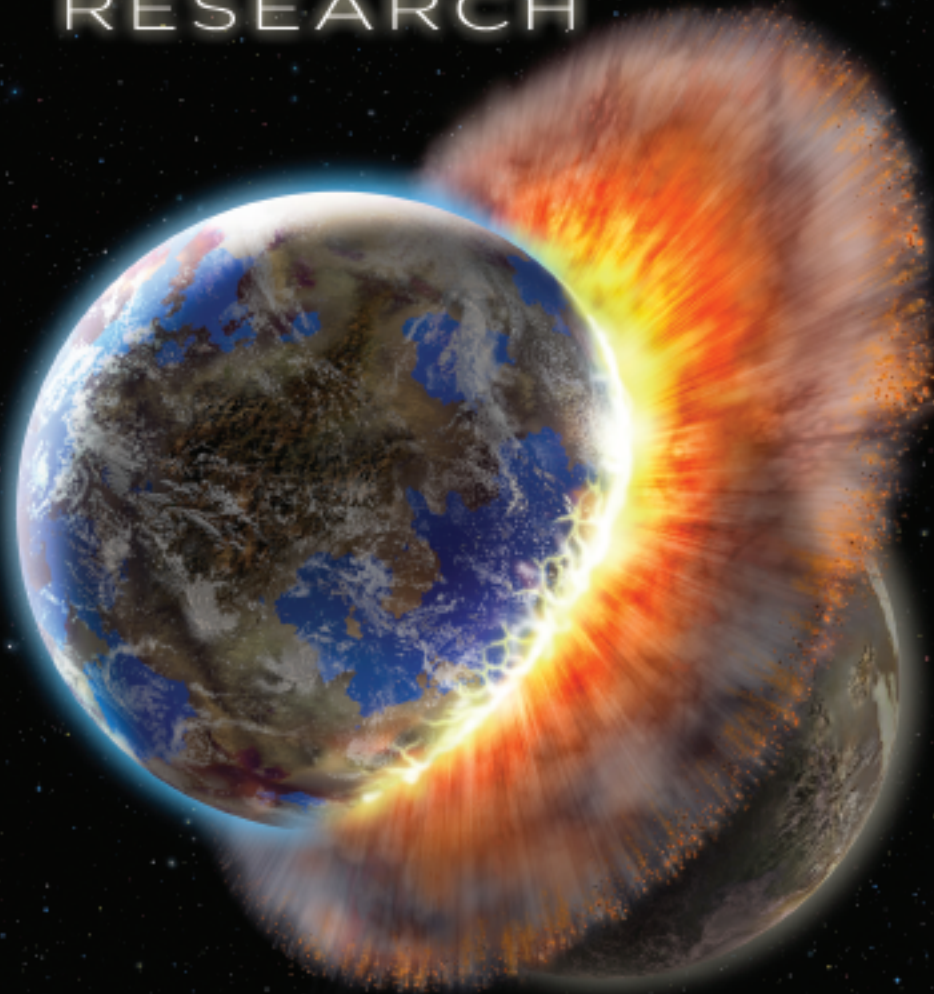
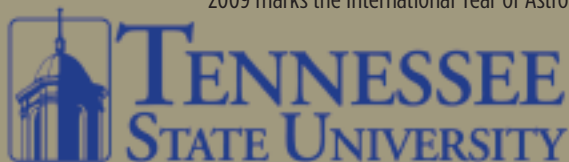


31st ANNUAL UNIVERSITY-WIDE  
RESEARCH SYMPOSIUM  
MARCH 30-APRIL 3, 2009

# CELEBRATING EXCELLENCE IN RESEARCH



**Celebrating 10 years (1999-2009) of extra-solar planet discoveries at Tennessee State University**  
Commemorating the 400th Anniversary (1609-2009) of Galileo's first observations with his telescope, detecting the moons of Jupiter  
2009 marks the International Year of Astronomy





Tennessee State University

# School of Agriculture and Consumer Sciences



We teach, conduct a multimillion dollar research program, and perform public service throughout the State of Tennessee in the areas of food, agriculture, the environment, and consumer sciences.



Academic Degree Offerings:

**Agribusiness**

**Agricultural Biotechnology**

**Agricultural Education**

**Animal Science/Pre-Veterinary Medicine**

**Applied Geospatial Information Systems**

**Child Development & Family Relations**

**Design**

**Early Childhood Education**

**Family and Consumer Sciences Education**

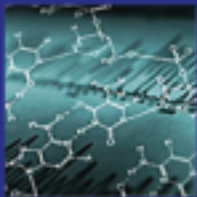
**Fashion Merchandising**

**Food Service Management**

**Food Technology**

**Foods & Nutrition**

**Plant and Soil Science**



## Teaching ❖ Research ❖ Extension

*Enhancing the Quality of Life for All People*

Dr. Chandra Reddy, Dean  
(615) 963-7561



CELEBRATING  
*E*XCELLENCE  
IN RESEARCH

31ST ANNUAL  
UNIVERSITY-WIDE  
RESEARCH SYMPOSIUM

MARCH 30 - APRIL 3, 2009

TENNESSEE STATE UNIVERSITY  
OFFICIAL 2009 SYMPOSIUM PROGRAM

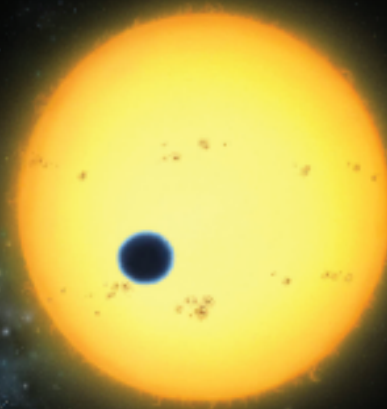
Editor, Nannette Carter Martin  
Consulting Editor, Princess Gordon-Patton



## **Tennessee State University Automatic Telescopes Extend the Search for New Worlds**

CONTRIBUTING TO THE FOUR HUNDRED YEARS OF TELESCOPIC DISCOVERY

The 31st Annual University-Wide Research Symposium at Tennessee State University (TSU) coincides with the 10th anniversary of TSU's 1999 discovery of the first planet outside our solar system to transit across the face of its star. TSU astronomers have developed a unique automated observatory located in the mountains of southern Arizona (below). These telescopes, while modest in size, are designed to make the most precise measurements possible of the brightness and spectrum of stars, which is fundamental data for astronomical research at TSU.



© 1999 Lynette Cook

The automated telescopes operate without human assistance via computers programmed from TSU's Center of Excellence in Information Systems Engineering and Management (see back cover); they provide TSU astronomers and students with data of higher quality, in greater quantity, with greater efficiency, and at lower cost than ever before possible. The 1999 discovery of the first transiting extrasolar planet (seen above in an artist's conception by Lynette Cook) was highlighted in the local, national, and international news media and began an exciting new era of scientific discovery. As stated in a National Aeronautics and Space Administration (NASA) press release dated November 14, 1999: "By observing the transit of a planet

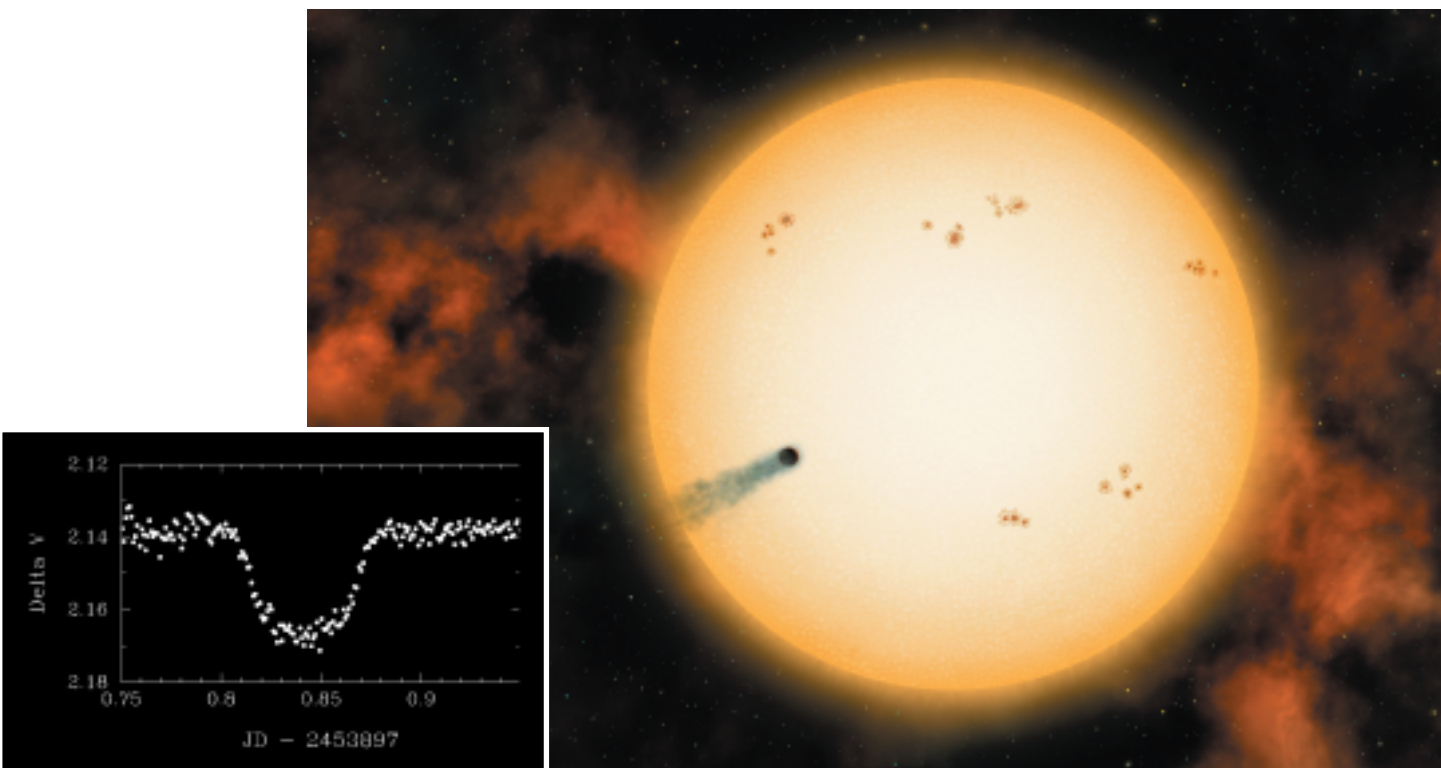


Shown here are some of the many telescopes at the automated observatory in southern Arizona. These telescopes are generating the most precise, long-term measurements of brightness changes in Sun-like stars to illuminate the causes of climate change on Earth.

across the face of a distant star, astronomers prove that planets exist outside our solar system." The age-old question of the existence of other worlds in the Universe was answered in the affirmative! TSU has continued to play an important role in the discovery of dozens of new extrasolar planets and recently collaborated in the discovery of a fresh ring of dust surrounding the star BD+20 307, suggesting a recent and devastating collision between two terrestrial planets in orbit around BD+20 307 (see artist's conception by Lynette Cook on the front cover). TSU is now broadening its astronomical work to search for Earth-like planets at the right distance from their star to be capable of supporting life. The next 10 years promise even more excitement.

The 31st University-Wide Research Symposium is also being held in conjunction with the International Year of Astronomy (IYA2009), commemorating 400 years since Galileo Galilei first turned a primitive telescope (see front cover) to the sky in 1609. With his telescope, Galileo was the first to observe the craters and mountain ranges of the moon. He discovered that Jupiter is accompanied by four bright moons of its own and found that the planet Venus undergoes phases of illumination just like our moon. His discovery of the phases of Venus confirmed that the Sun, not the Earth, was the center of our system of planets. In a sense, Galileo discovered the "first" planetary system, a Sun-centered solar system envisioned two generations earlier by Copernicus.

Galileo's observations began four centuries of discovery with increasingly larger and technically more advanced telescopes, culminating in large 10-meter ground-based telescopes and the orbiting Hubble, Spitzer, and Chandra space telescopes. The telescopes have revolutionized our perception of the universe from gamma ray to optical to radio wavelengths. In recognition of the 400th anniversary of the first telescopic observations, the International Astronomical Union (IAU) has proclaimed IYA2009 as a time to encourage all people to discover and appreciate their place in the Universe around them.



Left shows minute brightness changes of a Sun-like star as an orbiting planet moves across the face of the star, blocking a small amount of the star's light. Above is Lynette Cook's artistic rendition of such an event called a planetary transit. This planet orbits so close to its star that some of its atmosphere is boiling off.

See the schedule within for information about the IYA2009 activities planned for Tuesday, March 31, 2009 and learn more about TSU's exciting astronomical research at <http://schwab.tsuniv.edu>.



OFFICE OF  
THE PRESIDENT

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



March 30, 2009

Dear Colleagues:

I am delighted to welcome each of you to the campus of Tennessee State University. I commend the Division of Research and Sponsored Programs for its success in the planning and implementation of the University's 31st Annual University-Wide Research Symposium. As in years past, the division has sponsored a symposium that depicts the University's commitment to foster an academic environment where research and scientific discoveries flourish.

This year's symposium features top research professionals from various academic disciplines. I feel certain that these discussions will be stimulating as well as informative. Further, our students will greatly benefit from interacting with the research talent assembled at this event.

As we position Tennessee State University to become one of the top-tier research institutions in the nation, our evolution will depend heavily on the collaborative sharing of innovative knowledge with our peers. Events, such as this one, provide an outlet for sharing and expanding existing platforms.

As you participate in ongoing discussions, please remember that Tennessee State University is committed to excellence in research.

Sincerely,

A handwritten signature in blue ink that reads "Melvin N. Johnson".

Melvin N. Johnson  
President

*"A Commitment to Excellence"*  
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F



OFFICE OF  
THE VICE PRESIDENT

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



March 30, 2009

Dear Colleagues:

Welcome to the 31st Annual University-Wide Research Symposium showcasing the endeavors and accomplishments of our student and faculty researchers. Research presentations delivered by our students under the collaborative mentoring of faculty produce an important intersection of education and innovation which equals excellence. Therefore, our annual theme is "Research: Celebrating Excellence."

The Symposium provides a dual educational process for the benefit of both students and faculty incorporating opportunities for students to develop proficiency in the methods of research and for faculty to be recognized for research endeavors. Each participant experiences a week of interdisciplinary presentations wherein judges decide awards based on the category of research. Each working day of the Symposium is graced with a luncheon and a speaker with whom participants network.

The week culminates in a keynote address by Jesse E. Russell, who is a 1972 graduate of Tennessee State University. Mr. Russell is an eminent example of research excellence as the founder of digital cellular technology and as an entrepreneur of 4G technology, holding over 75 patents in digital cellular technology, dual-mode digital cellular phones, and digital radio software. Mr. Russell's distinguished achievements inspire our students to choose careers in research; thus, preserving our tradition of scientific and technological advancement.

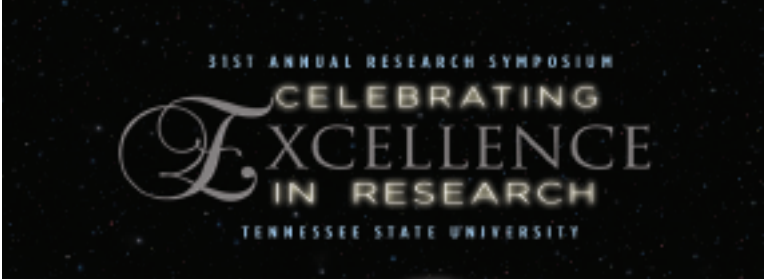
On behalf of the Division of Research and Sponsored Programs, I celebrate the environment of research excellence produced by the collaboration of our faculty and students.

Sincerely,

A handwritten signature in blue ink, appearing to read "Maria Thompson", with a long, sweeping flourish extending to the right.

Maria Thompson, Ph.D.  
Interim Vice President  
Research and Sponsored Programs

*"A Commitment to Excellence"*  
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F



# **The Research Symposium**

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

The Annual University-Wide Research Symposium at Tennessee State University is celebrating 31 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 31 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 (2008-2009).

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. 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.

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



## OVERVIEW OF EVENTS

### Monday, March 30, 2009

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8:00 am - 9:00 am **Symposium Programs Available** Research and Sponsored Programs Building, First Floor Lobby

9:00 am - 4:00 pm **Open House** in the Hiram van Gordon Gallery (open to public)  
Art Department - Jane Elliott Hall (Women's Building)

#### School of Nursing Day 8:00 am - 1:00 pm

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12:00 noon **Luncheon** Cathy Taylor, speaker - Assistant Commissioner, Tennessee Department of Health  
James E. Farrell - Fred E. Westbrook Building, 118

1:30 pm - 3:00 pm **Graduate and Undergraduate Oral Presentations** in Health, Education and Social Sciences  
Research and Sponsored Programs Building, 163

3:00 pm - 3:45 pm **Graduate Student Oral Presentations** in Humanities and Arts  
Research and Sponsored Programs Building, 163

### Tuesday, March 31, 2009

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8:00 am - 9:00 am **Symposium Programs Available** Research and Sponsored Programs Building, First Floor Lobby

9:00 am - 4:00 pm **Open House** in the Hiram van Gordon Gallery (open to public)  
Art Department - Jane Elliott Hall (Women's Building)

#### Astronomy Day

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##### HIGH SCHOOL STUDENTS

9:00 am - 10:00 am **Core Lab Demonstrations**, Research and Sponsored Programs Building

10:00 am - 11:00 am **Matthew Muterspaugh**, speaker - Assistant Professor, COE-ISEM, TSU  
Walter S. Davis Humanities Building

11:00 am - 12:00 noon **Planet Alignment Walking Tour**

12:00 noon - 1:00 pm **High School Student Luncheon**, Floyd-Payne Campus Center

##### FACULTY AND RESEARCHERS

11:30 am - 1:00 pm **Astronomy Researchers Luncheon**  
James E. Farrell - Fred E. Westbrook Building, 118

**Matthew Muterspaugh**, Speaker- Assistant Professor, COE-ISEM, TSU  
**Issuance of Proclamation to Tennessee State University** by the Honorable Phil Bredesen, Governor  
State of Tennessee

10:00 am - 12:00 noon **Judging for Graduate and Undergraduate Posters**  
Research and Sponsored Programs Building, Lower Level

1:30 pm - 3:15 pm **Undergraduate Oral Presentations** in Engineering and Science  
Research and Sponsored Programs Building, 163

6:00 pm **TSU Astronomy Day Community Event- Adventure Science Center  
Presentations and Discussions  
Movies** (complimentary admission) *Nine Planets and Counting; Stars*

#### Psychology Day

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1:00 pm - 3:00 pm **Translating Research into Publications Workshop**  
Agricultural Information Technology Center

5:00 pm - 5:30 pm **Poster Session and Reception**  
James E. Farrell - Fred E. Westbrook Building, 118

5:30 pm - 7:30 pm **Awards Ceremony**  
**Brent Mallinckrodt**, speaker - Director, Counseling Psychology Program  
The University of Tennessee - Knoxville  
Agricultural Information Technology Center

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Posters will be displayed from March 30 - April 3, 2009, Research and Sponsored Programs Building, Lower Level.  
Exception: Chemistry Posters will be displayed in the Alger V. Boswell Building Lobby.

## OVERVIEW OF EVENTS

### Wednesday, April 1, 2009

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8:00 am - 9:00 am	<b>Symposium Programs Available</b> Research and Sponsored Programs Building, First Floor Lobby
9:00 am - 4:00 pm	<b>Open House</b> in the Hiram van Gordon Gallery (open to public) Art Department - Jane Elliott Hall (Women's Building)

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#### Pilot Center for Academic Excellence in Intelligence Studies Day

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9:30 am - 10:00 am	<b>Lady Day Performance</b> (open to public) Performing Arts Center
10:00 am - 11:00 am	<b>Core Labs Tour</b> , Research and Sponsored Programs Building
10:00 am - 11:00 am	<b>AFROTC Demonstration</b> , Floyd-Payne Campus Center
11:30 am - 1:30 pm	<b>Intelligence Studies Luncheon</b> <b>Gordana Vlahovic</b> , speaker - Associate Professor, Department of Environmental, Earth and Geospatial Sciences, North Carolina Central University James E. Farrell - Fred E. Westbrook Building, 118
10:00 am - 12:00 noon	<b>Judging for Graduate and Undergraduate Posters</b> Research and Sponsored Programs Building, Lower Level
1:30 pm - 4:00 pm	<b>Graduate Oral Presentations</b> in Engineering and Science Research and Sponsored Programs Building, 163

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### Thursday, April 2, 2009

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8:00 am - 9:00 am	<b>Symposium Programs Available</b> Research and Sponsored Programs Building, First Floor Lobby
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#### Celebrate Chemistry Day

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8:30 am - 5:30 pm	<b>Darcie Wallace-Duckworth</b> , speaker - Assistant Director of Training, Aegis Sciences Corporation Alger V. Boswell Building
6:00 pm	<b>Awards Dinner</b> , James E. Farrell - Fred E. Westbrook Building, 118
9:00 am - 4:00 pm	<b>Open House</b> in the Hiram van Gordon Gallery (open to public) Art Department - Jane Elliott Hall (Women's Building)

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#### School of Agriculture and Consumer Sciences Day

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9:00 am - 11:30 am	<b>Pia Herring</b> , speaker - US Department of Agriculture/ Animal and Plant Health Inspection Service/ Veterinary Service Tennessee <b>Larry Whaley</b> , speaker - US Department of Agriculture/ National Agricultural Statistics Service
11:30 am - 1:00 pm	<b>Luncheon</b> James E. Farrell - Fred E. Westbrook Building, 118
2:00 pm - 4:00 pm	<b>Judging for Graduate and Undergraduate Posters</b> Research and Sponsored Programs Building, Lower Level

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### Friday, April 3, 2009

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8:00 am - 9:00 am	<b>Symposium Programs Available</b> Research and Sponsored Programs Building, First Floor Lobby
9:00 am - 11:30 am	<b>Faculty Oral Presentations</b> Research and Sponsored Programs Building, 163
9:00 am - 4:00 pm	<b>Open House</b> in the Hiram van Gordon Gallery (open to public) Art Department - Jane Elliott Hall (Women's Building)

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#### Research and Sponsored Programs Awards Ceremony

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11:30 am	<b>Jesse E. Russell</b> , keynote speaker - Chairman and CEO, incNETWORKS James E. Farrell - Fred E. Westbrook Building, 118
2:00 pm	<b>Adjournment</b>

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Posters will be displayed from March 30 - April 3, 2009, Research and Sponsored Programs Building, Lower Level.  
Exception: Chemistry Posters will be displayed in the Alger V. Boswell Building Lobby.

# PRESENTATION SCHEDULES

**Monday, March 30, 2009**

HEALTH, EDUCATION, SOCIAL SCIENCES

## Graduate and Undergraduate Oral Presentations

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

1:30 pm	A1	<b>OBESITY AWARENESS AMONG TSU COLLEGE STUDENTS</b> White, Whitney* and Revlon Briggs. Health Administration and Health Sciences
1:45 pm	A2	<b>THROUGH THE EYES OF THE STUDENTS: THE SERVICE-LEARNING EXPERIENCE</b> West, Susan* and Ginger Pepper Hausser. Center for Service Learning and Civic Engagement
2:00 pm	A3	<b>IS COGNITIVE SCIENCE RESEARCH DRIVING THE DEVELOPMENT OF FLASHCARD PROGRAMS?</b> Williams, Melvin L.* and Prem Kahlon. Psychology
2:15 pm	A4	<b>THE MODERATING EFFECT OF HEALTH BEHAVIOR ON PHYSICAL AND PSYCHOLOGICAL HEALTH AMONG ADULTS IN TENNESSEE</b> Gociu, Adina*, Selina Hill, and Jan Emerson. Education
2:30 pm	A5	<b>MOST EFFECTIVE PROTOCOL FOR USING TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION DURING LABOR BACK PAIN</b> Bishop, C.*, G. Hamilton, S. Heerdink, R. Ingram, and David Lehman. Physical Therapy
2:45 pm	A6	<b>KNOWLEDGE OF PROSTATE CANCER AMONG NASHVILLE MEN</b> Lambert, Meegan*, Ayile' Arnett, Pamela Hull, and Michelle Reece. Center for Health Research

HUMANITIES AND ARTS

## Graduate Oral Presentations

3:00 pm	A7	<b>A CONCISE HISTORY OF THE PIANO DUET</b> Ishihara, Ai* and Robert Elliot. Music
3:15 pm	A8	<b>HEROES AIN'T NOTHING BUT WHAT THEY DO: IDENTITY IN ALICE CHILDRESS' YOUNG ADULT FICTION</b> Peterson, Jason* and Melissa Hull. Languages, Literature and Philosophy
3:30 pm	A9	<b>A SURVEY OF THE PERCEPTIONS OF TENNESSEE BEGINNING TEACHERS, THEIR ADMINISTRATORS, AND TEACHER EDUCATORS REGARDING PRESERVICE MUSIC EDUCATION</b> Simon, Kerry* and Robert Elliott. Music

**Tuesday, March 31, 2009**

ENGINEERING AND SCIENCE

## Undergraduate Oral Presentations

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

1:30 pm	B1	<b>THE EFFECT OF KAEMPFEROL ON LIPID OXIDATION</b> Hamsa, Mohamed* and Joshua Moore. Chemistry
1:45 pm	B2	<b>USING CHEMOGRAPHS TO CHARACTERIZE A KARST SPRING IN NASHVILLE, TN</b> Cobb, Carlton*, Tom Byl and Jennifer Stewart-Wright. Civil & Environmental Engineering
2:00 pm	B3	<b>MODULATION OF L-AMINO AROMATIC DECARBOXYLASE EXPRESSION IN THE STRIATUM OF MPTP-PD MOUSE MODEL</b> Dean, Warren*, and Charlton Clivel. Biological Sciences
2:15 pm	B4	<b>ANTI-CANCER COMPOUNDS EXTRACTED FROM PHYTOCHEMICAL</b> McDowell, Olena* and E. Lewis Myles. Biological Sciences
2:30 pm	B5	<b>OPTIMIZATION OF DIMETHANOL SULFOXIMIDE IN PRESERVING HUMAN CANCER CELL</b> Jolayemi, Olukemi Gbemisola* and E. Lewis Myles. Biological Sciences
2:45 pm	B6	<b>ANTI-MICROBIAL EFFECTS OF GREEN AND BLACK TEAS ON SALMONELLA TYPHIMURIUM AND ESCHERICHIA COLI</b> Marnier, Jonathan*, Danaka J Hancock*, and E. Lewis Myles. Biological Sciences
3:00 pm	B7	<b>DESIGN OF MEDIUM SIZE POWER SYSTEM USING RTDS</b> Uzoh, Teddy*, Boykin Korey, and Dhananjaya Marpaka. Electrical and Computer Engineering

# PRESENTATION SCHEDULES

**Wednesday, April 1, 2009**

ENGINEERING AND SCIENCE

## Graduate Oral Presentations

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

1:30 pm	C1	<b>IMMUNOMODULATORY EFFECTS OF GOLD AND SILVER NANOPARTICLES GENERATED BY USING CHONDROITIN SULFATE OR CARTILAGE POWDER</b> Ivory, Dana* and Koen Vercruysse. Chemistry
1:45 pm	C2	<b>SYNTHESIS AND CHARACTERIZATION OF PbE (E = Se, Te)</b> Bajaj, Prashant* and Joshua T. Moore. Chemistry
2:00 pm	C3	<b>LOCALIZATION OF SEMAPHORIN 2A PROTEIN EXPRESSION DURING DEVELOPMENT AND IN THE ADULT OF LIMULUS POLYPHEMUS</b> Howard, Christianna* and Brenda McAdory. Biological Sciences
2:15 pm	C4	<b>MOLECULAR CHARACTERIZATION OF THE PEARL GRAY GUINEA FOWL THROUGH COMPARATIVE ANALYSIS OF PARTIAL GENE SEQUENCE CONSTRUCTS</b> Tyus, James* and Samuel Nahashon. Agricultural Sciences
2:30 pm	C5	<b>LEWIS ACID MEDIATED DIASTERESELECTIVE SYNTHESIS OF FUSED FLUORINATED SPIROKETAL AS POTENTIAL BIOLOGICALLY ACTIVE UNNATURAL PRODUCTS</b> Agbaje, Charles Oluropo* and Cosmas Okoro. Chemistry
2:45 pm	C6	<b>SYNTHESIS AND ANTICONVULSANT ACTIVITY DETERMINATION OF SOME CYCLIC FLUORINATED ENAMINONES</b> Okoromoba, E. Otome* and Cosmas Okoro. Chemistry
3:00 pm	C7	<b>LINK BETWEEN GROUNDWATER GEOCHEMISTRY AND BACTERIA IN TWO KARST SPRINGS</b> Armstrong, Patrice* and Tom Byl. Biological Sciences
3:15 pm	C8	<b>USE OF INDEPENDANT GAMMA DISTRIBUTION TO DESCRIBE TRACER BREAK-THROUGH CURVES</b> Martin, Marquan*, Roger Painter, and Tom Byl. Civil and Environmental Engineering
3:30 pm	C9	<b>THE DESIGN OF A SECURE NETWORK SNIFFER FOR A LOCALIZATION AND TRACKING SYSTEM USING A DIRECTIONAL ANTENNAE ARRAY</b> Hyde, Carlo* and Liang Hong. Electrical and Computer Engineering
3:45 pm	C10	<b>COMFORT ASSESSMENT OF AIRCRAFT CREW EJECTION SEAT ENDURANCE CUSHIONS</b> Ojetola, Akindeji* and Landon Onyebueke. Electrical and Computer Engineering

**Friday, April 3, 2009**

## Faculty Oral Presentations

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

9:00 am	F1	<b>EMPOWERING PRE-SERVICE TEACHERS WITH MULTIMODAL LITERACIES TO MEET THE NEEDS OF 21ST CENTURY LEARNERS</b> Mietlicki, Connie. Center of Excellence for Learning Sciences
9:15 am	F2	<b>POLYSACCHARIDE-GENERATED NANOPARTICLES</b> Vercruysse, Koen. Department of Chemistry
9:30 am	F3	<b>RICHARD FULTON: CIVIL RIGHTS/ POLITICS, 1962-1972</b> Pickard, Robert Evins. History, Geography, and Political Science
9:45 am	F4	<b>IMPLICATIONS FOR PERSONS WITH HYPERTENSION RELATIVE TO THE LACK OF A FEDERAL MANDATE FOR SODIUM</b> Stratton, Martha. Biological Sciences
10:00 am	F5	<b>STATISTICALLY SIGNIFICANT SOCIAL FACTORS FOR THE USE OF BANLIEUE LANGUAGE</b> Kent, Teresa. Languages, Literature, and Philosophy
10:15 am	F6	<b>REPRODUCING PAPER MONSTERS IN THOMAS NASHE</b> Hull, Melissa. Languages, Literature, and Philosophy
10:30 am	F7	<b>FLOW CYTOMETRIC ANALYSIS OF GENE EXPRESSION IN THE PATHOGENIC BACTERIUM ERWINIA CAROTOVORA SUBSPECIES ATROSEPTICA</b> Dumenyo, C. Korsi. Agricultural Sciences

# PRESENTATION SCHEDULES

**Friday, April 3, 2009**

## **Faculty Oral Presentations** continued

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

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10:45 am	F8	<b>SYNTHESIS AND CHARACTERIZATION OF SEMICONDUCTOR/CERAMIC NANOCOMPOSITE MATERIALS</b> Moore, Joshua T. Chemistry
11:00 am	F9	<b>MEDIA COVERAGE OF PRESIDENT BARACK OBAMA'S MARRIAGE AND IT'S IMPACT ON COLLEGE STUDENTS' ATTITUDE TOWARD MARRIAGE</b> Jackson, Coreen. Communications
11:15 am	F10	<b>LITTER DECOMPOSITION IN TERRESTRIAL ECOSYSTEMS: ESTIMATION METHODS AND ENVIRONMENTAL CONTROLS</b> Hui, Dafeng. Biological Sciences

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## **Poster Presentations**

HEALTH, EDUCATION, SOCIAL SCIENCES

### **Graduate Students**

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level. Chemistry Posters – Alger V. Boswell Building.

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P1	<b>EFFECTIVENESS OF SEMG TO ASSESS HYPOTONIA</b> Merchant, Karen*. Advisor: Larry Snyder, Occupational Therapy
P2	<b>COMPARISON OF FUNCTIONAL VERSUS COSMETIC UPPER-EXTREMITY PROSTHESIS TO QUALITY OF LIFE</b> Hall, D.*, M. Beziat, S. Underwood, E. Entekin. Advisor: Larry Snyder, Occupational Therapy
P3	<b>DOES LOW BACK PAIN RESPOND BETTER TO THE MCKENZIE APPROACH OR MANIPULATION?</b> Cooper, Sedric*. Advisor: Thomas Bukoskey, Physical Therapy
P4	<b>LASER THERAPY VS TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) IN REDUCING LOW BACK PAIN</b> Kaplan, Jami*, Millie Lomax, Cheryl Lomon. Advisor: Deborah Edmondson, Physical Therapy
P5	<b>USING FEEDBACK AND PRACTICE TO IMPROVE MOTOR DYSFUNCTION IN PATIENTS WITH CEREBROVASCULAR ACCIDENTS</b> Rudd, Lauren*, Marcus Pearson, Nikki Orazine. Advisor: David Lehman, Physical Therapy
P6	<b>SHOULD PHYSICAL THERAPISTS CONSIDER PULMONARY FUNCTION IN ASTHMATIC CHILDREN WHEN IMPLEMENTING AN AEROBIC EXERCISE PROGRAM</b> Bunger, Alan*. Advisor: Edilberto Raynes, Physical Therapy
P7	<b>PHANTOM LIMB PAIN: INTERVENTION FOR PEDIATRIC PHYSICAL THERAPY</b> Cochrane, Kyle*. Advisor: Natalie Housel, Physical Therapy
P8	<b>EXERCISE FOR HYPERMOBILITY IN DOWN SYNDROME: AN EVIDENCE-BASED REPORT</b> Graves, Mark*. Advisor: Natalie Housel, Physical Therapy
P9	<b>EFFECTS OF DIABETES ON TENNESSEANS</b> Smith, Carlisha*. Advisor: Van Cain, Psychology/Center for Health Research
P10	<b>THE RISK FACTORS ASSOCIATED WITH AN INITIAL MYOCARDIAL INFARCTION AMONG ADULTS IN TENNESSEE</b> Simpkins, Tremayne*. Advisor: Van Cain, Psychology/Center for Health Research
P11	<b>STROKE MORTALITY TRENDS IN TENNESSEE</b> Knowles, Martha*. Advisor: Van Cain, Psychology/Center for Health Research

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## Poster Presentations

### LIFE AND MOLECULAR SCIENCES

#### Graduate Students

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level. Chemistry Posters – Alger V. Boswell Building.

- P12 INHIBITION OF LYTIC FUNCTION OF HUMAN NK CELLS BY TRIBUTYLTIN: ROLE OF PROTEIN KINASE C**  
Abraha, Abraham\*, Biological Sciences. Advisor: Margaret Whalen, Chemistry
- P13 EFFECT OF PENTACHLOROPHENOL ON MAP KINASES IN HUMAN NATURAL KILLER CELLS**  
Cato, Anita\*, Biological Sciences. Advisor: Margaret Whalen, Chemistry
- P14 TRIBUTYLTIN CAUSES ACTIVATION OF C-RAF IN HUMAN NATURAL KILLER CELLS**  
Celada, Lindsay\*, Biological Sciences. Advisor: Margaret Whalen, Chemistry
- P15 A TIME-COURSE STUDY OF THE EXPRESSION OF SEMAPHORIN 3F AND ITS RECEPTOR IN THE MAMMALIAN HIPPOCAMPUS**  
Coleman, Antoinette\*. Advisor: Brenda McAdory, Biological Sciences
- P16 ACTIVATION OF THE MAP-KINASE P44/42 IN HUMAN NK CELLS BY PMA ALTERS THE EXPRESSION OF CELL SURFACE PROTEINS**  
Dudimah, Fred\*, Biological Sciences. Advisor: Margaret Whalen, Chemistry
- P17 HEXABROMOCYCLODODECANE DECREASES THE LYTIC FUNCTION AND ATP LEVELS OF HUMAN NATURAL KILLER CELLS**  
Hinkson, Natasha\*, Biological Sciences. Advisor: Margaret Whalen, Chemistry
- P18 EFFECTS OF PESTICIDES AND NATURALLY OCCURRING-COMPOUNDS ON ALFALFA-RHIZOBIUM SIGNALING**  
Kersey, Caleb\*, and Xuan Le, Biological Sciences. Advisor: E. Kudjo Dzantor, Agricultural Sciences
- P19 MECHANISMS FOR DROUGHT AND SALT TOLERANCE IN SOLANUM CHILENSE**  
Nveawiah-Yoho, Peter\*, S. Bhatti, J. Zhou and Z. Liu. Advisors: Suping Zhou and Roger Sauve. Agricultural Sciences
- P20 EFFECTS OF EXPOSURES TO DIBUTYLTIN ON SIGNALING PATHWAYS AND CYTOSOLIC CALCIUM ION LEVELS IN HUMAN NATURAL KILLER CELLS**  
Odman-Ghazi, Sabah\*, Biological Sciences. Advisor: Whalen, Margaret, Chemistry
- P21 EFFECTS OF TRIBUTYLTIN EXPOSURES ON THE TRANSCRIPTION REGULATOR AP-1**  
Person, Rachel\*, Biological Sciences. Advisor: Margaret Whalen, Chemistry
- P22 ISOLATION AND CHARACTERIZATION OF EPIPHYTIC BACTERIA POPULATION FROM GERANIUM (PELARGONIUM SPP) CVS. MAVERICK PINK AND HORIZON ORANGE**  
Prestwich, Peter\*. Advisor: C. Korsi Dumenyo, Agricultural Sciences
- P23 EFFECT OF TBT EXPOSURES ON PROTEIN KINASE D ACTIVITY OF HUMAN NATURAL KILLER CELLS**  
Rana, Krupa\*, Biological Sciences. Advisor: Margaret Whalen, Chemistry
- P24 EFFECTS OF ZIRAM ON HUMAN NATURAL KILLER CELLS MAP KINASES P38 AND P44/42**  
Taylor, Thyneice\*, Biological Sciences. Advisor: Margaret Whalen, Chemistry
- P25 MECHANISMS FOR COLD TOLERANCE IN FLOWERS OF HELEBORUS NIGER**  
Liu, Zong\*, S. Bhatti, J. Zhou, and P. Nveawiah-Yoho. Advisors: Suping Zhou and Roger Sauve. Agricultural Sciences

### ENGINEERING, COMPUTATIONAL & PHYSICAL SCIENCES

#### Graduate Students

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level. Chemistry Posters – Alger V. Boswell Building.

- P26 MICROWAVE IRRADIATED PALLADIUM CATALYZED CROSS-COUPPLING REACTION OF POTASSIUM ALLYLTRIFLUOROBORATES AND ARYL HALIDES**  
Alam, Shahrina\*. Advisor: Mohammad Al-Masum, Chemistry
- P27 LEWIS ACID MEDIATED DIASTERESELECTIVE SYNTHESIS OF FUSED FLUORINATED SPIROKETAL AS POTENTIAL BIOLOGICALLY ACTIVE UNNATURAL PRODUCTS**  
Agbaje, Charles Olorupo\*. Advisor: Cosmas Okoro, Chemistry
- P28 INTERACTIONS BETWEEN THYMINE AND METAL IONS: SPECTROSCOPIC STUDIES**  
Aitha, Mahesh\*. Advisor: Nsoki Phambu, Chemistry

## PRESENTATION SCHEDULES

- 
- P29 WETLANDS IMPROVE WATER QUALITY AT TENNESSEE STATE UNIVERSITY**  
Cobb, Brandon\*, Carlton Cobb, Patrice Armstrong, Marquan Martin. Advisors: Tom Byl, Lonnie Sharpe and Jennifer Stewart-Wright, Civil & Environmental Engineering
- 
- P30 INTERACTIONS BETWEEN ANTIRETROVIRALS**  
Kennemore, Courtney\*. Advisor: Nsoki Phambu, Chemistry
- 
- P31 ABOVE- AND BELOW-GROUND BIOMASS ALLOCATION**  
Le, Xuan\*. Advisor: Dafeng Hui, Biological Sciences
- 
- P32 INTERACTION OF CALCIUM IONS WITH PHOSPHOLIPIDS**  
Marneni, Murali Krishna\*. Advisor: Phambu Nsoki, Chemistry
- 
- P33 TYPES AND EXTENT OF POLLUTION IN MIDDLE TENNESSEE RIVERS**  
McDermott, Kathleen\*. Advisor: Robert Harrison, Agricultural Sciences
- 
- P34 ALCL3 MICROWAVE IRRADIATED BENZOYLATION**  
Wai, Maya\*. Advisor: Mohammad Al-Masum, Chemistry
- 
- P35 MULTIVECTOR THREAT DETECTION AND TRACKING SYSTEM BASED ON DIRECTIONAL ANTENNA ARRAY**  
Williams, Lindsay D.\*, Electrical and Computer Engineering. Advisor: Fenghui Yao, Computer Sciences
- 
- P36 DESIGN OF A VISUALIZATION AND MAPPING SYSTEM FOR USE IN AN INDOOR 802.11G WIRELESS LOCALIZATION AND TRACKING SYSTEM**  
Yarbrough, Leondre\*, Electrical and Computer Engineering. Advisor: Tamara Rogers, Computer Sciences
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### HEALTH, EDUCATION, SOCIAL SCIENCES

#### Undergraduate Students

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level. Chemistry Posters – Alger V. Boswell Building.

- 
- P37 A COMPARISON OF THE ADMISSION REQUIREMENTS FOR MASTERS SPEECH LANGUAGE PATHOLOGY PROGRAMS**  
Hudson, Megan\*, Iris Johnson-Arnold, Janika Blair and Brandy Hines. Advisor: Iris Johnson-Arnold, Speech Pathology
- 
- P38 FOOD SAFETY KNOWLEDGE AND RISKY FOOD PRACTICES OF OLDER ADULTS IN TENNESSEE**  
Clayborne, Amber\*. Advisor: Sandria Godwin, Family and Consumer Sciences
- 
- P39 ENGLISH LANGUAGE LEARNERS**  
Babiry, Ghariba\*. Advisor: Graham Matthews, Family and Consumer Sciences
- 
- P40 RELATIONSHIPS BETWEEN PERSONALITY AND SUGGESTIBILITY**  
Davidson, Michael\*. Advisor: Lara Ault, Psychology
- 
- P41 ATTRACTIVENESS AND PERSON PERCEPTION**  
Smith, Brittany\*. Advisor: Lara Ault, Psychology
- 
- P42 THE 110TH CONGRESS AND PARTY REPRESENTATION ON CONGRESSIONAL HOME PAGES**  
White, Josh\*, Susan West, McKinley Woodson, and Michael Thompson. Advisor: Brian Russell, History, Geography, and Political Science
- 
- P43 MEDIA BRANDING, PERCEPTIONS, AND POLITICAL IDEOLOGY**  
Duffy, Erin\*. Advisor: Brian Russell, History, Geography, and Political Science
- 
- P44 ARE FEMALE POLITICAL CANDIDATES AT A DISADVANTAGE?**  
Miller, Shalinda\*. Advisor: Brian Russell, History, Geography, and Political Science
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### LIFE AND MOLECULAR SCIENCES

#### Undergraduate Students

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level. Chemistry Posters – Alger V. Boswell Building.

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- P45 DETECTING SEGMENTAL COPY NUMBER VARIATION ON THE CD8 LOCUS**  
Coates, Gregory\*. Advisor: Michael Ivy, Biological Sciences
- 
- P46 LOCALIZATION OF SEMAPHORIN 3 IN THE POSTNATAL BRAIN OF RATS USING IMMUNOCYTOCHEMISTRY**  
Dean, Shatondra\*. Advisor: Brenda McAdory, Biological Sciences
-

## PRESENTATION SCHEDULES

- P47 THE EFFECT OF KAEMPFEROL ON LIPID OXIDATION**  
Hamsa, Mohamed\*. Advisor: William Boadi, Chemistry
- P48 ASSESSING INTERACTIVE RESPONSES IN LITTER DECOMPOSITION IN MIXED SPECIES OF SUGAR MAPLE, SCARLET OAK, AND TULIP TREE**  
Jabeen, Sara\*, and Lewis Myles. Advisor: Dafeng Hui, Biological Sciences
- P49 THE FLAME RETARDANT, TETRABROMOBISPHENOL A, INTERFERES WITH THE IMMUNE FUNCTION OF HUMAN NATURAL KILLER CELLS**  
Kibakaya, Esther Caroline\*. Advisor: Margaret Whalen, Chemistry
- P50 THE EFFECT OF LOW DOSES OF HYDROGEN PEROXIDE ON LIPID OXIDATION**  
Mobley, Dionna\*. Advisor: William Boadi, Chemistry
- P51 THE EFFECTS OF COPPER ON LIPID PEROXIDATION**  
Overton, Jazzmine\*. Advisor: William Boadi, Chemistry
- P52 EFFECTS OF KAEMPFEROL AND QUERCETIN ON LIPID PEROXIDATION**  
Smith, Jennifer\*. Advisor: William Boadi, Chemistry
- P53 ANALYSIS OF EFFECTS OF DICHLORO-DIPHENYL-TRICHLOROETHANE (DDT) ON NATURAL KILLER CELLS**  
Udoji, Felicia\*, Biological Sciences. Advisor: Margaret Whalen, Chemistry
- P54 IMPACTS OF CONVENTIONAL PESTICIDES AND BIOPESTICIDES ON SOIL MICROBIAL POPULATION AND SOYBEAN-RHIZOBIUM SYMBIOSIS**  
Wilson, Carlotta\*, Chemistry. Advisor: Kudjo Dzantor, Agricultural Sciences
- P55 IMPACTS OF THE OVEREXPRESSION OF AN OXALATE OXIDASE GENE IN TOMATO**  
Zhou, J.\*. Advisor: S. Zhou and R. J. Sauve, Agricultural Sciences

## ENGINEERING, COMPUTATIONAL & PHYSICAL SCIENCES

### Undergraduate Students

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level. Chemistry Posters – Alger V. Boswell Building.

- P56 SYNTHESIS AND CHARACTERIZATION OF A HGTE/SIO<sub>2</sub> NANOCOMPOSITE**  
Ebert, Jared\*. Advisor: Joshua T. Moore, Chemistry
- P57 SYNTHESIS AND CHARACTERIZATION OF CDS/SIO<sub>2</sub> NANOCOMPOSITE**  
Etherton, Rachel A.\*. Advisor: Joshua T. Moore, Chemistry
- P58 CATALYST-FREE MICROWAVE ENHANCED SYNTHESIS OF OXAZOLIDINE USING ALDEHYDES AND ETHANOL AMINE**  
Ghazialsharif, Nazanin\*. Advisor: Mohammad Al-Masum, Chemistry
- P59 SYNTHESIS AND CHARACTERIZATION OF MIXED-METAL SULFIDE NANOPARTICLES**  
Lazenby, Joseph\*. Advisor: Joshua T. Moore, Chemistry
- P60 SYNTHESIS OF PBS/SILICA NANOCOMPOSITES**  
Marsh, Tiffany\*. Advisor: Joshua T. Moore, Chemistry
- P61 THEORETICAL INVESTIGATION OF INTERSTELLAR PHOSPHAETHYNE**  
Mesfin, Million\*. Advisor: Sujata Guha, Chemistry
- P62 EFFECT OF PROCESSING MODES ON THE STRUCTURE OF YAM**  
Nguyen, Tu\*. Advisor: Nsoki Phambu, Chemistry
- P63 COST EFFECTIVE NANOPARTICLES THAT CATALYZE THE SYNTHESIS OF NEW ORGANIC COMPOUNDS IN AQUEOUS SOLUTIONS**  
Pitts, Eleanor\*. Advisor: Joshua T. Moore, Chemistry
- P64 CATALYSIS USING POLYSACCHARIDE-STABILIZED AU OR PT NANOPARTICLES**  
Reed, Yulonda\*. Advisor: Koen Vercruyssen, Chemistry
- P65 MICROWAVE ENHANCED CROSS-COUPLED REACTION OF VINYLTRIFLUOROBORATES AND CARBON PRONUCLEOPHILES IN THE PRESENCE OF PALLADIUM CATALYST**  
Sharif, Mohamed\*. Advisor: Mohammad Al-Masum, Chemistry
- P66 SOLUBILITY AND BIODEGRADATION OF ET-85 IN GROUNDWATER**  
Spear, Loreal\*. Advisor: Tom Byl and Lonnie Sharpe, Civil & Environmental Engineering



# PRESENTATION SCHEDULES

- P67 IDENTIFYING SOURCES AND AREAS OF RUNOFF ON THE TSU FARM**  
Tillman, Leon\*. Advisor: Robert Harrison, Agricultural Sciences
- P68 EVALUATING ATTENUATION OF STORM RUNOFF AT MAMMOTH CAVE NATIONAL PARK USING LEAF-PACK FILTERS**  
West, Ashley\*. Advisor: Tom Byl, Civil & Environmental Engineering
- P69 SYNTHESIS OF RHODIUM NANOPARTICLES AND THEIR POTENTIAL CATALYTIC PROPERTIES**  
Williams, Antoinette\*. Advisor: Koen Vercruysee, Chemistry

## ENGINEERING, COMPUTATIONAL & PHYSICAL SCIENCES

### Faculty and Staff

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level. Chemistry Posters – Alger V. Boswell Building.

- P70 PLANT PATHOGENIC PHYTOPHTHORA SPECIES FOUND IN TENNESSEE COMMERCIAL NURSERIES**  
Santamaria, L.\*, M. T. Mmbaga and R. J. Sauve, Agricultural Sciences.
- P71 MICROBIAL ORGANISMS FOUND ON THE FOLIAGE OF FUNGICIDE TREATED AND NON-TREATED DOGWOODS**  
Mmbaga, Margaret\* and Roger Sauve, Agricultural Sciences
- P72 FOLIAGE DISEASES OF BIGLEAF HYDRANGEA FOUND AT TSU RESEARCH CENTER IN McMINNVILLE, TN**  
Mmbaga, M. T.\* and R. J. Sauve\*, Agricultural Sciences
- P73 NETWORKS IN TECHNICAL COMMUNICATION SCHOLARSHIP**  
Smith, Elizabeth O.\* (Betsy). Languages, Literature, and Philosophy
- P74 HEADSHIP CORRELATIONS OF TN NEIGHBORHOODS & CHILD**  
Brown, Elizabeth.\* Health Administration and Health Sciences
- P75 EVALUATING INJURY FROM YOUTH VIOLENCE IN NASHVILLE**  
Brown, Elizabeth.\* Health Administration and Health Sciences
- P76 REDUCING RISK-ASSOCIATED SEXUAL BEHAVIOR**  
Foxy, Terri.\* Health Administration and Health Sciences
- P77 THE UTILIZATION OF CHILD PASSENGER SAFETY RESTRAIN**  
Samuels, A. Dexter.\* HAHS
- P78 PRE-HARVEST IRRIGATION: OPPORTUNITY TO APPLY BIORATIONAL AND CONVENTIONAL INSECTICIDES AGAINST JAPANESE BEETLE LARVAE IN NURSERIES**  
Oliver, Jason.\* Agriculture and Consumer Sciences
- P79 POINSETTIA CULTIVAR PREFERENCES IN 2008**  
Bhatti, Sarabjit.\* Agriculture and Consumer Sciences
- P80 SURFACE PLASMON RESONANCE SENSOR FOR DETECTION OF SALMONELLA**  
Chen, Fur-Chi.\* Family and Consumer Sciences
- P81 BACTERIA ISOLATES FROM FRESH PRODUCE**  
Kilonzo-Nthenge, Agnes.\* Family and Consumer Sciences
- P82 FAMILY INTERACTION AND NUTRITION**  
Machara, Margaret.\*, CFLE. Family and Consumer Sciences
- P83 SUGGESTING THE NEW LOCATION OF OUTLET STORE**  
Seo, Jung-Im.\* Family and Consumer Sciences
- P84 ASSESSMENT OF FLOOR SPACE REQUIREMENT FOR FRENCH GUINEA FOWL**  
Nahashon, Samuel.\* Agricultural Sciences
- P85 PATHOGENS IN OUR FOODS: WHY IMPORTS MATTER**  
Ekanem, E.\* Agricultural Sciences
- P86 HANDLING OF RAW MEAT DURING FOOD PREPARATION AND THE POTENTIAL FOR CROSS CONTAMINATION IN HOME KITCHENS**  
Godwin, S.L.\*, F.C. Chen\*, A. Kilonzo-Nthenge, C. Thompson, L. Pearson, and C. Smith, Family and Consumer Sciences



# School of Nursing Day

## SPEAKER

**Cathy R. Taylor, DrPH, MSN, RN**, was appointed Assistant Commissioner for the Tennessee Department of Health's Bureau of Health Services Administration in 2007. In this role, Taylor oversees a system of 13 regional health offices responsible for the oversight of services in 89 rural and six metropolitan county health departments.

Prior to joining the Department of Health, Taylor served as an assistant professor of nursing at Vanderbilt University School of Nursing and director of the Meharry-Vanderbilt Alliance Disease Management Program. She held administrative and clinical positions with the Veteran's Administration, was Director of Nursing at Fentress County Hospital, and served as a public health nurse in Tennessee's Fentress and Rutherford Counties.

Taylor completed a post-doctoral fellowship in health outcomes research at Vanderbilt University. She earned a Doctor of Public Health degree from the University of Alabama at Birmingham, a Master of Science in Nursing degree from The University of Tennessee, Memphis, a Bachelor of Science in Nursing from the University of Alabama, Huntsville and a Bachelor of Science degree from Middle Tennessee State University.



Taylor was appointed by Governor Phil Bredesen to chair the Tennessee Center for Diabetes Prevention and Health Improvement Board in November 2006. She has served as a consultant for the U.S. Department of Health and Human Services, Health Resources and Services Administration's Maternal and Child Health Bureau Leadership Institute and the Tennessee Department of Mental Health and Mental Retardation. Taylor is a member of the American Diabetes Association, the American Nurses Association and the American Public Health Association. She has earned numerous grants and awards, and her work has been included in professional publications such as *Diabetes Care*, *Maternal and Child Health Journal*, *Quality and Safety in Healthcare*, and *Concepts and Models for Service Learning in Nursing*.

Taylor was recently named one of Vanderbilt University School of Nursing's 100 Nurse Leaders and honored as The University of Tennessee College of Nursing's Outstanding Alumna in 2008.

**Monday, March 30, 2009**

## Schedule of Events

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

8:00 am - 8:55 am	<b>Registration and Breakfast</b>
9:00 am - 11:00 am	<b>Roundtable Research Presentations</b>
11:00 am - 12:00 noon	<b>Poster Presentations</b>
12:05 pm	<b>Introduction of Speaker</b>
12:15 pm - 1:00 pm	<b>Speaker and Luncheon</b>



# Astronomy Day

## SPEAKER



**Matthew W. Muterspaugh**, Ph.D., recently joined the Center of Excellence in Information Systems Engineering and Management at Tennessee State University as Assistant Professor. He is a former Townes Postdoctoral Fellow from University of California – Berkeley. Muterspaugh earned a B.S. in Mathematics and a B.S. in Physics from Indiana University, both with highest distinction. He received a Ph.D. in Physics from Massachusetts Institute of Technology.

Muterspaugh is principal investigator for a \$907,000 grant from the National Science Foundation-Advanced Technologies and Instrumentation (NSF-ATI), “Digital Spectral Analysis of Heterodyne Signals from the Infrared Spatial Interferometer.” He is co-investigator on a \$380,648 grant from the National Aeronautics and Space Administration (NASA), “The TEDI Near-IR Radial Velocity Exoplanet Search.

Muterspaugh has six years experience with Palomar Testbed Interferometer (PTI) for generalized high spatial resolution near-infrared studies and development of new high-resolution techniques. He is the co-developer of the technique for and science program of the Palomar High-precision Astrometric Search for Exoplanet Systems at PTI, looking for giant planet orbiting either star in binary star systems.

Muterspaugh is also the principal investigator for the Visible Imaging System for Interferometric Observations, a new camera for the Navy Prototype Optical Interferometer (NPOI). He has written a number of conference proceedings and co-authored numerous refereed and non-refereed publications.

**Dr. Matthew Muterspaugh** is shown working inside the Hamilton Spectrograph, a camera that has been used to find many of the planets known to orbit other stars.

**Tuesday, March 31, 2009**

## Schedule of Events

### High School Students

#### Research and Sponsored Programs Building

9:00 am - 10:00 am **Core Lab Demonstrations for High School Students**

#### Walter S. Davis Humanities Building Auditorium

10:00 am - 11:00 am *“Exploring New Worlds – The Past and The Future: TSU’s Contribution to Astronomy”*  
Matthew Muterspaugh

11:00 am - 12:00 Noon **Planet Alignment Walking Tour**

#### Floyd-Payne Campus Center

12:00 Noon - 1:00 pm **High School Students Luncheon**

### Faculty and Researchers

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

11:30 am – 1:00 pm **Astronomy Researchers Luncheon**

*“Exploring New Worlds – The Past and The Future: TSU’s Contribution to Astronomy”*  
Matthew Muterspaugh

**Issuance of Proclamation to Tennessee State University**  
The Honorable Phil Bredesen, Governor, State of Tennessee

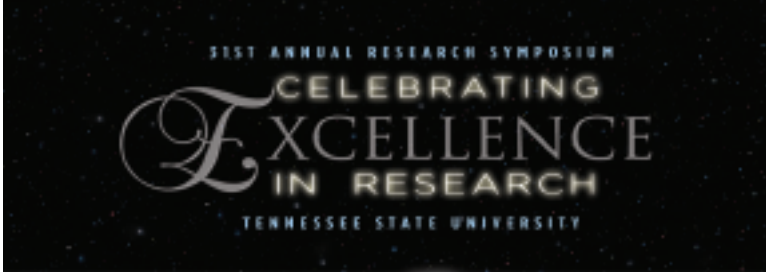
### The Community

6:00 pm **Adventure Science Center Nashville** 800 Fort Negley Blvd., Nashville, Tennessee - *Open to the public*

#### Presentations and Discussions

**Issuance of Proclamation to Tennessee State University**  
The Honorable Phil Bredesen, Governor, State of Tennessee

**Nine Planets and Counting; Stars – Movies** (complimentary admission)



# Psychology Day

## SPEAKER

**Brent Mallinckrodt, Ph.D.**, received his degree in Counseling Psychology from the University of Maryland in 1986. He is the author of over 80 articles and book chapters. His research interests include adult attachment and applications of attachment theory to psychotherapy processes and outcomes. He is the co-investigator in two National Institutes of Health (NIH) funded projects studying social support and coping in women following treatment for breast cancer. Currently, he is the director of the Counseling Psychology program at The University of Tennessee—Knoxville.

Since 2004, Mallinckrodt has been Editor of the *Journal of Counseling Psychology*. For eight years previous to that appointment, he served as Associate Editor of *Psychotherapy Research*. Of the awards he has received, Mallinckrodt is most proud of being named the 2005 University of Missouri Graduate Mentor of the Year.



**Tuesday, March 31, 2009**

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## Schedule of Events

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### Agricultural Information Technology Center (AITC)

1:00 pm      ***Translating Research into Publications Workshop***  
Brent Mallinckrodt, *Editor, Journal of Counseling Psychology*

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

5:00 pm      **Student Poster Session and Reception**

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### Agricultural Information Technology Center (AITC)

5:30 pm      **Award Ceremony**

6:00 pm      ***Applications of Adult Attachment Theory to Psychotherapy***  
Brent Mallinckrodt, speaker

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# Pilot Center for Academic Excellence in Intelligence Studies (PCAEIS) Day

## SPEAKER

**Gordana Vlahovic**, Ph.D., is Associate Professor, in the Department of Environmental, Earth and Geospatial Sciences at North Carolina Central University (NCCU). She has a B.S. in Physics from the University of Zagreb, Croatia. Her M.S. and Ph.D., both in Geology, were earned at the University of North Carolina at Chapel Hill.

Vlahovic is the principal investigator on a number of ongoing grants: \$736,000 from CREST: Computational Center for Fundamental and Applied Science and Education at North Carolina Central University for a collaborative study with CERI (Center for Earthquake Research and Information at the University of Memphis) to study the New Madrid Seismic Zone; \$150,000 from NSF (National Science Foundation) for “Pathway to Success – Research and Internship Opportunities for Students,” and \$139,000 from the National Geospatial Intelligence Agency for “Geospatial Research and Internship Partnerships.”

Vlahovic has written extensively about geosciences and geospatial technology, and she has co-authored a number of articles that have appeared in scholarly journals. She was recently honored for outstanding scholarly achievement, proposal writing and grants management by NCCU. She is a member of the Seismological Society of America, American Geophysical Union, American Society for Photogrammetry and Remote Sensing, and the National Association of Geoscience Teachers.



**Rakesh Malhotra**, Ph.D., is a Visiting Assistant Professor at North Carolina Central University (NCCU), where he established and operates the Geospatial Research, Innovative Teaching and Services (GRITS) center with NCCU faculty support. He earned a Bachelor’s in Engineering in Mechanical Engineering from Punjab University in Chandigarh, India. He holds two M.S. degrees, one in Forest Resources and one in Computer Science and a Ph.D. in Geography, all from the University of Georgia.

Malhotra worked with a team of scientists at NCCU on environmental justice projects, established a GIS certificate program for graduate and undergraduate students, and taught GIS courses. He received a number of awards and grants from NCCU: Co-Principal Investigator, “Pathway to Success – Research and Internship Opportunities for Students, 2008,” \$150,000; Co-Principal Investigator, “Integrative Geophysical Investigation of the New Madrid Seismic Zone: Collaborative Research NCCU and CERI (Center for Earthquake Research and Information, University of Memphis), 2008,” \$736,000. Malhotra is a former project manager for Fugro EarthData Solutions Inc. in Frederick, MD, where he provided GIS support to the Airborne Rapid Imaging for Emergency Support (ARIES) program and assisted Florida Power and Light with GIS applications in the aftermath of Hurricane Charley. He is co-author of a number of proceedings, presentations and scholarly publications.

**Wednesday, April 1, 2009**

## Schedule of Events

### Performing Arts Center

9:30 am - 10:00 am **Lady Day Performance** by Lawrence James, Ph.D., Communications, TSU  
*Kennedy Center American College Theatre Festival (KCACTF) Region IV Finalist, 2009*  
 Lawrence James received a faculty certificate of merit for directing; students Ashley Bishop and Alex White, II nominated for an acting award; student Nikki Staggs nominated for a stage management award.  
*KCACTF National Finalist, 2009*

### Research and Sponsored Programs Building

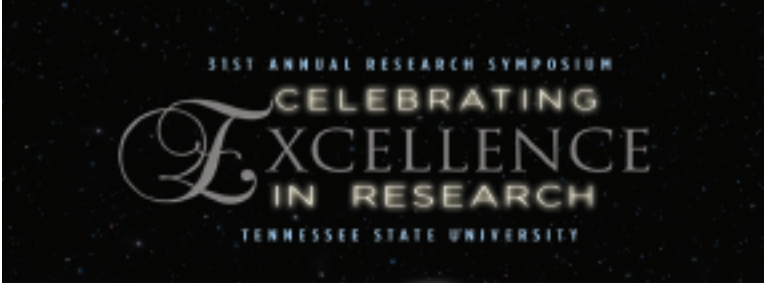
10:00 am - 11:00 am **Core Labs Tour**

### Floyd-Payne Campus Center

10:00 am - 11:00 am **AFROTC Demonstration**

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

11:30 am - 1:30 pm **Intelligence Studies Luncheon** Gordana Vlahovic, speaker



# School of Agriculture & Consumer Sciences Day

## SPEAKERS



**Pia Herring** attended Tennessee State University from 1996-2000 as part of the United States Department of Agriculture (USDA)/1890 Scholars Program and subsequently obtained a Bachelors degree in Animal Science. In January 2001, Herring began a permanent position with the USDA Animal and Plant Health Inspection Service (APHIS) Veterinary Service Tennessee (VSTN) Area Office as an animal health technician. In this position, she was responsible for the collection, testing, and reporting of milk samples for the *Brucella abortus* agent—which if left undetected—is known to cause Undulant Fever in humans that consume unpasteurized milk or are in contact with infected animals. Herring was also responsible for assisting Federal and State Veterinarians in the documentation of Foreign Animal Disease cases, via the USDA's Emergency Management Response System.

In October 2006, Herring accepted the Administrative Officer position with the VSTN Area Office. In this position, she is responsible for the administration and facilitation of a budget totaling over \$2.2 million, local human resources management, property and procurement oversight, and the facilitation and tracking of cooperative agreements with various State and Tribal governments. Herring also serves as a recruiter for the USDA-APHIS.



**Larry Whaley** graduated from the School of Agriculture at Tennessee State University in 2001 with a degree in agribusiness that focused on statistics. Whaley was involved in the USDA/1890 Scholars Program, which exposed him to the federal career opportunities for minorities interested in agriculture. This particular program, along with several campus-based agriculture clubs, helped to match students with successful career paths beyond Tennessee State University.

Upon the completion of his bachelor's degree, Whaley began a career with USDA's National Agricultural Statistics Service (USDA - NASS) in Nashville, Tennessee at the Ellington Agricultural Center, where he is currently employed as an agricultural statistician. He expanded his professional duties by becoming a licensed realtor in 2004. Whaley is also an actively involved member of Mt. Zion Baptist Church, Kappa Alpha Psi Fraternity, Inc., and the Diamond Foundation. He and his wife, Maresa, currently reside in the Nashville area.

**Thursday, April 2, 2009**

## Schedule of Events

### Lawson Hall and James E. Farrell - Fred E. Westbrook Building

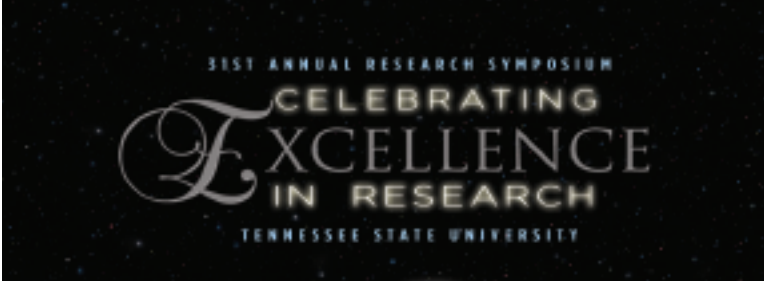
- 9:00 am **Welcome** School of Agriculture and Consumer Sciences Student Ambassadors
- 9:15 am **Agricultural and Consumer Sciences Research Demonstrations** – Biotechnology; Fashion Merchandising; Food Safety, Geospatial Information Systems (GIS); Global Positioning System (GPS)

### Agricultural Information Technology Center (AITC)

- 11:00 am **Virtual Tour of the School of Agriculture and Consumer Sciences**  
Academics, Research, and Extension; the Agricultural Research and Education Center at Nashville, the Otis L. Floyd Nursery Research Center at McMinnville, and the Cheatham County Agricultural Research Center.  
*Pia Herring and Larry Whaley, speakers*

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

- 11:30 am **Luncheon**  
*Meet the Dean, Chandra Reddy*  
*Recruitment Presentation*
- 12:30 pm Campus Tour



# Celebrate Chemistry Day

## SPEAKER



**Darcie Wallace-Duckworth, Ph.D.**, is the Assistant Director of Training for Aegis Sciences Corporation with the responsibility for all team member orientation, training and continuing education. She is also responsible for developing and improving the fundamental understanding of Aegis team members in forensic analytical toxicology and the applied method of quantitative chemical analysis.

Prior to joining the Aegis Sciences Corporation, Wallace-Duckworth served as Supervisor of Organic Chemistry Laboratories at Goucher College in Baltimore, Maryland.

Wallace-Duckworth earned a bachelor's in chemistry from Austin Peay State University, a master's from Goucher College and a doctorate from Middle Tennessee State University. She is a member of the National Science Teachers Association and the American Chemical Society.

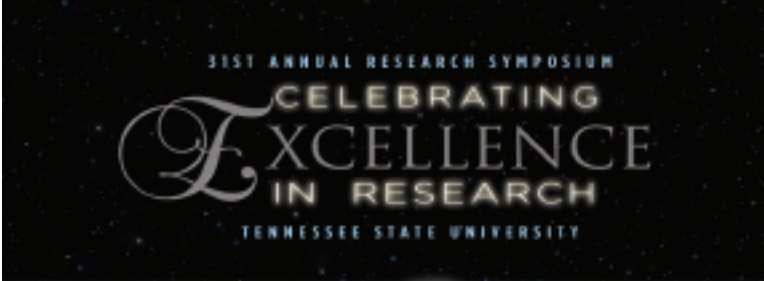
**Thursday, April 2, 2009**

## Schedule of Events

### Alger V. Boswell Building

8:30 am	<b>Breakfast</b>
9:00 am	<b>Check-In</b>
9:15 am	<b>Tour of Chemistry Department and Research and Sponsored Programs</b>
10:00 am	<b>Chemistry Demonstrations</b> with Koen Vercruysse, Ph.D., Chemistry
11:00 am	<b>Chemistry Challenge</b> with Joshua Moore, Ph.D., Chemistry
12:15 pm	<b>Lunch</b> in Student Union Cafeteria
1:00 pm	<b>Student Research Poster Presentations</b>
2:40 pm	<b>Introduction of Speaker</b> by Cosmas Okoro, Ph.D., Chemistry Darcie Wallace-Duckworth, Aegis Sciences Corporation, speaker
6:00 pm	<b>Awards Dinner, James E. Farrell - Fred E. Westbrook Building, 118</b>

*This event was sponsored in part by Fisher Scientific.*



AWARDS CEREMONY KEYNOTE SPEAKER

## Jesse E. Russell

CHAIRMAN AND CEO, incNETWORKS, LONG BRANCH, NEW JERSEY

**Jesse E. Russell** is currently Chairman and CEO of incNETWORKS, a broadband wireless communications company focused on fourth generation wireless communications networks and technologies. Russell has over 30 years of professional experience with Lucent Bell Labs, AT&T and incNETWORKS in directing research and development of pioneering technologies, products and services related to the communications industry. For the last 20 years, Russell's work has been focused in the wireless communications area as the Chief Technical Officer for Lucent Wireless Business Unit and Chief Wireless Architect and Vice President of Advanced Communications Technologies with the AT&T Company. For over a decade, Russell has dealt with business development aspects of communications technologies, products and service realization through business strategy development, business case preparation, marketing and sales support, as well as customer interface and product portfolio management.

Russell is a member of the National Academy of Engineering, a Fellow of the IEEE, and a Fellow of the International Engineering Consortium (IEC). In 1980, Russell was selected by Eta Kappa Nu Electrical and Computer Engineering Honor Society as "The Most Outstanding Young Electrical Engineer of the Year" under the age of 32. Russell has over 75 U.S. patents to his credit in the communication engineering field.

For over 14 years, Russell also has served as Chairman of the Telecommunication Industry Association (TIA) Wireless Communication Standards Organization. As a recognized communications technology expert, Russell testified before a Congressional Subcommittee on Technology, as well as appeared before Justice Harold Greene, who was overseeing the breakup of AT&T. Russell is also an internationally recognized wireless communications consultant in the area of advanced broadband wireless technologies and emerging broadband wireless 3G and 4G product strategy, as well as a consultant in regulatory and spectrum strategy. In addition, Russell consults on wireless standards related issues such as radio frequency (RF) health and safety matters as well as cellular communication industry standards (1G, 2G, 2.5G, 3G "UMTS", and 4G).

Russell received his Bachelor of Science degree in Electrical Engineering from Tennessee State University in 1972 and his Master's in Electrical Engineering from Stanford University in 1973.



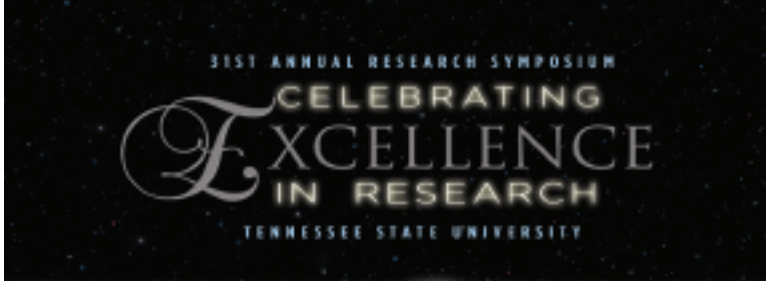
**Friday, April 3, 2009 11:30 am**

## Research and Sponsored Programs Awards Ceremony

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

Welcome	Valerie Williams, <i>Symposium Co-Chair</i>
Luncheon	
Introduction of Speaker	Maria Thompson, <i>Interim Vice President, Research and Sponsored Programs</i>
Keynote Speaker	Jesse E. Russell, <i>Chairman and CEO, incNETWORKS</i>
Presentation of Awards	Maria Thompson, <i>Interim Vice President, Research and Sponsored Programs</i>
Acknowledgements and Closing Remarks	Valerie Williams and Brenda McAdory, <i>Symposium Co-Chairs 2009</i>

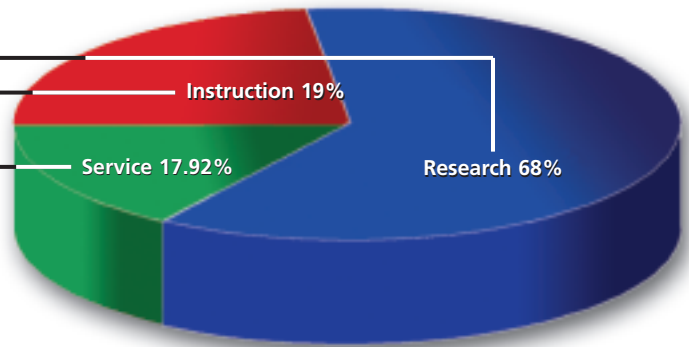




## Research and Sponsored Project Awards FY 2008

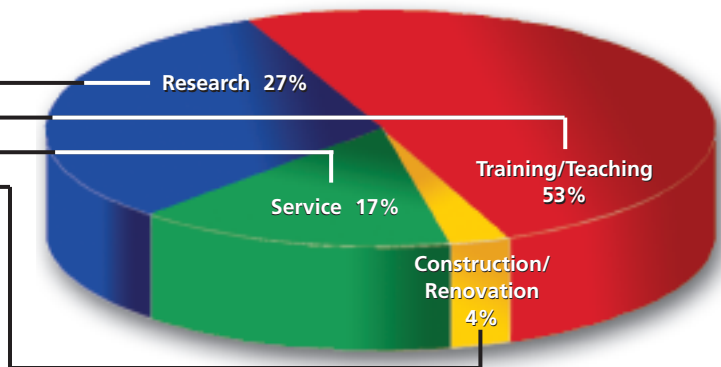
### Submissions By Project Type

Research \$29,633,859 (80)  
 Instruction \$8,316,850 (26)  
 Service \$5,513,149 (14)  
**TOTAL \$43,463,858 (120)**



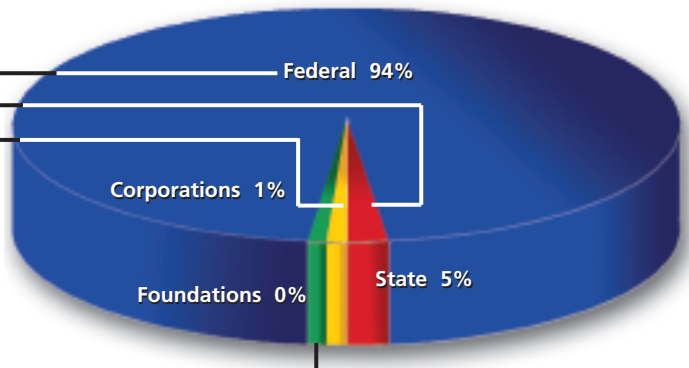
### Awards By Project Type

Research \$11,705,303 (44)  
 Training/Teaching \$15,715,458 (77)  
 Service \$5,778,773 (24)  
 Construction/Renovation \$1,300,000 (24)  
**TOTAL \$34,472,853 (146)**



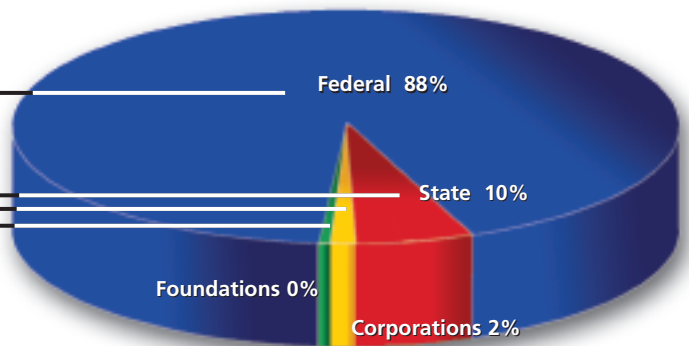
### Submissions By Source

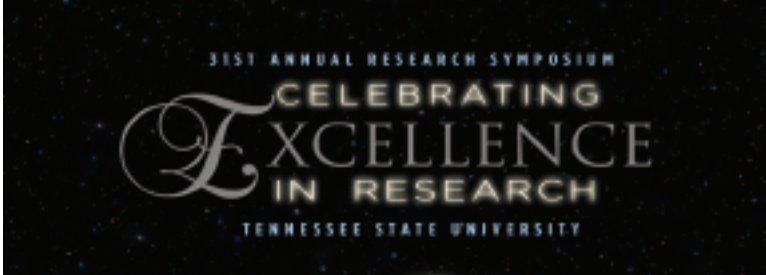
Federal \$40,450,016 (89)  
 State \$2,364,447 (18)  
 Industry/Corporate \$597,075 (12)  
 Private Foundations \$53,320 (1)  
**TOTAL \$43,463,858 (120)**



### Awards By Source

Federal \$30,431,488 (117)  
 State \$3,389,127 (18)  
 Corporations \$618,938 (6)  
 Private Foundations \$33,300 (5)  
**TOTAL \$34,472,853 (146)**





# Student Awards

R E S E A R C H S Y M P O S I U M 2 0 0 8

## **Oral Presentations**

1st Place - \$250  
2nd Place - \$100  
3rd Place - \$50

## **Poster Presentations**

1st Place - \$150  
2nd Place - \$75  
3rd Place - \$25

- 
- **Graduate Student Oral Competition - Computer Science, Engineering, Mathematics & Physics**

First Place	A15	Charles McCurry
Second Place	A23	Leondre Yarbrough
Third Place	A17	Matthew Murray

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  - **Graduate Student Oral Competition - Education, Health and Social Sciences**

First Place	B4	Rebecca Wagner
Second Place	B5	Christina Barland
Third Place	B2	Leigh Arino de la Rubia

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  - **Undergraduate Student Oral Competition - Education, Health and Social Sciences**

First Place	C3	Rosalina Moore
Second Place	C5	Megan Stancil
Third Place	C6	Jasmine Whitaker

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  - **Graduate Student Oral Competition - Sciences**

First Place	D4	Thyneice Taylor
Second Place	D1	Saudat Adamson
Third Place	D2	Oluropo Agbaje

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  - **Undergraduate Student Oral Competition - Engineering and Sciences**

First Place	E10	Sravanthis Pallapothu
Second Place	E4	Debra Collins-Biggs
Third Place	E1	Jameka Johnson

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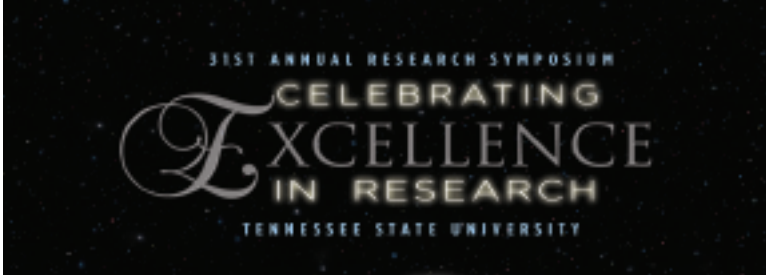
  - **Graduate Student Poster Competition**

First Place	P22	Olivia Golchi
Second Place	P21	James Tyus
Third Place	P26	Paris Heydari

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  - **Undergraduate Student Oral Competition - Sciences**

First Place	P41	Fredrica Piphus
Second Place	P44	Nicholas Reynolds
Third Place	P38	Carlton Cobb
-



## Judges

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**Terri Allgood**, *Tennessee State University*

---

**Anthony Baucum**, *Vanderbilt University*

---

**Hugh Fentress**, *Vanderbilt University*

---

**Shannon Hardie**, *Vanderbilt University*

---

**Lois Harlston**, *Tennessee State University*

---

**Gregory Henry**, *Tennessee State University*

---

**Helen Houston**, *Tennessee State University*

---

**George Hull**, *Professor Emeritus, Fisk University*

---

**Lee-Hyun Keel**, *Tennessee State University*

---

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

---

**Heinrich Matthies**, *Vanderbilt University Medical Center*

---

**Leah Miller**, *Vanderbilt University*

---

**Samantha Morgan-Curtis**, *Tennessee State University*

---

**Matthew Muterspaugh**, *Tennessee State University*

---

**E. Lewis Myles**, *Tennessee State University*

---

**Yvonne Myles**, *Tennessee State University*

---

**Gary Peevely**, *Tennessee State University*

---

**Stacie Putman**, *Tennessee State University*

---

**Aramandla Ramesh**, *Meharry Medical College*

---

**Marilyn E. Thompson**, *Belmont University*

---

**Richard Todd**, *Tennessee State University*

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## 2009 Research Symposium Committee

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**Terri Allgood**, *Pilot Center for Academic Excellence in Intelligence Studies*

---

**Gwen Brandon**, *Research and Sponsored Programs*

---

**Sarabjit Bhatti**, *School of Agriculture and Consumer Sciences*

---

**Mark Brinkley**, *Pilot Center for Academic Excellence in Intelligence Studies*

---

**David Danner**, *Research and Sponsored Programs*

---

**Phyllis Danner**, *Research and Sponsored Programs*

---

**Todd Gary**, *Research and Sponsored Programs*

---

**Jodi Gresham**, *Art Gallery*

---

**Marie Hammond**, *Psychology*

---

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

---

**Michael Ivy**, *Biological Sciences*

---

**Gary Linn**, *Nursing*

---

**Deborah Long**, *School of Agriculture and Consumer Sciences*

---

**Nannette Martin**, *School of Agriculture and Consumer Sciences, (former symposium co-chair)*

---

**Mohan Malkani**, *Engineering, Technology, and Computer Science*

---

**Brenda McAdory**, *Biology (symposium co-chair)*

---

**E. Lewis Myles**, *Biological Sciences (former symposium chair)*

---

**Yvonne Myles**, *Biological Sciences*

---

**Will Nesby**, *School of Agriculture and Consumer Sciences*

---

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

---

**Moinuddin Sarkar**, *Physics and Astronomy*

---

**Jennifer Stewart-Wright**, *Research and Sponsored Programs*

---

**Susan Verberne-Sutton**, *Research and Sponsored Programs*

---

**Verla Vaughan**, *Nursing*

---

**Valerie Williams**, *Center of Excellence for Learning Sciences (symposium co-chair)*

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### EX-OFFICIO MEMBERS

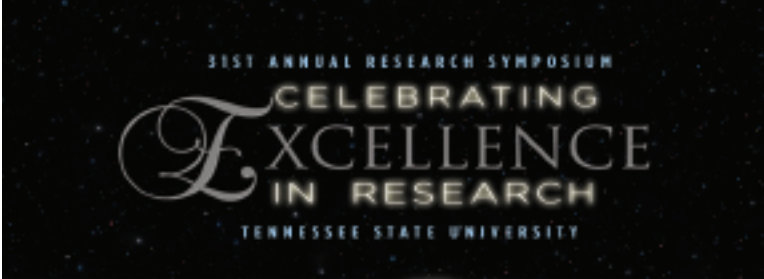
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**Maria Thompson**, Ph.D., *Interim Vice-President, Research and Sponsored Programs*

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**Gloria Johnson**, Ph.D., *Interim Dean, College of Arts and Sciences*

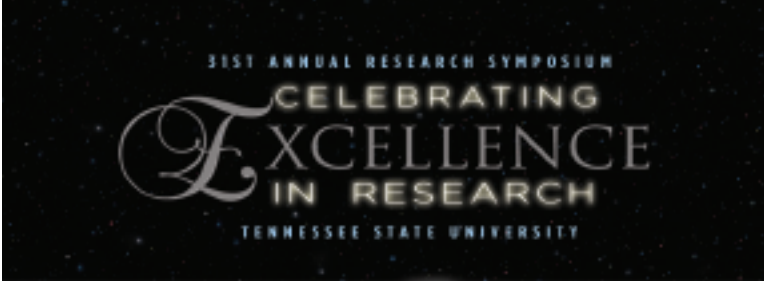
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## **Million Dollar Club Members**

<b>Dr. Michael Busby</b>	<i>Center for Excellence in Information Systems Engineering and Management</i>
<b>Dr. Satinderpaul Devgan</b>	<i>College of Engineering, Technology, and Computer Science</i>
<b>Dr. Soumen N. Ghosh</b>	<i>Office of Business and Economic Research</i>
<b>Dr. Baqar A. Husaini</b>	<i>Center for Health Research</i>
<b>Dr. Prem S. Kahlon</b>	<i>Department of Biological Sciences</i>
<b>Dr. Lee-Hyun Keel</b>	<i>Center for Excellence in Information Systems Engineering and Management</i>
<b>Dr. William Lawson</b>	<i>School of Arts and Sciences</i>
<b>Mrs. Mary Love</b>	<i>TRIO Programs</i>
<b>Mrs. Janice Lovell</b>	<i>Center of Excellence for Learning Sciences</i>
<b>Dr. Mohan Malkani</b>	<i>College of Engineering, Technology, and Computer Science</i>
<b>Dr. E. Lewis Myles</b>	<i>Department of Biological Sciences</i>
<b>Dr. Robert F. Newkirk</b>	<i>Department of Biological Sciences</i>
<b>Dr. Barbara Nye</b>	<i>Center of Excellence: Basic Skills</i>
<b>Dr. Chinyere Onwubiko</b>	<i>College of Engineering, Technology, and Computer Science</i>
<b>Dr. Edward L. Risby</b>	<i>Graduate School and Office of Sponsored Research</i>
<b>Dr. Decatur B. Rogers</b>	<i>College of Engineering, Technology, and Computer Science</i>
<b>Dr. Lonnie Sharpe</b>	<i>Massie Chair of Excellence in Environmental Engineering</i>
<b>Dr. Marcus W. Shute</b>	<i>Research and Sponsored Programs</i>
<b>Dr. Amir Shirkhodaie</b>	<i>College of Engineering, Technology, and Computer Science</i>
<b>Dr. Willard Smith</b>	<i>Center for Excellence in Information Systems Engineering and Management</i>

Congratulations to the 20 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 20 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.



## ***Congratulations to the Newest Million Dollar Club Members***

*MILLION DOLLAR CLUB CELEBRATES RESEARCHERS AWARDED \$1,000,000 OR MORE PER GRANT*



**E. Lewis Myles**

**E. Lewis Myles, Ph.D.**, completed his doctoral training at the University of Arizona (Tucson) in Genetics. He continued his work as an associate research scientist at the College of Physicians and Surgeons of Columbia University. Myles has been a part of the research and teaching faculty at Tennessee State University in the Department of Biological Sciences where he is currently a professor. Myles has directed the theses and dissertations for more than 20 graduate students. He has also trained over 75 undergraduate students in his research laboratory as well as high school students during his 23 year tenure at TSU.

Myles is the co-PI for a joint grant between Tennessee State University and Middle Tennessee State University that has a pending award of \$2,998,806 over a five-year period. This is an NSF GK-12 program designed to change science, technology, engineering, and mathematics (STEM) graduate students' experiences through an innovative, collaborative training program (TRIAD) connecting graduate fellows, partner teachers, and industry representatives. This comprehensive, collaborative approach to instruction provides greater depth and understanding for content at all levels, creates a greater interest and appreciation for the STEM professions and is expected to result in scientists who are better prepared to meet the opportunities and challenges of scientific investigation in an academic or industrial environment.

**Janice Lovell, M.Ed.**, is Project Director for Head Start Career Advancement Partnership Program (HSCAPP) in the Tennessee State University Center of Excellence for Learning Sciences and has more than 20 years of experience designing and administering early childhood research and demonstration projects. Her educational preparation includes a B.S. in Social Welfare/Behavior Sciences and M.Ed. in Education Administration and Supervision from Tennessee State University, with additional hours of coursework related to higher education.

While at TSU, Lovell has coordinated projects with over \$6 million in research and project delivery contracts, including the statewide TECTA (Tennessee Early Childhood Training Alliance) training program. She has extensive Head Start experience as an early childhood training specialist, advisor, and a regional and national trainer in early childhood education. In addition, Lovell has served as accreditation Mentor and Validator for the National Association for the Education of Young Children (NAEYC).

Within the early childhood field, Lovell was responsible for the implementation of a pilot program to operate a model childcare center for (Tennessee) state employees in Nashville. She is a trainer for infant toddler development, professional development for Pre-K teachers, and served five years as the Project Coordinator and Mentor for the higher education grant, Tennessee State University's Partnership for Academic Training with Head Start (TSU-PATHS). The records of grant participation indicate that Lovell highly values stewardship.



**Janice Lovell**



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- Dean of Students & Director of Residence Life
- Dean of Students/Chief Judicial Officer
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- Career Development Center
- Wellness Center & Floyd-Payne Campus Center
- Health Center
- Student Activities
- International Student Affairs
- Disabled Student Services
- TRIO Programs
- First Year Students Program
- TSU Police Department
- Intramurals/Recreation
- Office of Admissions
- Financial Aid

**Michael A. Freeman, Ph.D.**  
Vice President  
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## AIR FORCE ROTC

Detachment 790  
at Tennessee State University



### WHO CAN ENROLL IN AIR FORCE ROTC?

Detachment 790 is located at Tennessee State University; however, we have cross-town agreements with most of the middle Tennessee area universities. Students from the following universities can enroll at no cost and can compete for SCHOLARSHIPS!

- Tennessee State University
- Middle Tennessee State University
- Vanderbilt University
- Belmont University
- Western Kentucky University
- David Lipscomb University
- Austin Peay State University
- Fisk University
- Meharry Medical College
- Tennessee Technological University
- Nashville State Community College
- Volunteer State Community College
- Aquinas College
- Free-Will Baptist Bible College

### WHAT IS AIR FORCE ROTC?

Air Force Reserve Officer Training Corps (ROTC) is a program that prepares young men and women to become officers in the United States Air Force while completing a degree.

### WHAT ARE THE BENEFITS OF BEING IN AIR FORCE ROTC?

- Scholarships
- A monthly, tax-free cash stipend
- Visits to Air Force bases
- Orientation flights
- Opportunity to pursue a degree
- Opportunity to learn leadership



We have 15 HBCU scholarships per year for students enrolled at Tennessee State University, Fisk University, and Meharry Medical College who have a 2.5 GPA and meet eligibility requirements.

Air Force ROTC HBCU scholarships pay up to \$15,000 per year for tuition, \$900 per year for books, \$350-\$500 per month tax free stipend while on scholarship. The scholarship can be activated after one semester in AFROTC.

Students who enroll but choose not to accept the scholarship are under no obligation to the Air Force.

For more information contact:

**Captain Bryan Wicks**  
Telephone: (615) 953-5977  
Email: [bwicks@tnstate.edu](mailto:bwicks@tnstate.edu)

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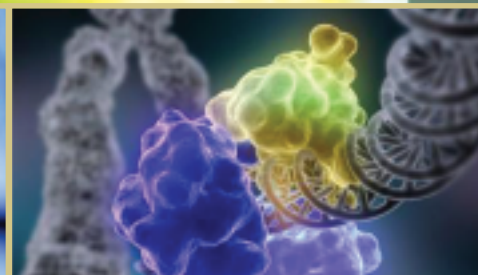
ASSOCIATION OF PRE-PROFESSIONAL LIFE SCIENTISTS



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# RIMI

*Research Infrastructure for  
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**Dr. Robert Newkirk**  
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**Dr. Michael T. Ivy**  
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**Dr. Brenda McAdory**  
*Investigator*

**Dr. Xiaofei Wang**  
*Investigator*



**The Center for  
Service Learning & Civic Engagement**  
Tennessee State University

**Be the change  
you want to see  
in this world.**  
- Ghandi

# *Honoring the 31st Annual University-Wide Research Symposium*



## **Our Vision:**

Knowledge, Engagement, Reflection, Transformation – Where scholarly service is the bridge uniting learning with civic responsibility.

## **Our Mission:**

*The Center...*

Exists to facilitate quality educational experiences through community-based service-learning.

Connects campus and community resources to create diverse learning experiences and to serve community needs.



Has programs that integrate the academic, service, and reflection components of service-learning by providing resources – including training and technical assistance – to students, faculty and community.

Advances TSU's goals of quality teaching, research, and service.

## **Our Service-Learning Courses:**

Prepare students for our increasingly multicultural and global society by developing the skills to work collaboratively and compassionately to create more just and equitable workplaces, communities, and social institutions.

Include learning objectives that help students clarify their own conception of service as they participate in the community.

Enable moral and civic learning to become a component of the curriculum. Thus, learning becomes a tool for both individual and social betterment.

Provide access for TSU students to acquire the knowledge, skills and awareness to become more culturally aware, self-reflective and responsive community participants.





PCAIEIS

TENNESSEE STATE UNIVERSITY  
PILOT CENTER FOR ACADEMIC  
EXCELLENCE IN INTELLIGENCE STUDIES

*Salutes*

the  
31st Annual  
University-Wide Research  
Symposium

**ABOUT THE PROGRAM**

The Pilot Center for Academic Excellence In Intelligence Studies (PCAIEIS) is the program through which the U.S. Intelligence Community assists Tennessee State University's efforts to develop a diverse pool of analytical leaders; to positively influence student interest in the intelligence profession and service to the nation in general; to facilitate students to become more culturally aware citizens; to encourage the learning of a secondary language; and most importantly, to build solid U.S. citizen graduates who are capable of serving the nation in any capacity.

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TENNESSEE  
STATE UNIVERSITY

# Center of Excellence for Learning Sciences

Building Capacities to Strengthen Communities Through Education



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

### PROGRAMS AND PROJECTS

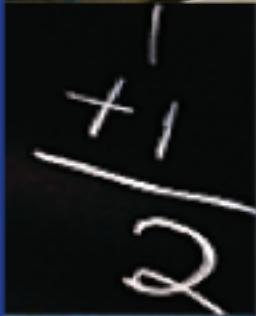
Head Start Career Advancement Partnership Program (HS-CAPP)  
Davidson County Child Care Resource and Referral (CCR&R)  
Tennessee Early Childhood Training Alliance (TECTA)  
Tennessee State University-TN CAREs Early Head Start  
Social Services Competency Based Training (SSCBT)

### RESEARCH INITIATIVES

STEM Education  
Teaching and Learning  
Early Intervention Models  
Student Learning Measurement  
Early Childhood Educator Professional Development  
P-16 Instructor and Administrator Professional Development  
Birth to Three Curriculum, Program and Professional Development

### For more information, please contact:

Tennessee State University  
Center of Excellence for Learning Sciences  
3500 John A. Merritt Blvd., Box 9500  
Nashville, TN 37209  
Main Office: 615.277.1651  
Fax: 615.277.1654  
[www.tnstate.edu/learningsciences](http://www.tnstate.edu/learningsciences)



# TENNESSEE STATE UNIVERSITY

## College of Arts & Sciences

### PROGRAMS

**Africana Studies**

**Art**

**Biological Sciences**

**Chemistry**

**Communications**

**Criminal Justice**

**History**

**Geography**

**Political Science**

**Foreign Languages**

**English**

**Philosophy**

**Music**

**Physics**

**Mathematics**

**Social Work**

**Sociology**

**Interdisciplinary Studies**

**Teacher Certification**

**International Affairs**

**Women's Studies**

The College of Arts and Sciences is committed to excellence in teaching and advising, research and creative activity, and public service. The College aims to provide students with a solid academic foundation upon which to pursue lifelong learning and build successful lives and careers.



We believe that the promotion of active, inquiry-based learning communities, revolving around faculty and student research is paramount in the preparation of students for careers in the 21st century. In building these learning communities, we are proud of the work of our faculty in securing external funds to support their research and to provide research training opportunities for students.

As the College of Arts and Sciences continues to build on a legacy of scholarly excellence and service, we are indebted to the faculty and students who present research papers to scholarly audiences, publish books and journal articles and apply research findings to advance public policy. The scholarly contributions of these faculty and students will help to sustain this University for future generations.



**Gloria C. Johnson, Ph.D.**  
*Interim Dean*

Degrees Offered

B.A. • B.S.

M.A. • M.S. • M.C.J.

Ph.D.

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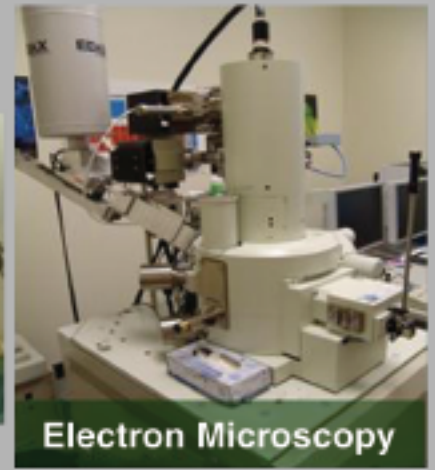
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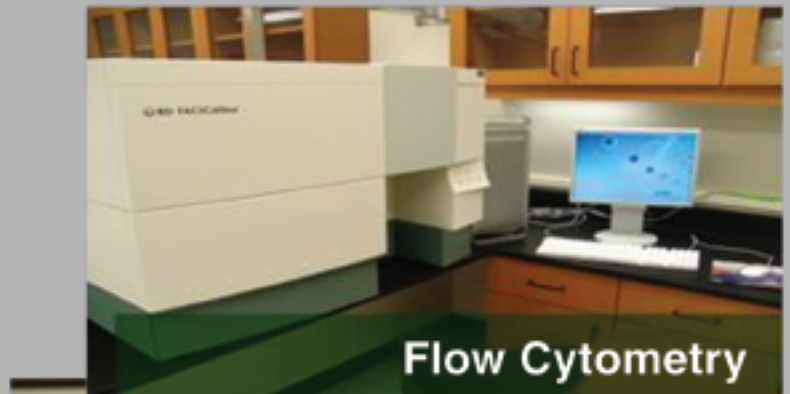
Electron Microscopy

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### **For more information contact:**

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*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.



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