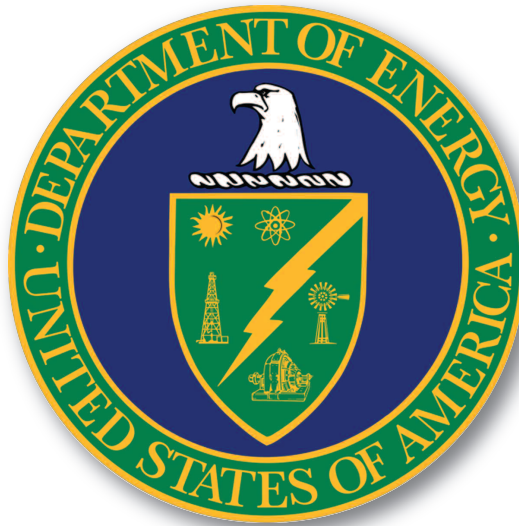
The Graduate School establishes high academic standards in pursuit of excellence. Our commitment is to drive effective recruitment, retention, and provide support for all students in order to improve graduation rates. The Graduate School is prepared to contribute to the land-grant mission and goal of the university through leveraging faculty resources for the effective and efficient delivery of academic programs and processes.

For More Information Contact - Email: gradschool@tnstate.edu or Call: 615-963-5901

Recognizing the
MASSIE CHAIR OF EXCELLENCE

Professorship of Engineering in the Environmental Disciplines
Distinguished supporter of the
35th Annual University-Wide Research Symposium

Dr. Lonnie Sharpe, D.S. Chair



The Massie Chair of Excellence is sponsored by
the U.S. Department of Energy
Office of Environmental Management



Current Staff

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



CHEW Post Doctoral Fellow and
 3 of 8 Current Graduate Assistants

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



Meharry-Vanderbilt-TSU
 Cancer Partnership
www.cancer-alliance.org

Funded by: National Cancer Institute

WWW.TNSTATE.EDU/PREVENTIONRESEARCH

THE DIVISION OF BUSINESS AND FINANCE

SUPPORTS THE 35TH ANNUAL
 UNIVERSITY-WIDE RESEARCH SYMPOSIUM



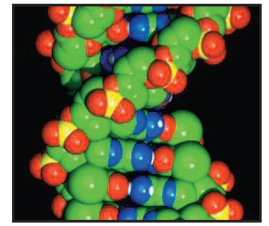
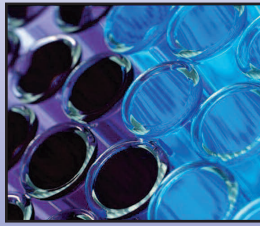
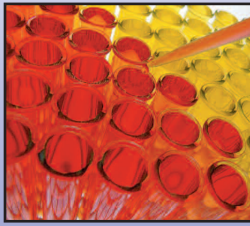
VICE PRESIDENT FOR BUSINESS AND FINANCE

Cynthia B. Brooks

AUXILIARY SERVICES – *Frank Battle, Assistant Vice President*
 BUDGET, FISCAL PLANNING AND TRAVEL – *Bradley White, Assistant Vice President*
 FACILITIES MANAGEMENT – *Ron Brooks, Associate Vice President*
 FINANCIAL AID – *Amy Wood, Director*
 FINANCE AND ACCOUNTING – *Bob Hughes, Associate Vice President*
 HUMAN RESOURCES – *Linda Spears, Associate Vice President*
 PROCUREMENT – *Joel Sims, Interim Director*

TENNESSEE STATE UNIVERSITY

THE DEPARTMENT OF BIOLOGICAL SCIENCES



PREPARING SCHOLARS FOR THE PURSUIT OF RESEARCH CAREERS IN ACADEMIA, GOVERNMENT AND INDUSTRY

**The Department of Biological Sciences
offers B.S., M.S. and Ph.D. degrees**

To inquire about Graduate or Undergraduate Programs, contact:
Dr. Terrance Johnson, Department Head

Email address: TJohnson@tnstate.edu • Telephone: (615) 963-5681



DEGREE PROGRAMS

Master of Social Work

Bachelor of Science in Social Work
Child Welfare Certification

Bachelor of Science in Sociology
(Traditional and Online)

Bachelor of Science in Urban Studies

Minor in Nonprofit Management and Leadership

Minor in Sociology

**3500 John A. Merritt Blvd.
Nashville, TN 37209-1561
Phone: 615.963.5511
www.tnstate.edu/cpsua/degrees**

COLLEGE OF PUBLIC SERVICE AND URBAN AFFAIRS
DEPARTMENT OF SOCIOLOGY, SOCIAL WORK AND URBAN PROFESSION

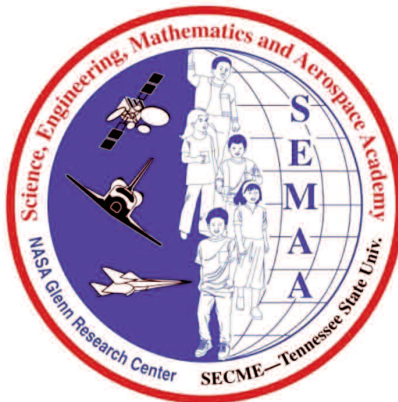


TENNESSEE STATE UNIVERSITY

SEMAA PROGRAM

SCIENCE, ENGINEERING, MATHEMATICS AND AEROSPACE ACADEMY

HONORS THE 35TH ANNUAL RESEARCH SYMPOSIUM



To enroll your child or receive information about becoming a volunteer, visit:

www.SEMAAnashville.com



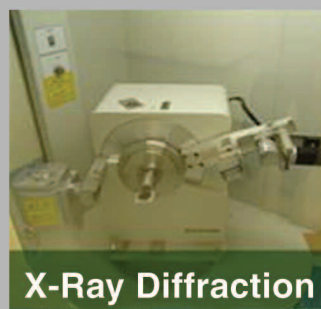
Nano-Bio Core Research Facility

State-of-the-Art Science at your Fingertips

The Core Research Facility houses contemporary analytical tools open to all faculty on campus. Located on the second floor of the **Research and Sponsored Programs** building, the laboratories welcome researchers to discover the power these instruments can add to their research.

For more information contact:

RSP Building, Room 226
615-963-2537



X-Ray Diffraction



Electron Microscopy

Capabilities Include:

- Scanning Electron Microscopy
- Transmission Electron Microscopy
- Flow Cytometry
- X-Ray Diffraction
- Dynamic Light Scattering
- Inductively Coupled Plasma OES
- Spectrophotometry
- and more to come...



TENNESSEE
STATE UNIVERSITY

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

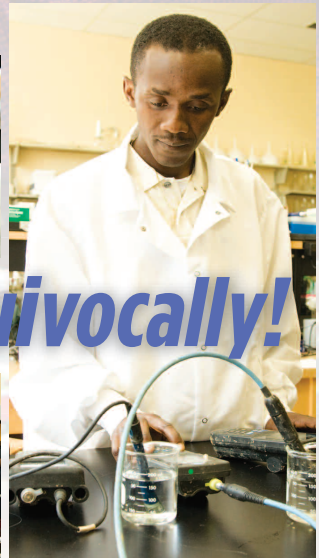
Master of Engineering (M.E.) Degree

Ph.D. Degree

Computer and Information Systems Engineering

TSU...

Transforming Students Unequivocally!



3500 John A. Merritt Blvd.

Nashville, TN 37209-1561

T (615) 963-5401 • F (615) 963-5397

Visit us on the web at www.tnstate.edu/engineering

Building Capacities to Strengthen Communities Through Education



**TENNESSEE
STATE UNIVERSITY**

Center of Excellence for Learning Sciences

**Proudly Supports the 35th Annual University-Wide
Research Symposium**



ACADEMICS

Child Care Provider Training and Academic Support

The Center provides professional learning opportunities within higher education institutions, workplaces, and online environments, as well as other informal and non-traditional educational settings.

RESEARCH

**Research that addresses the needs and
priorities of the educational community**

Learning Sciences is an interdisciplinary/multidisciplinary field that draws on multiple theoretical perspectives and research paradigms with the goal of advancing knowledge about human learning and development in formal and informal settings.



SERVICE

**Supporting children and families through
comprehensive training and care**

The Center's service programs are examples of the successful outreach and community partnerships that enhance the opportunities for the growth and development of children and adults in Tennessee and throughout the nation.



For more information visit www.tnstate.edu/learningsciences

or contact Valerie Williams, Interim Director • 615-277-1651 • learningsciences@tnstate.edu

Research and Sponsored Programs Building • Suite 1B



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

Family and Consumer Sciences

- Bachelor of Science in Early Childhood Education
 - Bachelor of Science in Family and Consumer Sciences
- with concentrations: *Certificate in Family Financial Planning*

Department of Chemistry

- Bachelor of Science in Chemistry
- Master of Science in Chemistry

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
 - Research and Education Center at Cheatham County
- The Otis L. Floyd Nursery Crop Research Center at McMinnville
 - Center for Health Prevention Research, Nashville
 - International Agricultural Programs (IAP)

EXTENSION

Performing public service across

Tennessee in areas of
food, agriculture,
environmental science,
and consumer sciences
through the Cooperative
Extension Program.

CONTACT INFORMATION

3500 John A. Merritt Blvd. • Nashville, Tennessee 37209

Office Telephone (615) 963-7561

Visit us on the Web: www.tnstate.edu/agriculture