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
32nd ANNUAL UNIVERSITY-WIDE RESEARCH SYMPOSIUM

MARCH 15-19, 2010

TENNESSEE STATE UNIVERSITY

OFFICIAL 2010 SYMPOSIUM PROGRAM

Cover photograph by Vando Rogers, Nashville, Tennessee. Undergraduate student researchers featured: David Lynes, (left) senior student, physics major and Al Wilson (right), senior student, mathematics major.

Orville Bignall, Ph.D.
Associate Professor and Coordinator for Physics Program
Department of Physics and Mathematics

Editor, Nannette Carter Martin
The 32nd Annual University-Wide Research Symposium celebrates our environment of research excellence here at Tennessee State University which has produced the synergistic coordination of multiple undergraduate-research initiatives.

The programs for undergraduate research at TSU include the Symposium, the Undergraduate Engineering Capstone Research Projects, the Minority Access to Research Careers (MARC) Program, the Undergraduate Research and Mentoring (URM) Program in Ecology and Environmental Science, and the Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP). Many successful TSU alumni conducted research as part of their undergraduate education such as Jesse Russell ('72), inventor of key cell-phone technology who served as the 2009 Symposium keynote speaker; Levi Watkins ('66), leading cardiologist at Johns Hopkins University Hospital; and Latasha Taylor ('04), candidate for the NASA astronaut program.

Engagement in research and other scholarly activities has a profound impact on undergraduate students. According to S. Keith Hargrove, Dean of the TSU College of Engineering, Technology and Computer Science, all graduating engineering students complete the capstone research projects, and, over the past five years, a majority of these seniors have excelled in academics. This success is consistent with the findings of published studies that have concluded that undergraduate students engaged in scientific research tend to enjoy higher GPAs, effectuate greater retention in advanced courses, elevate their technical and communication skills, energize their self-confidence, and enter graduate education programs and the STEM (Science, Technology, Engineering and Mathematics) professions in higher numbers.

LaTasha Taylor and Marcell Pickens conducting undergraduate research aboard NASA’s reduced gravity KC-135 plane. LaTasha is currently a Lockheed Martin engineer designing the astronaut crew compartment for the NASA Orion spacecraft and has applied to the NASA astronaut program.
In its 2005 publication, *A Vision of Research and Graduate Education*, the Tennessee Board of Regents (TBR) recommended that each TBR campus establish a Center of Undergraduate Research. In this vein, Dr. Maria Thompson, Vice President for the Division of Research and Sponsored Programs, created the Undergraduate Research and Creative Activities (URECA) program at TSU which has a mission to advance the student-centered research endeavors of the University. The URECA program received initial TBR Access and Diversity Initiative Grant funding in 2009 to coordinate a STEM-focused research journey for students through the six disciplines of biological science, chemical science, engineering, agricultural science, physics, and astronomy. In addition, the “Creative Activities” portion of the URECA program is a TSU initiative that supports grant proposals for faculty from all disciplines including music and art. URECA is a component of The Scholars Experience program at TSU which is also a unique network of university-wide student-development programs focused on creating the holistic scholar.

The acronym URECA is pronounced identically to the exclamation “Eureka!” - which derives from a Greek word for discover - accordant with the future of research at the University. As stated by Dr. Thompson, “URECA supports the University’s strategic integrative goal of becoming a premier public research land-grant university and a destination campus in the region.”

2009-2010 UReCA Scholars
Agriculture, Jenae Smith
Astronomy, Julia O'Connell
Biology, Hartman Madu
Chemistry, Deanna Bowman
Engineering, Carmen Hollingsworth
Mathematics and Physics, Kimberly Eakins

URECA Director - Todd Gary, Ph.D.
URECA Coordinator - Mrs. Robin Madison
www.tnstate.edu/research

Ms. Julia O’Connell, 2009-2010 UReCA scholar, discusses her research with TSU astronomer Dr. Geoffrey Burks.

Undergraduate students use CytoViva microscope system to perform hyperspectral imaging and fluorescent microscopy in Nanoscience and Biotechnology Core research laboratories; Director - Susan Verbene-Sutton. Left: Jeremy Young, junior, veterinary science. 2009-2010 exchange student from the University of Arizona. Right: Anthony Spann, senior, electrical engineering. Top right: Kimberly Eakins, senior, physics. UReCA Scholar.
March 15, 2010

Dear Colleagues:

It brings me great pleasure to welcome each of you to Tennessee State University’s 32nd annual University-wide Research Symposium. I commend the Division of Research and Sponsored Programs for bringing together many of the University’s most brilliant minds to engage in spirited dialogue and discussion about the fruits gathered after months of laborious research in our STEM disciplines.

Each year, I look forward to chatting with our faculty and student researchers about the exciting projects they are producing right here at the University. This year’s symposium, themed “Research: Celebrating Excellence,” proves to be even more special, as the program highlights our greatest assets—our students.

In addition to the interaction our young research scholars will certainly glean from the research talent assembled at this event, the opportunity to be commended among peers and contemporaries in their fields for outstanding research is truly a hallmark of academia.

The dedication and persistence our student researchers will display throughout the week shows that they too have made a commitment to meeting my challenge of positioning Tennessee State University as one of the top-tier research institutions in the nation. Their creativity and technological insight demonstrated certifies that the future of scientific advancement is in capable, intuitive hands.

As you participate in discussions throughout this symposium, please remember that Tennessee State University has a commitment to excellence in research.

Sincerely,

Melvin N. Johnson
President
March 15, 2010

Dear Colleagues:

Welcome to the 32nd Annual University-Wide Research Symposium showcasing our endeavors to engage undergraduate students in scholarly and creative research.

The Symposium permits each participant to experience a week of interdisciplinary presentations wherein judges decide competitive awards that span multiple sections of research pursuits. These research presentations are delivered to the campus and community by our students under the collaborative mentoring of faculty which yields both seasoned scholarship and competitive creativity.

Our Symposium theme is “Research: Celebrating Excellence,” and the sub-title is, “Undergraduate Research—A Leading Perspective on Inventing the Future.” Undergraduate research is an essential tool of education because education is a process of mentoring. The word education is derived from its Latin root words of educare meaning “to rear” and educere meaning “to pull out.” As a process of mentoring in education, professors both impart established information to students and rear these students to investigate uncertain or untested matters, thereby equipping this next generation to create or to pull out more clarity of knowledge. The nerve center of this process at Tennessee State University is the Undergraduate and Creative Activities (UReCA) Program, which advances the continuing research mission of the University by coordinating the teamwork of more than eight university-wide programs. The UReCA Program engages undergraduate students in scholarly endeavors within all disciplines and supports faculty in working with these students to obtain external funding for their research endeavors.

On behalf of the Division of Research and Sponsored Programs, we celebrate our environment of research excellence which is produced by the synergistic coordination of multiple undergraduate-research initiatives.

Sincerely,

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

“A Commitment to Excellence”
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F
The Research Symposium

A BRIEF HISTORY

The Annual University-Wide Research Symposium at Tennessee State University is celebrating 32 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 Scheick, 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.


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.

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).
# Overview of Events

## Monday, March 15, 2010

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am - 9:00 am</td>
<td>Symposium Programs Available</td>
<td>Research and Sponsored Programs Building, First Floor Lobby</td>
</tr>
<tr>
<td></td>
<td>Spring Break Academy – High School Jr. and Sr. students visit campus for “The Life of a College Student.”</td>
<td></td>
</tr>
</tbody>
</table>

### School of Nursing Day

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am - 1:00 pm</td>
<td>Luncheon Dr. Pamela C. Hull, speaker – Associate Director, Center for Health Research, TSU James E. Farrell - Fred E. Westbrook Building, 118</td>
</tr>
</tbody>
</table>

### Association of Pre-Professional Life Scientists- APLS Day

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 p.m. - 4:00 p.m.</td>
<td>APLS Webinar Theater - Science Careers Away from the Bench; Effective Lab Skills: Managing People, Projects and Money; Open Innovation and Social Networking</td>
</tr>
<tr>
<td>1:00 p.m. - 2:00 p.m.</td>
<td>Nanoscience and Biotechnology Core Facility Genetics Workshop with High School Students: Crime Scene Investigation</td>
</tr>
<tr>
<td>2:00 p.m. - 3:30 p.m.</td>
<td>Conference Room 163 APLS Life Science Challenge and Competition</td>
</tr>
<tr>
<td>3:30 p.m. - 5:00 p.m.</td>
<td>Panel Discussion with Faculty/Administrators - Success in Science: Beyond the Classroom</td>
</tr>
<tr>
<td>5:00 p.m. - 6:00 p.m.</td>
<td>First Floor Lobby Reception and Professional Mixer</td>
</tr>
<tr>
<td>6:00 p.m. - 9:00 p.m.</td>
<td>Floyd-Payne Campus Center Forum Featured Film</td>
</tr>
</tbody>
</table>

## Tuesday, March 16, 2010

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am - 9:00 am</td>
<td>Symposium Programs Available</td>
<td>Research and Sponsored Programs Building, First Floor Lobby</td>
</tr>
<tr>
<td></td>
<td>Spring Break Academy – High School Jr. and Sr. students visit campus for “The Life of a College Student.”</td>
<td></td>
</tr>
</tbody>
</table>

### Graduate Oral Presentations

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m. - 11:30 a.m.</td>
<td>SCIENCES</td>
</tr>
<tr>
<td>2:00 p.m. - 4:15 p.m.</td>
<td>SCIENCES</td>
</tr>
<tr>
<td>10:00 am - 12:00 noon</td>
<td>Judging for Graduate and Undergraduate Posters Research and Sponsored Programs Building, Lower Level</td>
</tr>
</tbody>
</table>

### Engineering Day

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Luncheon Presentation by Dr. S. Keith Hargrove, speaker – Dean, College of Engineering, Technology and Computer Science</td>
<td>Farrell-Westbrook Building, 118</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>RSP Building, Robotics Laboratory Robotics demonstration for high school students</td>
<td></td>
</tr>
</tbody>
</table>

### Agriculture and Consumer Sciences Day

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 p.m.</td>
<td>Presentation by Dr. Maria Browning, speaker – Extension Animal Scientist, Alabama A&amp;M University</td>
<td></td>
</tr>
<tr>
<td>2:00 p.m. - 2:45 p.m.</td>
<td>Biotechnology and Food Safety demonstrations for high school students</td>
<td></td>
</tr>
</tbody>
</table>

## Wednesday, March 17th, 2010

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am - 9:00 am</td>
<td>Symposium Programs Available</td>
<td>Research and Sponsored Programs Building, First Floor Lobby</td>
</tr>
<tr>
<td></td>
<td>Spring Break Academy – High School Jr. and Sr. students visit campus for “The Life of a College Student.”</td>
<td></td>
</tr>
</tbody>
</table>

### Graduate Oral Presentations

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 a.m. - 9:45 a.m.</td>
<td>HEALTH, EDUCATION, AND SOCIAL SCIENCES</td>
</tr>
<tr>
<td>3:15 p.m. - 4:30 p.m.</td>
<td>ENGINEERING</td>
</tr>
<tr>
<td>10:00 am - 12:00 noon</td>
<td>Judging for Graduate and Undergraduate Posters Research and Sponsored Programs Building, Lower Level</td>
</tr>
</tbody>
</table>

Posters will be displayed from March 15 - 19, 2010, Research and Sponsored Programs Building, Lower Level.
### Wednesday, March 17, 2010 continued

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am - 9:00 am</td>
<td>Symposium Programs Available</td>
<td>Research and Sponsored Programs Building, First Floor Lobby</td>
</tr>
</tbody>
</table>

#### Intelligence Studies Day 9:10 a.m. – 5:30 p.m.

**Agricultural Information and Technology Center**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:10 a.m. - 10:10 a.m.</td>
<td>Globalization and Terrorism Workshop</td>
<td></td>
</tr>
<tr>
<td>10:20 a.m. - 11:20 a.m.</td>
<td>Intelligence Community Career Fair</td>
<td>Farrell-Westbrook Building, 118</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Luncheon Presentation by Maura Burns, Issue Manager, Central Intelligence Agency</td>
<td></td>
</tr>
<tr>
<td>1:00 p.m. - 1:20 p.m.</td>
<td>Intelligence Community Career Fair</td>
<td></td>
</tr>
<tr>
<td>1:30 p.m. - 2:15 p.m.</td>
<td>790th AFROTC Detachment Tour</td>
<td>Floyd-Payne Center</td>
</tr>
<tr>
<td>2:30 p.m. - 3:20 p.m.</td>
<td>Introduction to Biological Sciences</td>
<td>Biological Sciences Laboratory Demonstrations - McCord Hall</td>
</tr>
<tr>
<td>3:30 p.m. - 4:30 p.m.</td>
<td>Globalization and Terrorism Workshop Research and Sponsored Programs, Room 209</td>
<td></td>
</tr>
<tr>
<td>4:30 p.m. - 5:30 p.m.</td>
<td>Scholars Reception Research and Sponsored Programs Lobby</td>
<td></td>
</tr>
</tbody>
</table>

### Thursday, March 18th, 2010

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am - 9:00 am</td>
<td>Symposium Programs Available</td>
<td>Research and Sponsored Programs Building, First Floor Lobby</td>
</tr>
</tbody>
</table>

#### UNDERGRADUATE ORAL PRESENTATIONS

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m. - 11:15 p.m.</td>
<td>SCIENCES</td>
<td></td>
</tr>
<tr>
<td>3:00 p.m. - 3:30 p.m.</td>
<td>ENGINEERING</td>
<td></td>
</tr>
<tr>
<td>3:30 p.m. - 3:45 p.m.</td>
<td>HUMANITIES</td>
<td></td>
</tr>
<tr>
<td>2:00 p.m. - 4:00 p.m.</td>
<td>Judging for Graduate and Undergraduate Posters</td>
<td>Research and Sponsored Programs Building, Lower Level</td>
</tr>
</tbody>
</table>

#### Chemistry Day 9:00 a.m. – 7:00 p.m.

**Alger V. Boswell Building**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 a.m. - 12:00 p.m.</td>
<td>Career Fair</td>
<td></td>
</tr>
<tr>
<td>10:00 a.m. - 11:00 a.m.</td>
<td>Chemistry Demonstrations</td>
<td></td>
</tr>
<tr>
<td>11:00 a.m. - 12:00 p.m.</td>
<td>Chemistry Challenge</td>
<td></td>
</tr>
<tr>
<td>12:00 p.m. - 2:30 p.m.</td>
<td>Student Poster Presentations</td>
<td></td>
</tr>
<tr>
<td>2:40 p.m. - 4:00 p.m.</td>
<td>Presentation by Ruth Woodall, Director of Tennessee Scholars Program, speaker</td>
<td></td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Psychology Day 11:30 a.m. – 7:00 p.m.

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 a.m.</td>
<td>Luncheon Presentation - Dr. Jim O’Neil, speaker, Professor of Educational Psychology and Family Studies, Univ. of Connecticut</td>
<td></td>
</tr>
<tr>
<td>RSP 209</td>
<td>1:00 p.m. - 2:30 p.m.</td>
<td>Poster Session (student research)</td>
</tr>
<tr>
<td>2:30 p.m. - 4:00 p.m.</td>
<td>Presentation Dr. Jim O’Neil, speaker– Professor of Educational Psychology and Family Studies, University of Connecticut</td>
<td></td>
</tr>
<tr>
<td>4:15 p.m. - 5:30 p.m.</td>
<td>Panel Discussion: Completing your senior project, thesis, and dissertation</td>
<td></td>
</tr>
<tr>
<td>5:45 p.m. - 7:00 p.m.</td>
<td>Awards Ceremony</td>
<td></td>
</tr>
</tbody>
</table>

### Friday, March 19, 2010

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am - 9:00 am</td>
<td>Symposium Programs Available</td>
<td>Research and Sponsored Programs Building, First Floor Lobby</td>
</tr>
<tr>
<td>9:00 a.m. - 9:45 a.m.</td>
<td>Faculty Oral Presentations All Presentations will be in the Research and Sponsored Programs Building, Room 163</td>
<td></td>
</tr>
</tbody>
</table>

#### Student Awards Ceremony

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Welcome Dr. Brenda McAdory, Symposium Co-Chair</td>
<td></td>
</tr>
<tr>
<td>Luncheon</td>
<td>OPY</td>
<td></td>
</tr>
<tr>
<td>Presentation of Awards</td>
<td>Dr. Maria Thompson, Vice President for Research and Sponsored Programs</td>
<td></td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>Ms. Valerie Williams, Symposium Co-Chair and Closing Remarks</td>
<td></td>
</tr>
<tr>
<td>1:00 pm</td>
<td>Adjournment</td>
<td></td>
</tr>
</tbody>
</table>

Posters will be displayed from March 15 - 19, 2010, Research and Sponsored Programs Building, Lower Level.
<table>
<thead>
<tr>
<th>TIME</th>
<th>Monday March 15, 2010</th>
<th>Tuesday March 16, 2010</th>
<th>Wednesday March 17, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 - 9:00</td>
<td>Welcome Check-in Group Assignment</td>
<td>Welcome Check-in Application Check</td>
<td>Welcome Check-in Application Check</td>
</tr>
<tr>
<td>RSP Room 209</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:10 - 10:10</td>
<td>TSU History The University I Selected</td>
<td>What America Do We Have? Career Development Center</td>
<td>HBCU-UP Program</td>
</tr>
<tr>
<td></td>
<td>TSU Student Panel RSP Room 209</td>
<td>RSP Room 209</td>
<td>TSU Students, Faculty, Staff, and Guests AITC Center</td>
</tr>
<tr>
<td>10:20 - 11:20</td>
<td>Admission Requirements and Financial Aid Discussion RSP Room 209</td>
<td>College Life “Academics... My major... My schedule... My study habits” TSU Student &amp; Faculty Panel</td>
<td>Intelligence Community Career Fair Farrell-Westbrook Building, 118</td>
</tr>
<tr>
<td>11:30 - 1:00</td>
<td>Lunch in Student Center and Accountability Check</td>
<td>Lunch in Student Center and Accountability Check</td>
<td>Research Symposium Lunch and Accountability Check Farrell-Westbrook Building, 118</td>
</tr>
<tr>
<td>1:00 - 2:00</td>
<td>CSI-Crime Scene Investigation &quot;Hands-On&quot; Science Experiments with Nano Lab Tour RSP Room 209</td>
<td>College of AG &amp; Consumer Sciences AITC Center Veterinary Science Majors and Careers Virtual Learner Experience</td>
<td>1:00-1:20 Intelligence Community Career Fair in Hallway of Farrell-Westbrook Bldg, 118</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:30 - 2:15 790th AFROTC Detachment Tour</td>
</tr>
<tr>
<td>2:00 - 3:00</td>
<td>APLS Life Science Challenge/Game RSP Room 209</td>
<td>2:00-2:45 College of AG &amp; Consumer Sciences Biotechnology and Food Safety demonstrations</td>
<td>790th AFROTC Detachment Tour</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2:30-3:20 pm - McCord Hall Biology Lab Tour</td>
</tr>
<tr>
<td>3:00 - 4:00</td>
<td>APLS Workshop: How to be a Scientist-What you will not learn in a classroom RSP Room 209</td>
<td>College of Engineering Robotics Lab Tour Holland Hall Room 323</td>
<td>3:30 - 4:40 Globalization and Terrorism Workshop HS Students RSP Room 163</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:00 - 4:30</td>
<td>• Connections Look to Tomorrow Accountability Business Attire Discussion Dress Business on March 16, 2010 RSP Room 209</td>
<td>• Connections Look to Tomorrow Accountability • Wear “I Love TSU” T-shirt for March 17, 2010 RSP Room 209</td>
<td>• HS Student Survey - Reception 4:30 to 5:30 PM RSP Lobby and Room 163 - Awards presentation for “A Spring Break Academy” to follow Reception</td>
</tr>
</tbody>
</table>

**Presentation Schedules**

**SCiences**

**Graduate Oral Presentations**

**Tuesday, March 16, 2010  Morning Session**

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation Title</th>
<th>Presenter(s)</th>
<th>Advisor(s)</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30</td>
<td><strong>FACTORS AFFECT BIOMASS ALLOCATION OF FORESTS IN CHINA</strong></td>
<td>Le, Xuan L.* and Hui, Dafeng; Advisor, Dr. Dafeng Hui</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>8:45</td>
<td><strong>AFRICAN SCIENTISTS IN DIASPORA: RELEVANCE AND IMPACTS ON THEIR CONTINENT</strong></td>
<td>Otokpe, F.*; Advisor, Dr. Surrendra Singh.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>9:00</td>
<td><strong>INFLUENCE OF DIET INDUCED OBESITY ON AVIAN CARDIOMYOPATHY</strong></td>
<td>Boatswain, Thea; Advisor, Dr. Samuel Nahashon.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>9:15</td>
<td><strong>A GENOMIC AND PROTEOMICS APPROACH FOR IDENTIFYING GENES ASSOCIATED WITH FAT ACCRETION IN POULTRY</strong></td>
<td>Kelley, Gary*; Advisors, Drs. Samuel Nahashon and Fur Chi Chen.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td><strong>ORGANIC FARMING AND THE CONVERSION FACTORS FROM CONVENTIONAL FARMING IN TENNESSEE</strong></td>
<td>Da Silva, Sherese*; Advisors, Drs. Dharma S. Pitchay and Surrendra Singh.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>9:45</td>
<td><strong>EVALUATION OF OPTIMUM CALCIUM AND PHOSPHORUS REQUIREMENT OF THE PEARL GREY GUINEA FOWL</strong></td>
<td>Glover, Lakesha*; Advisor, Dr. Samuel Nahashon.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td><strong>EVALUATION OF PROGRESSION AND AMELIORATION OF FURAZOLIDONE INDUCED CARDIOMYOPATHY IN CHICKENS</strong></td>
<td>Branham, Ketedrea*; Advisor, Dr. Samuel Nahashon.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>10:15</td>
<td><strong>CHARACTERIZATION OF A TN5 MUTANT OF THE SOFT ROT BACTERIUM PECTOBACTERIUM CAROTOVORUM</strong></td>
<td>Kersey, Caleb*; Advisor, Dr. Korsi Dumeny.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td><strong>ALTERED CARDIAC FUNCTION IN FURAZOLIDONE-INDUCED CARDIOMYOPATHY IN CHICKENS</strong></td>
<td>Brown, Ashley*; Advisor, Dr. Samuel Nahashon.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>10:45</td>
<td><strong>RHIZODEGRADATION OF THE INSECTICIDE BIFENTHRIN IN DIFFERENT SOILS</strong></td>
<td>Le, Xuan *, Liu, Zong, and Dzantor, E. Kudjo; Advisor, Dr. Kudjo Dzantor.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td><strong>OPPORTUNITIES AND CHALLENGES IN THE GOAT MEAT INDUSTRY IN THE UNITED STATES</strong></td>
<td>Favors, Delicia*; Advisor, Dr. Surrendra P. Singh.</td>
<td>School of Agriculture and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td><strong>EXAMINING THE PROFILE OF SMALL BUSINESSES IN THE BLACK BELT REGION</strong></td>
<td>Allen, Derek*; Advisor, Dr. James Bukkenya.</td>
<td>Agribusiness</td>
<td></td>
</tr>
</tbody>
</table>

**Tuesday, March 16, 2010  Afternoon Session**

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation Title</th>
<th>Presenter(s)</th>
<th>Advisor(s)</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00</td>
<td><strong>TETRABROMOBISPHENOL A CAUSES ACTIVATION OF MITOGEN ACTIVATED PROTEIN KINASES IN HUMAN NATURAL KILLER CELLS</strong></td>
<td>Cato, A.*, Kibakaya, E., and Whalen, M.; Advisor, Dr. Margaret Whalen.</td>
<td>Department of Biological Sciences</td>
<td></td>
</tr>
<tr>
<td>2:15</td>
<td><strong>INITIAL CHARACTERIZATION OF PLANT METABOLITES INDUCING VIRULENCE IN SOFT ROT PATHOGEN, PECTOBACTERIUM SPP.</strong></td>
<td>Agyemang, Paul* and Kersey, Caleb; Advisor, Dr. Charles. K. Dumeny.</td>
<td>Department of Biological Sciences</td>
<td></td>
</tr>
<tr>
<td>2:30</td>
<td><strong>ACTIVATION OF PROTEIN KINASE D IS PART OF THE NK CELL SIGNALING PATHWAY ACTIVATED IN THE TUMOR-CELL DESTROYING PROCESS</strong></td>
<td>Rana, K.* and Whalen, M.; Advisor, Dr. Margaret Whalen.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>2:45</td>
<td><strong>DESIGN AND SYNTHESIS OF FLUORINATED CHROMEN-5(6H)-ONE AS POTENTIAL ANTICANCER AGENTS</strong></td>
<td>Ogunwale, M. A.* and Okoro, C. O.; Advisor, Dr. Cosmas Okoro.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
</tbody>
</table>
### PRESENTATION SCHEDULES

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter(s)</th>
<th>Advisor(s)</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00</td>
<td>TP17</td>
<td>MOBILITY AND REACTIVITY OF NANOPARTICULATE ZERO VALENT IRON IN GROUNDWATER</td>
<td>Janum palli, Harini* and Harris, Justin.</td>
<td>Advisor, Dr. Roger Painter.</td>
<td>Department of Chemistry</td>
</tr>
<tr>
<td>3:15</td>
<td>TP18</td>
<td>ROBUST STABILITY AND STABILIZATION OF NON-LINEAR STOCHASTIC DISCRETE-TIME SYSTEMS</td>
<td>Sathanathan, S., Keel, L. H., and Strong, A.*</td>
<td>Advisor, Dr. Sivapragasm Sathanathan. Dept. of Mathematics and Physics</td>
<td></td>
</tr>
<tr>
<td>3:30</td>
<td>TP19</td>
<td>SIMPLE STATISTICAL RESULTS OF FOUR NETWORK TOPOLOGIES IN THE DISCOVERY PROBLEM</td>
<td>Knap, Michael*; Advisor, Dr. Stefan Forcey.</td>
<td>Department of Mathematics and Physics</td>
<td></td>
</tr>
<tr>
<td>3:45</td>
<td>TP20</td>
<td>AN ALGORITHMIC APPROACH TO PARAMETRIC STABILITY IN SYSTEMS CONTROL DESIGN</td>
<td>Keel, L. H., Battacharyya, S. P, and Knap, M.*</td>
<td>Advisor, Dr. Lee H. Keel.</td>
<td>Department of Mathematics and Physics</td>
</tr>
<tr>
<td>4:00</td>
<td>TP21</td>
<td>ROBUST H-INFINITY CONTROL OF LINEAR STOCHASTIC SYSTEMS UNDER MARKOVIAN SWITCHING</td>
<td>Sathanathan, S., Ladde, G. S., Keel, L. H, and Knap, M.*;</td>
<td>Advisor, Dr. Lee H. Keel.</td>
<td>Department of Mathematics and Physics</td>
</tr>
</tbody>
</table>

**HEALTH, EDUCATION, AND SOCIAL SCIENCES**

### Graduate Oral Presentations

**Wednesday, March 17, 2010 MORNING SESSION**

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter(s)</th>
<th>Advisor(s)</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>WA1</td>
<td>PREVENTATIVE MEASURES FOR SHOULDER OVERUSE INJURIES IN BASEBALL PITCHERS: STRENGTH TRAINING VS. KINESIOTAPE</td>
<td>Ballard, J.*, Studer, J., and Young, A.;</td>
<td>Advisor, Dr. Thomas Bukoskey.</td>
<td>Department of Physical Therapy</td>
</tr>
<tr>
<td>9:15</td>
<td>WA2</td>
<td>EFFECTS OF ECCENTRIC TRAINING ON ACHILLES TENDINOPATHY</td>
<td>Izadi, E.*; McFarlane, K., Scollard, J. and Sherlock, C.;</td>
<td>Advisor, Dr. Thomas Bukoskey.</td>
<td>Department of Physical Therapy</td>
</tr>
<tr>
<td>9:30</td>
<td>WA3</td>
<td>FACTORS INFLUENCING MENS MEDICAL VISITS</td>
<td>Davidson, M.*; Hull, P., Reece, M., Emerson, J., Cain, V., Schlundt, D., and Levine, R.;</td>
<td>Advisor, Dr. Pamela Hull. Center for Health Research</td>
<td></td>
</tr>
</tbody>
</table>

### ENGINEERING

**Wednesday, March 17, 2010 AFTERNOON SESSION**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter(s)</th>
<th>Advisor(s)</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:15</td>
<td>WP4</td>
<td>DESIGN OF A MONITORING SYSTEM FOR STRENGTH DEVELOPMENT IN QUADRICEP MUSCLES TO REDUCE ACL INJURIES</td>
<td>Perkins, Anita.*;</td>
<td>Advisor, Dr. Mohammad, Bodruzaman.</td>
<td>Department of Electrical Engineering</td>
</tr>
<tr>
<td>3:30</td>
<td>WP5</td>
<td>SECURITY SYSTEM FOR HETEROGENEOUS WIRELESS SENSOR NETWORKS</td>
<td>McNeal, McKenzie*;</td>
<td>Advisor, Dr. Chen Wei.</td>
<td>Department of Electrical Engineering</td>
</tr>
<tr>
<td>3:45</td>
<td>WP6</td>
<td>STATIC COMFORT ASSESSMENTS FOR EJECTION SEAT CUSHIONS IN THREE DIFFERENT RAIL ANGLES</td>
<td>Ojetola, Akindeji*;</td>
<td>Advisor, Dr. Landon Onyebueke.</td>
<td>Department of Mechanical and Manufacturing Engineering</td>
</tr>
<tr>
<td>4:00</td>
<td>WP7</td>
<td>DEVELOPMENT OF A COMPUTER AIDED DESIGN TECHNIQUE FOR SEAT COMFORT ANALYSIS</td>
<td>Amer, Saed*;</td>
<td>Advisor, Dr. Landon Onyebueke.</td>
<td>Department of Mechanical and Manufacturing Engineering</td>
</tr>
<tr>
<td>4:15</td>
<td>WP8</td>
<td>DISTRIBUTED CONTROL METHODOLOGY FOR COORDINATION OF SYSTEMS</td>
<td>McCurry, Charles D.*;</td>
<td>Advisor, Dr. M. S. Zein-Sabatto.</td>
<td>Department of Computer and Information Systems Engineering</td>
</tr>
</tbody>
</table>

**SCIENCES**

### Undergraduate Oral Presentations

**Thursday, March 18, 2010 MORNING SESSION**

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter(s)</th>
<th>Advisor(s)</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30</td>
<td>RA1</td>
<td>REPRODUCTIVE OUTPUT OF MEAT GOAT DOES IN RELATION TO THEIR WEANING WEIGHT RATIOS</td>
<td>Dixon-Lewis, Dawnn*;</td>
<td>Advisor, Dr. Richard Browning.</td>
<td>School of Agriculture and Consumer Sciences</td>
</tr>
<tr>
<td>8:45</td>
<td>RA2</td>
<td>DEVELOPING A RAPID TECHNIQUE FOR SEX DIFFERENTIATION OF THE GUINEA FOWL AT EARLY AGE</td>
<td>Young, Jeremy*;</td>
<td>Advisor, Dr. Samuel N. Nahashon.</td>
<td>School of Agriculture and Consumer Sciences</td>
</tr>
<tr>
<td>9:00</td>
<td>RA3</td>
<td>THE DESIRABLE AND UNDESIRABLE TRAITS IN MEAT GOATS</td>
<td>Smith, Jenae*;</td>
<td>Advisor, Dr. Surrendra Singh.</td>
<td>School of Agriculture and Consumer Sciences</td>
</tr>
</tbody>
</table>

* Denotes Presenter
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
<th>Advisors</th>
<th>Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:15</td>
<td>RA4</td>
<td>GENERATING GENOMIC RESOURCE INFORMATION OF THE GUINEA FOWL THROUGH cDNA LIBRARY CONSTRUCTS OF THE HYPOTHALAMUS</td>
<td>Bonner, Niesha*; Advisor, Dr. Samuel N. Nahashon. School of Agriculture and Consumer Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td>RA5</td>
<td>ANALYSIS OF EFFECTS OF DICHLORO-DIPHENYL-TRICHLOROETHANE (DDT) ON NATURAL KILLER CELLS</td>
<td>Udoji, Felicia* and Whalen, Margaret; Advisor, Dr. Margaret Whalen. Department of Biological Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:45</td>
<td>RA6</td>
<td>EXPLORING THE MODULATION OF L-AROMATIC AMINO ACID DECARBOXYLASE EXPRESSION IN THE STRIATUM OF THE MPTP-PD MOUSE MODEL</td>
<td>Dean V, Warren and Charlton, Clivel; Advisor, Dr. Clivel Charlton. Department of Biological Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>RA7</td>
<td>DETERMINATION OF THE LEVEL OF GROWTH INHIBITION IN THE CANCER CELL LINE SW620 USING EXTRACTS FROM BLACK TEA, GREEN TEA, AND WHITE TEA</td>
<td>Madu, Hartman*; Advisor, Dr. E. Lewis Myles. Department of Biological Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15</td>
<td>RA8</td>
<td>PD-CATALYZED MICROWAVE IRRADIATED CROSS-COUPLING REACTIONS FOR CHALCONE SYNTHESIS</td>
<td>Ng, Eunice*; Advisor, Dr. Mohammad Al-Masum. Department of Chemistry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>RA9</td>
<td>SYNTHESIS AND CHARACTERIZATION OF ACRIDONE DERIVATIVES AS POTENTIAL BIOLOGICALLY ACTIVE COMPOUNDS</td>
<td>Bogan, Deanna*, Okoromoba, Otome, and Okoro, Cosmas; Advisor, Dr. Cosmas Okoro. Department of Chemistry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:45</td>
<td>RA10</td>
<td>CHARACTERIZATION OF POLY-LACTIC-Glycolic Acid nanoparticle and self assemble monolayers (SAMS) using scanning probe microscope</td>
<td>Eakins, Kimberly*; Advisors, Drs. Lizhi Ouyang and Susan Verberne-Sutton. Department of Mathematics and Physics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>RA11</td>
<td>IMPROVING TSU’S AUTOMATED SPECTROSCOPIC TELESCOPE</td>
<td>O’Connell, Julia; Advisor, Dr. Matthew Muterspaugh. Department of Mathematics and Physics</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ENGINEERING**

**Undergraduate Oral Presentations**

**Thursday, March 18, 2010**  **AFTERNOON SESSION**

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
<th>Advisors</th>
<th>Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00</td>
<td>RP12</td>
<td>SENSOR-BASED ROBOTICS NAVIGATION</td>
<td>Hollingsworth, Carmen*; Advisor, Dr. Tamara Rogers. Department of Mechanical and Manufacturing Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:15</td>
<td>RP13</td>
<td>WATER QUALITY OF AN URBAN SPRING FEEDING A WETLAND SYSTEM IN NASHVILLE, TN</td>
<td>Carlton Cobb*; Advisor, Dr. Tom Byl. Department of Civil and Environmental Engineering</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**HUMANITIES** Group Presentation

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
<th>Advisors</th>
<th>Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:30</td>
<td>RP14</td>
<td>STUDENTS AND CREDIT CARD DEBT</td>
<td>Rogers, Brandy*, Sparkman, Charles, Watts, Amelia, and Sledge, Champagne; Advisor, Dr. Sandra Holt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:30</td>
<td>RP15</td>
<td>SEX AND VIDEO GAME VIOLENCE</td>
<td>Moore, Darrin*, Drake, Delores, Freeman, Derravia, Johnson, Derrick, and Freeman, Cordarius; Advisor, Dr. Sandra Holt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:30</td>
<td>RP16</td>
<td>YOUTH VIOLENCE</td>
<td>Knight, Lezlie*, Tep, Linna, and Triplett, Meghan; Advisor, Dr. Sandra Holt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Faculty Oral Presentations**

**Friday, March 19, 2010**

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
<th>Advisors</th>
<th>Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>FA1</td>
<td>PERCEPTIONS AND KNOWLEDGE ABOUT BIOTECHNOLOGY BY FARMERS, CONSUMERS, AND EXTENSION AGENTS IN GHANA</td>
<td>Tegegne, F.*, Nahashon, S., Aziz, A., and Dumenyoo, K. School of Agriculture and Consumer Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td>FA2</td>
<td>TENNESSEE’S MINORITY AND UNDERSERVED LANDOWNERS: DETERMINANTS OF INTERESTS IN DIVERSIFIED FARM/FOREST LAND STEWARDSHIP</td>
<td>Appleton, Nathaniel S.*, Catlin, Carter, and Mrerna, Frank. School of Agriculture and Consumer Sciences</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Poster Presentations
### Undergraduate Students

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level

### Biological Sciences

**P1**  EFFECTS OF NONYLPHENOL EXPOSURES ON ATP LEVELS IN HUMAN NATURAL KILLER CELLS  
Reid, Jacqueline* and Martin, Tamara; Advisor, Dr. Margaret Whalen. Department of Biological Sciences

**P2**  TRICLOSAN CAUSES PERSISTENT SUPPRESSION OF THE IMMUNE FUNCTION OF HUMAN NATURAL KILLER CELLS  
Martin, Tamara* and Whalen, Margaret; Advisor, Dr. Margaret Whalen. Department of Biological Sciences

**P3**  NONYLPHENOL INTERFERES WITH THE IMMUNE FUNCTION OF HUMAN NATURAL KILLER CELLS  
Etherton, Rachel* and Whalen, Margaret; Advisor, Dr. Margaret Whalen. Department of Biological Sciences

**P4**  CHRONIC ETHANOL PROMOTES CELL DEATH  
Jackson, Catherine*, Dugger, Taylor, Washington, Brittany M., and Mtshali, Charlie; Advisor, Dr. Benny Washington. Department of Biological Sciences

**P5**  CONSTRUCTING METALLO-ORGANIC FRAMEWORK UTILIZING SUPRAMOLECULARS  
Byrd, Crystal* and Siddiquee, Tasneem; Advisor, Dr. Tasneem Siddiquee. Department of Biological Sciences

### Chemistry

**P6**  SPECTROSCOPIC STUDIES OF THE INTERACTION OF AMYLOID-BETA WITH METAL IONS  
Arnett, Shirelle* and Pham bu, Nsoki; Advisor, Dr. Nsoki Pham bu. Department of Chemistry

**P7**  OXIDATION PREVENTION OF METALLIC NANOPARTICLES USING EXOPOLYSACCHARIDES  
Ryan, Lindsey*; Advisor, Dr. Koen Vercruysse. Department of Chemistry

**P8**  INTERACTION BETWEEN A SYNTHETIC PEPTIDE AND METAL IONS  
Mason, Zanetta* and Pham bu, Nsoki; Advisor, Dr. Nsoki Pham bu. Department of Chemistry

**P9**  SYNTHESIS AND CHARACTERIZATION OF B12TE3/SiO2 NANOCOMPOSITES  
Zhou, Jing* and Moore, Joshua, T.; Advisor, Dr. Joshua T. Moore. Department of Chemistry

**P10**  INFRARED STUDY OF POLYSACCHARIDE STABILIZED NANOPARTICLES  
Johnson, Damitea* and Vercruysse, Koen; Advisor, Dr. Koen Vercruysse. Department of Chemistry

**P11**  STUDIES ON THE EFFECT OF XANTHOPHYLL (LUTEIN) ON IRON-INDUCED LIPID PEROXIDATION IN M ETHYL LINOLENATE  
St.Louis, Murcellus*; Advisor, Dr. William Boadi. Department of Chemistry

**P12**  NONYLPHENOL DECREASES THE TUMOR-CELL BINDING FUNCTION OF HUMAN NATURAL KILLER LYMPHOCYTES  
Walker, Jasmine* and Whalen, Margaret; Advisor, Dr. Margaret Whalen. Department of Chemistry

### Engineering

**P13**  EMPOWERING STUDENTS WITH ENGINEERING LITERACY AND SYSTEMATIC PROBLEM SOLVING THROUGH INTERACTIVE AND COST-EFFECTIVE GAMES  
Keobounhom Chanthavone* and Shetty, Sachin; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering

**P14**  COMMUNICATION WITHIN A MULTI-AGENT SYSTEM  
Moore Jr., Gary* and Anderson, Monica; Advisor, Dr. Monica Anderson. Department of Electrical and Computer Engineering

**P15**  SECURE PHYSICAL LAYER KEY GENERATION IN MIMO NETWORKS  
Peter Riad*, Meena Thanu, and Sachin Shetty; Advisor, Dr. Sachin Shetty. Department of Electrical and Computer Engineering

### Health, Education, and Social Sciences

**P16**  STUDENT CONSIDERATIONS IN SELECTING AND APPLYING TO GRADUATE SCHOOL  
Barden, G.*, Hudson, M., Ranson, S., Sipes, H., and Taylor, K.; Advisor, Dr. Iris Johnson-Arnold. Department of Speech Pathology
P17 EXAMINATION INTO THE MICROBIOLOGICAL SAFETY OF IRRIGATION WATER USED BY A LOCAL SMALL FARMER
Frederick, Alex, Stone, Richard, Chen, Fur-Chi, and Godwin, Sandria; Advisor, Dr. Sandria Godwin. School of Family and Consumer Sciences

P18 FOOD SAFETY KNOWLEDGE AND PRACTICES AMONG PREGNANT WOMEN
Clayborne, Amber*, Machara, Margaret, and Godwin, Sandria; Advisor, Dr. Sandria Godwin. School of Family and Consumer Sciences

P19 PRADER-WILLI SYNDROME AND PHYSICAL THERAPY: A PROPOSED TREATMENT PROTOCOL
Christiansen, Shannon*; Cunningham, Jim, Jeffers, Felicia, and Shelide, April; Advisor, Dr. David Lehman. Department of Physical Therapy

P20 OBSERVING THE CONDITIONS AND OCCUPANTS OF NASHVILLE AREA PARKS
Miller, Traci*; Advisors, Drs. M. Machara and S. Godwin. Department of Family and Consumer Sciences

Poster Presentations
Graduate Students

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level

AGRICULTURAL AND CONSUMER SCIENCES

P21 INTERACTIVE GIS OF STATE OWNED BUILDINGS IN TENNESSEE
White, S.*, Skelton, T, and Kilbourne, K.; Advisor, Dr. Robert Harrison. School of Agriculture and Consumer Sciences

P22 HYDROPONIC PRODUCTION OF HOPS (HUMULUS LUPULUS 'CASCADE')
Chad R.*; Advisor: Dr. Roger Sauve. School of Agriculture and Consumer Sciences

P23 A SUBSECTOR ANALYSIS OF TENNESSEE AGRICULTURAL PRODUCT EXPORT: GROWTH, PROBLEMS, AND COUNTERMEASURES
Pasirayi, S.*; Advisor, Dr. Surendra Singh. School of Agriculture and Consumer Sciences

P24 SPATIAL ANALYSIS OF SWITCH GRASS YIELD PRODUCTIVITY IN UNITED STATES
Niharika, O.*; Advisor, Dr. Surendra Singh. School of Agriculture and Consumer Sciences

P25 ARE CONCENTRATED ANIMAL FEEDLOT OPERATIONS THE MAIN SOURCE OF POLLUTION IN TENNESSEE RIVERS?
McDermott, E.*; Advisor, Dr. Robert Harrison. School of Agriculture and Consumer Sciences

P26 IDENTIFYING SOCIAL FORMS OF THE INVASIVE FIRE ANT: A MOLECULAR APPROACH
Tyus, J.* and Ochieng, S.; Advisor, Dr. Sam Ochieng. School of Agriculture and Consumer Sciences

P27 COULD POTASSIUM ION PROVIDE THE NEEDED ABIOTIC RESISTANCE IN PLANT PRODUCTION?
Lewis, S.;* Advisor, Dr. Dharma Pitchay. School of Agriculture and Consumer Sciences

P28 IMPACT OF NITROGEN FORMS AND RATIOS, AND SUBSTRATE PH ON BLUEBERRY ROOT AND SHOOT DEVELOPMENT
Kennedy, S.* and Lewis, S.; Advisor, Dr. Dharma Pitchay. School of Agriculture and Consumer Sciences

P29 IMPACT OF NITROGEN AND PHOSPHORUS CONCENTRATIONS ON CONTAINER GROWN CRAPE MYRTLE
Lewis, S.* and Garcia, S.; Advisor, Dr. Dharma Pitchay. School of Agriculture and Consumer Sciences

P30 A MOLECULAR MODEL FOR TOLERANCE TO TOXIC METAL IONS IN TOMATO
Sangireddy, S. R.* and Zhou, S.; Advisor, Dr. Suping Zhou. School of Agriculture and Consumer Sciences

P31 SURVIVAL OF ENTEROBACTER SAKAZAKI ON FRESH PRODUCE DURING STORAGE AT REFRIGERATOR TEMPERATURE
Rotich, E.*, Kilonzo-Nthenge, A., and Thompson, C.; Advisor, Dr. Agnes Kilonzo-Nthenge. School of Family and Consumer Sciences

P32 MARKETING CHANNELS OF GOAT MEAT
Thompson, K.*; Advisor, Dr. Fisseha Tegegne. School of Agriculture and Consumer Sciences

All abstracts can be found at www.tnstate.edu/research

*Denotes Presenter
**Poster Presentations**

**Graduate Students**

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level

### BIOLOGICAL SCIENCES

**P33**  
**EFFECT OF P44/42 ACTIVATION ON TBT-INDUCED LOSSES OF GRANZYME B AND PERFORIN PROTEIN LEVELS IN HUMAN NK CELLS**  
Abraha, Abraham* and Whalen, Margaret; Advisor, Dr. Margaret Whalen. Department of Biological Sciences

**P34**  
**EFFECTS OF ZIRAM ON HUMAN NATURAL KILLER CELLS MAP KINASES AND CYTOLYTIC PROTEINS**  
Taylor, Thyniece R.* and Whalen, Margaret; Advisor, Dr. Margaret Whalen. Departments of Biological Sciences and Chemistry

**P35**  
**RESPONSES OF SOIL RESPIRATION TO ELEVATED CARBON DIOXIDE AND NITROGEN ADDITION IN YOUNG SUBTROPICAL FOREST ECOSYSTEMS IN CHINA**  
Deng Q.*, Hui, D., Zhou, G., Zhang, D., and Liu, J.; Advisor, Dr. Dafeng Hui. Department of Biological Sciences

**P36**  
**CHRONIC ETHANOL ALTERS MITOGEN ACTIVATED PROTEIN KINASES IN VASCULAR SMOOTH MUSCLE CELLS**  
Williams, S.*, Mtshali, C., and Gardner-Jones, C.; Advisor, Dr. Benny Washington. Department of Biological Sciences

**P37**  
**TIME COURSE ANALYSIS OF NEUROPEPTIDE Y IN THE MAMMALIAN BRAIN**  
Coleman, Antoinette Y.*, Howard, Christianna A., and McAdory, Brenda S.; Advisor, Dr. Brenda S. McAdory. Department of Biological Sciences

**P38**  
**FACTORS CONTRIBUTING TO THE DEVIATION OF RT-QPCR EFFICIENCIES**  
Bohannon-Stewart, A.*; Advisor, Dr. Xiaofei Wang. Department of Biological Sciences

**P39**  
**STRUCTURAL VARIATION OF ZINC FINGER RNA BINDING PROTEIN GENES IN THE GENOME OF CHICKENS**  
Feaster, T.* and Wang, X.; Advisor, Dr. Xiaofei Wang. Department of Biological Sciences

**P40**  
**AN EXPERIMENTAL ANALYSIS OF MAJOR FACTORS CONTRIBUTING TO UNEXPECTED REAL TIME RT-PCR EFFICIENCY**  
Bohannon-Stewart, A.*, and Wang, X.; Advisor, Dr. Xiaofei Wang. Department of Biological Sciences

**P41**  
**DEVELOPMENT OF A REPRODUCIBLE METHOD TO GROW AND STUDY DIFFERENTIATION OF MOUSE EMBRYONIC STEM CELLS**  
Norwood, C. W., Asfour, James, A., and Asson-Batres, M. A.; Advisor, Dr. Mary Ann Asson-Batres. Department of Biological Sciences

**P42**  
**DEVELOPMENT OF A MOUSE EMBRYONIC STEM CELL MODEL FOR NEUROGENESIS AND LOCALIZATION OF RARA AND RARG IN THESE CELLS**  
Buchanan, F.* and Asson-Batres, M. A.; Advisor, Dr. Mary Ann Asson-Batres. Department of Biological Sciences

**P43**  
**UTILIZING RECOMBINANT IGF IN THE DEVELOPMENT OF A SURFACE PLASMON RESONANCE BIOSENSOR FOR SALMONELLA TYPHIMURIUM**  
Darris, C.*; Advisors, Drs. Samuel Nahashon and Fur-chi Chen. Department of Biological Sciences

**P44**  
**PPEF2 AND ITS RELATIONSHIP WITH MELATONIN SYNTHESIS IN CHICKEN’S PINEAL GLAND IN REGULATING THEIR CIRCADIAN RHYTHM**  
Okafor, E.* and Wang, X.; Advisor, Dr. Xiaofei Wang. Department of Biological Sciences

**P45**  
**CYTOTOXIC EXTRACTS OF ETHNO MEDICINAL PLANTS PODOPHYLLUM PELTATUM (MAYAPPLE) AND ECHINACEA ANGUSTIFOLIA**  
McDowell, O.*; Advisor, Dr. E. Lewis Myles. Department of Biological Sciences

### BUSINESS ADMINISTRATION

**P46**  
**POSSIBLE COST AND LABOR SAVINGS OF AN INFORMATION SYSTEMS DEPLOYMENT FOR PROCUREMENT: A TSU USE CASE EXAMPLE.**  
Adeusi, Debo, A.*; Advisor, Dr. Sharon Thach. Business Administration

### CHEMISTRY

**P47**  
**TRIBUTYL Tin CAUSES ACTIVATION OF THE MAP3K, C-RAF, BUT NOT RAS IN HUMAN NATURAL KILLER CELLS**  
Celada, Lindsay* and Whalen, Margaret; Advisor, Dr. Margaret Whalen. Department of Chemistry

**P48**  
**TETRABROMOBISPHENOL A DECREASES CELL SURFACE MARKER EXPRESSION IN HUMAN NATURAL KILLER CELLS**  
Hurd, Tasia* and Whalen, Margaret; Advisor, Dr. Margaret Whalen. Department of Biological Sciences

*Denotes Presenter  
All abstracts can be found at www.tnstate.edu/research
<table>
<thead>
<tr>
<th>Presentation Schedule</th>
<th>Title</th>
<th>Authors</th>
<th>Advisor</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>P49</td>
<td>Microwave Irradiated Cross Coupling Reaction of Allyltrifluoroborate and Benzoyl Halide</td>
<td>Kwei-Yu L.*, and Alam, S.; Advisor, Dr. Mohammad Al-Masum.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>P50</td>
<td>Synthesis and Structure Activity Relationship of Some Fluorinated Acridone Derivatives as Potential Biologically Active Compounds</td>
<td>Otome, A.<em>, Okoromoba, E.</em>, and Okoro, C. O.; Advisor, Dr. Cosmas Okoro.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>P51</td>
<td>Design and Synthesis of Fluorinated Chromen-5(6H)-One as Potential Anticancer Agents</td>
<td>Mumiye A. O.* and Okoro, C. O.; Advisor, Dr. Cosmas O. Okoro.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>P52</td>
<td>Synthesis and Anticancer Activity of Fluorinated 6,7-Dihydro-1H-Indol-4(5H)-One Derivatives</td>
<td>Hadijatu M.* and Okoro, C.; Advisor, Dr. Cosmas Okoro.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>P54</td>
<td>Synthesis and Antioxidant Activity of Fluorinated Acridone Derivatives</td>
<td>Callicutt, Jarvis*; Advisors, Drs Cosmas Okoro, William Boadi, and Otome Okoromoba.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>P55</td>
<td>Trace Metals in Pharmaceutical Preparations</td>
<td>Gray, Kharmen*; Advisor, Dr. Theodore Duello.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>P56</td>
<td>Beta-Cycloextrin in Host-Guest Interactions</td>
<td>Juniel, Charla*; Advisor, Dr. Tasneem A. Siddiquee.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>P57</td>
<td>Synthesis and Characterization of Polysaccharide-Stabilized Nanoparticles</td>
<td>Bradley Ashley*; Advisor, Dr. Koen Vercruysse.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>P58</td>
<td>Synthesis of Gold and Silver Nanoparticles Using Polysaccharides</td>
<td>Robinson, Sherene* and Tyler, L.; Advisor, Dr. Koen Vercruysse.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
<tr>
<td>P59</td>
<td>Synthesis of a Diels-Alder Adduct for Host-Guest Chemistry</td>
<td>Williams, Destiny*; Advisor, Dr. Tasneem Siddiquee.</td>
<td>Department of Chemistry</td>
<td></td>
</tr>
</tbody>
</table>

**Health, Education, and Social Sciences**

<table>
<thead>
<tr>
<th>Presentation Schedule</th>
<th>Title</th>
<th>Authors</th>
<th>Advisor</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>P60</td>
<td>The Impact of Gender on Standardized Tests: A Meta-Analysis of Existing Studies 1987 – 2007</td>
<td>Hendrix, Nicole K.*; Advisor, Dr. Stephen Trotter.</td>
<td>Department of Psychology</td>
<td></td>
</tr>
<tr>
<td>P61</td>
<td>Health Promotion in Older Adults Using a Technological Method</td>
<td>Chatman, Mauricia*; Advisor, Dr. Elizabeth Brown.</td>
<td>Department of Health Administration and Health Sciences</td>
<td></td>
</tr>
<tr>
<td>P62</td>
<td>Exercise Interventions for Smoking Cessation: A Literature Review</td>
<td>Bonds, Susanne*, Hipps, Amy, and Horton, Kyle; Advisor, Dr. Deborah Edmondson.</td>
<td>Department of Physical Therapy</td>
<td></td>
</tr>
<tr>
<td>P63</td>
<td>Chronic Deep Vein Thrombosis: The Efficacy of Open Versus Closed Chain Exercises</td>
<td>Buchanan, Faith*, Gahagan, Kelsey, Haley, Lauren, and Parsons, Cristen; Advisor, Dr. Natalie House.</td>
<td>Department of Physical Therapy</td>
<td></td>
</tr>
<tr>
<td>P64</td>
<td>Physical Therapy in the Neonatal Intensive Care Unit (NICU)</td>
<td>Shelide, April* and Buchanan, Faith; Advisor, Dr. Natalie House.</td>
<td>Department of Physical Therapy</td>
<td></td>
</tr>
<tr>
<td>P65</td>
<td>A Qualitative Analysis of “Getting into Graduate School” Journals</td>
<td>Johnson-Arnold, I., Finger, B.*, Watson, J., Barden, G., Sipes, H., and Taylor, K.; Advisor, Dr. Iris Johnson-Arnold.</td>
<td>Department of Speech Pathology</td>
<td></td>
</tr>
<tr>
<td>P66</td>
<td>Will the Use of Supplemental Creatine Decrease Rehabilitation Time Among Young Adults Coping with the Effects of Immobilization Related Injuries?</td>
<td>Corn, Matthew*, Kallall, Don, Payne, Darin, Bullock, Chad, and Raynes, Ediberto; Advisor, Dr. Ediberto Raynes.</td>
<td>Department of Physical Therapy</td>
<td></td>
</tr>
<tr>
<td>P68</td>
<td>Relationship Between Prophylactic Management of Predisposing Risk Factors and Non Contact ACL Injuries with Female Athletes: Analysis of the Evidence-Based Literature</td>
<td>Graves, M*, Humphreys, R., and Bukoskey, T.; Advisor, Dr. Thomas Bukoskey.</td>
<td>Department of Physical Therapy</td>
<td></td>
</tr>
</tbody>
</table>

*Denotes Presenter
<table>
<thead>
<tr>
<th>Presentation Schedule</th>
<th>Title</th>
<th>Authors</th>
<th>Advisor</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>P69</td>
<td>PROPHYLACTIC MANAGEMENT OF PREDISPOSING RISK FACTORS AND NON CONTACT ACL INJURIES</td>
<td>Graves, M. and Humphreys, R.; Advisor, Dr. Thomas Bukoskey. Department of Physical Therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WITH FEMALE ATHLETES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P70</td>
<td>DOES MANAGEMENT OF RISK FACTORS TO AN ACL INJURY CREATE FURTHER INJURY OR ALTER</td>
<td>Anderson, A.* and Kizer, K.; Advisor, Dr. Thomas Bukoskey. Department of Physical Therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PERFORMANCE?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P71</td>
<td>I AM NOT PART OF THE SIDESHOW: WOMEN AND TATTOOS, PERCEPTIONS OF BODY MODIFICATIONS</td>
<td>Sisk, Lisa*; Advisor, Dr. Robin Oatis-Balew. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P72</td>
<td>WILL THE USE OF ORTHOTICS PREVENT TIBIAL STRESS FRACTURES IN MARCHING ACTIVITIES?</td>
<td>Houchin, L.* and Stewart, T.; Advisor, Dr. Deborah Edmondson. Department of Physical Therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P73</td>
<td>PRADER-WILLI SYNDROME: FOUNDATIONAL INFORMATION FOR THE PHYSICAL THERAPIST</td>
<td>Cunningham, Jim*, Christiansen, Shannon, Jeffers, Felicia, and Shelide, April; Advisor, Dr. David Lehman. Department of Physical Therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P74</td>
<td>PRADER-WILLI SYNDROME AND PHYSICAL THERAPY: A PROPOSED TREATMENT PROTOCOL</td>
<td>Christiansen, Shannon*; Cunningham, Jim, Jeffers, Felicia, and Shelide, April; Advisor, Dr. David Lehman. Department of Physical Therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P75</td>
<td>RECOMMENDED PHYSICAL THERAPY INTERVENTIONS FOR IMPROVING PARTICIPATION IN CHILDREN WITH</td>
<td>Elmore, S., Ochoa*, K., Sabbatini, M., and Strader, R.; Advisor, Dr. David A. Lehman. Department of Physical Therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DUCHENNE'S MUSCULAR DYSTROPHY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P76</td>
<td>QUESTIONS FOR AN SLP: A SURVEY OF ARTICULATION AND PHONOLOGICAL PRACTICES</td>
<td>Johnson-Arnold, I., Gully, S.*, Parker, J., Robertson, Q., and Rodriguez, I.; Advisor, Dr. Iris Johnson-Arnold. Department of Speech Pathology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P77</td>
<td>ADULT ATTACHMENT AND HIGH RISK SEXUAL BEHAVIOR</td>
<td>Pitts, Alexis*; Advisor, Dr. Marie Hammond. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P78</td>
<td>FATHER ABSENCE AND SELF-DESTRUCTIVE BEHAVIORS IN AFRICAN-AMERICAN WOMEN</td>
<td>Tumbling, Shayla*; Advisor, Dr. Marie S. Hammond. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P79</td>
<td>COPING WITH VOICES AND STRESS: CORRELATIONS WITH VOICE RELATIONSHIPS</td>
<td>Joppich, Heather*; Advisor, Dr. Marie Hammond. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P80</td>
<td>ATTRIBUTION AND SELF-INJURY AMONG COLLEGE STUDENTS AT A HISTORICALLY BLACK UNIVERSITY/</td>
<td>Johnson, Sade*; Advisor, Dr. Guler Boyraz. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COLLEGE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P81</td>
<td>COLLEGE CRISIS: LINK BETWEEN PARENTAL DIVORCE AND A PREDISPOSITION TO DEPRESSION AMONG</td>
<td>Blackwood, Suzanne*; Advisor, Dr. Robin Oatis-Balew. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FEMALE UNDERGRADUATES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P82</td>
<td>THE IMPACT OF EMDR TREATMENT ON INDIVIDUAL RESILIENCE: A PILOT STUDY</td>
<td>Walton, Maria F.*; Advisor, Dr. Marie Hammond. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P83</td>
<td>NURTURE: CONSISTENT ALTERNATIVE ENVIRONMENTS AND ITS RELATION TO SELF-ESTEEM IN</td>
<td>Elam, Tamara*; Advisor, Dr. James Campbell. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ADOLESCENTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P84</td>
<td>MEDIA INFLUENCE ON BODY IMAGE DISSATISFACTION</td>
<td>Gibbs, Makisha*; Advisor, Dr. Linda Guthrie. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P85</td>
<td>RACIAL IDENTITY, THE AFROCENTRIC WORLDVIEW, AND DATING PREFERENCES AND BEHAVIORS OF</td>
<td>Ocen, Michelle*; Advisor, Dr. Marie Hammond. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AFRICAN AMERICANS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P86</td>
<td>SPIRITUALITY AND COPING WITH GRIEF AND LOSS AMONG AFRICAN AMERICAN COLLEGE STUDENTS</td>
<td>Foster, Dana*; Advisor, Dr. Marie Hammond. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P87</td>
<td>OBESITY AMONG AFRICAN AMERICAN AND LATINO ADOLESCENT GIRLS</td>
<td>Smith, Carlisha*; Advisor, Dr. Pamela Hull. Center for Health Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P88</td>
<td>PARENT AND PEER ATTACHMENT OF COLLEGE STUDENTS: FATHERLESS VERSUS DUAL-PARENT HOMES</td>
<td>Narain, Ariane*; Advisor, Dr. Marie Hammond. Department of Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P89</td>
<td>INCREASED INTIMACY SKILLS IN MEN REAP INCREASED RELATIONAL SATISFACTION</td>
<td>Chester, Robin*; Advisor, Dr. Robin Oatis-Balew. Department of Psychology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Denotes Presenter  
All abstracts can be found at www.tnstate.edu/research
<table>
<thead>
<tr>
<th>Poster Presentations</th>
<th>Faculty and Staff Posters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRESENTATION SCHEDULES</strong></td>
<td></td>
</tr>
<tr>
<td><strong>P90</strong> TARGETING HEALTH DISPARITIES IMPROVING CHILD AND DRIVER SAFETY</td>
<td>Massey, Krystal*; Advisor, Dr. Owen Johnson. Department of Health Sciences</td>
</tr>
<tr>
<td><strong>P91</strong> EFFECTS OF STEP-FAMILY AND BLENDED FAMILY ENVIRONMENT UPON BIRTH ORDER AND ACHIEVEMENT</td>
<td>Wolf, Jillian*; Advisor, Dr. Marie Hammond. Department of Psychology</td>
</tr>
<tr>
<td><strong>P92</strong> CANCER SCREENING UTILIZATION IN COMMUNITY HEALTH CLINICS</td>
<td>Sherrill, Angel*, Hull, Pamela, Reece, Michelle, Emerson, Janice, Cain, Van, Schlundt, David, and Levine, Robert; Advisor, Dr. Pamela Hull. Center for Health Research</td>
</tr>
</tbody>
</table>

**Poster Presentations**

**Faculty and Staff Posters**

Poster Presentations will be in the Research and Sponsored Programs Building, Lower Level

| **F101** EQUIFINALITY AND UNCERTAINTY IN MODELING SOIL RESPIRATION | Hui, Dafeng* and Shen, Weijun. Department of Biological Sciences |
| **F102** COMPARISON OF MANUKA OIL BAITED AND UNBAITED TRAPS FOR THE CAPTURE OF BUPRESTIDS AND CERAMBYCID | Youssef, N. N.*, Oliver, J. B., and Basham, J. P. School of Agriculture and Consumer Sciences |
| **F103** EVALUATION OF INSECTICIDES, BIOPESTICIDES, AND STRESS TREATMENTS ON TREE ATTACKS BY AMBROSIA BEETLES | Oliver, J. B.*, Ranger, C. M., Reding, M. E., Schultz, P. B., Youssef, N. N., and Moyseenko, J. J. School of Agriculture and Consumer Sciences |
| **F104** INCREASING DIVERSITY OF U.S. BLACK AND MINORITY FARM OPERATORS IN THE SOUTH | Amenyenu, A.*, Singh, S. P., Tegegne, F., and Ekanem, E. School of Agriculture and Consumer Sciences |
| **F105** COMPARISONS OF MICROBIAL CONTAMINATION AND CLEANING PRACTICES OF HOME KITCHENS IN NASHVILLE, TN | Chen, Fur-Chi*, Godwin, Sandria, L., Kilonzo-Nthenge, Agnes, Rotich, Emily, Sheshachala, Bhargavi, and Thompson, Cindy. School of Family and Consumer Sciences |
| **F106** THE INTERNET SHOPPING IN THE CUSTOMIZED APPAREL MARKETING | Seo, Jung-Im.* School of Family and Consumer Sciences |
| **F107** EVALUATION OF OPTIMUM FLOOR SPACE REQUIREMENT OF THE PEARL GREY GUINEA FOWL | Nahashon, Samuel.* School of Agriculture and Consumer Sciences |
| **F108** PREVALENCE AND ANTIMICROBIAL SUSCEPTIBILITY OF ENTEROBACTERIACEAE ISOLATES ON CONDIMENT JARS AND CONTAINERS IN DOMESTIC REFRIGERATORS | Kilonzo-Nthenge, A.*, Rotich, R., Godwin, S., Chen, F., and Thompson, C. School of Family and Consumer Sciences |
| **F109** PEER SERVICE LEARNING: WORLD AIDS DAY PROMOTING HEALTHY BEHAVIORS THROUGH HIV/AIDS EDUCATION | Foxx, Terri*, Brown, Elizabeth, and Samuels, A. Dexter. Department of Health Administration and Health Sciences |
| **F110** DRIVERS WITH A CHILD PASSENGER ARE MORE AT RISK FOR INJURY THAN THEIR CHILD PASSENGER DUE TO THE DRIVER NOT WEARING A SEATBELT | Foxx, Terri*, Samuels, Dexter A., Brown, Elizabeth, Johnson, Owen, and Massey, Krystal. Department of Health Administration and Health Sciences |
| **F111** USING SERVICE LEARNING TO EDUCATE CONSUMERS ON KEEPING FOOD SAFE DURING AN EMERGENCY | Stone, Richard*, Godwin, Sandria, and Coppings, Richard. School of Family and Consumer Sciences |
| **F112** POTENTIAL FOR CROSS CONTAMINATION OF FOODS THROUGH IMPROPER STORAGE IN HOME REFRIGERATORS | Godwin, Sandria*, Chen, Fur-chi, and Stone, Richard. School of Family and Consumer Sciences |
| **F113** MYROTHECIUM RORIDUM AS A NEW DISEASE IN GARDEN HYDRANGEA | Mmbaga, Margaret T.* and Sauve, Roger J. Department of Plant and Soil Science |
| **F114** LEAF SPOT DISEASE ON ORNAMENTAL FLOWERING CHERRY | Mmbaga, Margaret* and Sauve, Roger. Department of Plant and Soil Science |
| **F115** IDENTIFICATION OF PHOMA LEAF SPOT IN BIG LEAF HYDRANGEA | Mmbaga, Margaret T.* Department of Plant and Soil Science |

All abstracts can be found at www.tnstate.edu/research

*Denotes Presenter
School of Nursing Day

REFORM FOR HEALTHCARE PROFESSIONALS:
OVERCOMING OBSTACLES AND MOVING INTO COLLABORATION

Pamela C. Hull, Ph.D., is Associate Director of the Center for Health Research at Tennessee State University. Dr. Hull is a medical sociologist with expertise in health and race and ethnicity; prevention, early detection and management of chronic conditions including obesity, diabetes, and cancer; the impact of community factors on health; access to health care; and program evaluation. Dr. Hull conducts community-based participatory research in collaboration with community partners in the Nashville Hispanic and African American communities. She also collaborates with researchers from Vanderbilt University and Meharry Medical College, including the Cancer Outreach Core of the Meharry-Vanderbilt Cancer Partnership. Some of Dr. Hull’s research focuses on developing and evaluating community-based programs to improve health, while other research projects involve statistical analysis of large databases. Dr. Hull earned a Bachelor’s degree in Sociology from Duke University, and a Masters and Ph.D. in Sociology from Vanderbilt University. She has additional background in immigration and Latin American studies, and is fluent in Spanish.

Monday, March 15, 2010

Schedule of Events

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am</td>
<td>Registration and Continental Breakfast</td>
</tr>
<tr>
<td>8:30 am</td>
<td>Occasion and Welcome by Dr. Kathy L. Martin, Dean - School of Nursing</td>
</tr>
<tr>
<td>8:30 am - 9:15 am</td>
<td>MSN and BSN Poster Presentations</td>
</tr>
<tr>
<td>9:20 am - 10:55 am</td>
<td>Concurrent Sessions</td>
</tr>
<tr>
<td>11:00 am - 10:55 am</td>
<td>Presentation by Sponsors</td>
</tr>
<tr>
<td>11:30 am - 12:00 noon</td>
<td>Luncheon</td>
</tr>
<tr>
<td>12:10 pm - 12:40 pm</td>
<td>Keynote Address</td>
</tr>
<tr>
<td></td>
<td>Keynote Speaker - Dr. Pamela C. Hull, Associate Director</td>
</tr>
<tr>
<td></td>
<td>Center for Health Research, Tennessee State University</td>
</tr>
</tbody>
</table>
APLS Day
THE ASSOCIATION OF PRE-PROFESSIONAL LIFE SCIENTISTS

APLS is a multi-disciplinary, multi-institutional professional organization, founded at TSU in 2007, 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. As of January 2010, APLS boasts a membership roster of over 150 students, faculty and staff at Tennessee State University, Meharry Medical College, Vanderbilt University and, most recently, Middle Tennessee State University.

The APLS community outreach objective is to engage K-12 students from limited-resource families and communities through STEM-based activities and to provide public education in those areas. During the 2008-2009 academic year, APLS logged over 215 hours of community service and engaged over 1700 K-12 students and parents at local community centers, churches, and schools. The current APLS administration, under the leadership of APLS President Christianna Howard, is poised to do some wonderful things this year, both on campus and in the community. Students and faculty with an interest in the life sciences, technologies or research are encouraged to visit APLS at www.aplsglobal.org or email us at info@aplsglobal.org.

2010 APLS Leadership:
Christianna Howard, President and Chair of Enrichment Activities
LaKesha Glover, Vice President and Chair of Service Activities
Syrita Murray, Treasurer and Chair of Finance Committee
Rendie McHenry, Secretary
Carl Darris, Co-Executive Director  James Tyus, Co-Executive Director  Ashley Pellerin, Executive Secretary

Monday, March 15, 2010

Schedule of Events

Research and Sponsored Programs Building

Conference Room 209
1:00 pm – 4:00 pm  APLS Webinar Theater
• Science Careers Away from the Bench
• Effective Laboratory Skills: Managing People, Projects and Money
• Open Innovation and Social Networking

Nanoscience and Biotechnology Core Facility
1:00 pm – 2:00 pm  Genetics Workshop with High School Students: Crime Scene Investigation

Conference Room 163
2:00 pm – 3:30 pm  APLS Life Science Challenge and Competition
3:30 pm – 5:00 pm  Panel Discussion with Faculty and Administrators: “Success in Science: Beyond the Classroom”

First Floor Lobby
5:00 pm – 6:00 pm  Reception and Professional Mixer

Floyd-Payne Campus Center
6:00 pm – 9:00 pm  Featured Film
Dr. S. Keith Hargrove was recently appointed the Dean of the College of Engineering, Technology and Computer Science at Tennessee State University (TSU). He previously served as Chairperson of the Department of Industrial, Manufacturing & Information Engineering in the Clarence Mitchell, Jr. School of Engineering at Morgan State University in Baltimore, MD. Dr. Hargrove received his B.S. degree in Mechanical Engineering from TSU in 1985, M.S. degree from the Missouri University of Science & Technology in Rolla, MO. as a National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (GEM) Fellow, and the Ph.D. degree from the University of Iowa as a Committee of Institutional Consortium (CIC) Fellow. Dr. Hargrove was a Boeing Welliver Faculty Fellow (2008), and a Harvard Fellow with the Division of Engineering & Applied Sciences, Harvard University (2005-2006). He served as Assistant to the Dean and Associate Professor of Mechanical Engineering at Tuskegee University, and has worked for General Electric, Battelle Pacific Northwest Laboratories, National Institute of Standards and Technology (NIST), Oak Ridge Laboratories, and General Motors. Dr. Hargrove has conducted research projects with Sikorsky Aircraft, Boeing, NASA, and the US Army in systems engineering, design, and manufacturing. He is an Associate Member of the Society of Manufacturing Engineers, Institute of Industrial Engineers, American Society for Engineering Education (ASEE), and the Tennessee Society of Professional Engineers. His current research interests are in virtual and augmented reality, advanced manufacturing systems, systems engineering and management, and minority engineering education. As Dean of the College of Engineering, Technology and Computer Science, he is promoting strategic initiatives that focus on ACCESS (recruitment), AFFORDABILITY (scholarships and research funding), and ATTRITION (innovative curriculum and retention).

Tuesday, March 16, 2010

Schedule of Events

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 11:30 am - 1:00 pm | Luncheon  
Introduction of Speaker, Dr. Mohan Malkini, Associate Dean of Engineering  
Presentation by Dr. S. Keith Hargrove, speaker  
Dean, College of Engineering, Technology and Computer Science  
Preparing the Global Engineer for the 21st Century |
| 3:00 pm       | Robotics demonstration for high school students                      |

Holland Hall, Room 323 Robotics Laboratory
School of Agriculture and Consumer Sciences Day

A native of Brazil, Dr. Maria Lenira Leite-Browning is a Doctor of Veterinary Medicine and an animal reproduction specialist. She became involved in goat research and extension in 1980 as a research scientist and field veterinarian in northern Brazil. Currently, she is an animal extension scientist at Alabama A&M University.

Dr. Leite-Browning is a goat management consultant with extensive experience in goat production. This experience leads her to conduct seminars, workshops and conferences throughout the United States with the objective of educating producers, extension county agents, industry representatives and veterinarians on several issues of goat farming including nutrition, genetics, husbandry, health, reproductive management and marketing. An author of several scientific articles published in peer review journals, her work has been presented at national and international scientific conferences. Dr. Leite-Browning has a distinguished record of grantsmanship for supporting goat research.

She has been a pioneer in goat extension service in Tennessee since 2000 and successfully organized the goat industry in Tennessee. These activities were instrumental in forming the Tennessee Goat Producers Association. Dr. Leite-Browning was inducted into the “Teachers Hall of Fame” by the International Kiko Goat Association in 2009 because of such accomplishments.

Dr. Leite-Browning earned the Doctor of Veterinary Medicine (DVM) in 1980 from the Universidade Federal da Bahia in Bahia, Brazil and earned the Master of Science degree in theriogenology in 1985 from the Universidade Federal Fluminense in Rio de Janeiro, Brazil.

She is married to Dr. Richard Browning, Jr., a prominent goat research scientist, who initiated, and continues today, the goat research program at Tennessee State University.

Tuesday, March 16, 2010

Schedule of Events

School of Agriculture - Agriculture Information and Technology Center

1:00 p.m.  
Occasion by Dr. Carter Catlin, Associate Dean for Research - School of Agriculture and Consumer Sciences
Welcome by Dr. Chandra Reddy, Dean, Director of Research and Administrator of Extension — School of Agriculture and Consumer Sciences
Introduction of Speaker by Nannette C. Martin, School of Agriculture and Consumer Sciences
Presentation by Dr. Maria Browning, speaker – Extension Professor, Alabama A&M University
Veterinary Science: The 21st Century Perspective

1:30 p.m.  
The Virtual Learner in Agriculture and Consumer Sciences Presentation
Jonell Hinsey, School of Agriculture and Consumer Sciences

1:50 p.m. – 2:45 p.m.  
Agriculture and Consumer Sciences Research Demonstrations
Biotechnology and Food Safety
The Center of Academic Excellence in Intelligence Studies (CAEIS) Day

The Center for Academic Excellence in Intelligence Studies (CAEIS) is a student development program through which the U.S. Intelligence Community assists TSU’s efforts to develop a diverse pool of analytical leaders and to positively influence student interest in the intelligence profession and service to the nation, in general. The CAEIS facilitates students becoming more culturally aware global citizens, encourages the learning of secondary languages, and most importantly, builds solid U.S. citizen graduates who are capable of making immediate contributions to professional organizations in providing solutions to 21st Century challenges.

Maura Burns, Speaker
The guest speaker for the CAEIS luncheon is Maura Burns, a 22-year veteran with the Central Intelligence Agency (CIA). Her area of focus is on the analysis of foreign weapons programs. Currently, she is an Issue Manager in the Weapons Intelligence, Nonproliferation, and Arms Control Center (WINPAC). She is a 1985 graduate from the University of Kentucky. Ms. Burns will discuss the development of critical thinking skills.

Wednesday, March 17, 2010

Schedule of Events

Agricultural Information and Technology Center
9:10 a.m. - 10:10 a.m.  Globalization and Terrorism Workshop
Farrell-Westbrook Building, 118
10:20 a.m. – 11:20 a.m.  Intelligence Community Career Fair
11:30 a.m. – 1:00 p.m.  Luncheon
Presentation by Maura Burns, Issue Manager, Central Intelligence Agency, “Critical Thinking Skills”
Panel Discussion by representatives from Intelligence Community
1:00 p.m. – 1:20 p.m.  Intelligence Community Career Fair

Floyd-Payne Center
1:30 p.m. – 2:15 p.m.  790th AFROTC Detachment Tour

McCord Hall 204
2:30 p.m. – 3:20 p.m.  Introduction to Biological Sciences
Biological Sciences Laboratory Demonstrations

Research and Sponsored Programs, Room 209
3:30 p.m. – 4:30 p.m.  Globalization and Terrorism Workshop

Research and Sponsored Programs Lobby
4:30 p.m. - 5:30 p.m.  Scholars Reception
Celebrate Chemistry Day

Ruth Woodall serves as the director of the Tennessee Scholars program, a rewards and recognitions program started by the Tennessee Chamber of Commerce & Industry in Nashville, Tennessee.

Prior to joining the Tennessee Chamber of Commerce & Industry, Woodall taught chemistry in Tennessee public school systems – Metropolitan-Nashville, Shelby County, and Dyer County. She has led groups of students to study chemistry in Russia and Siberia, and marine biology and zoology in New Zealand and Australia.

Presently, Woodall holds the office of councilor for the Nashville Section of the American Chemical Society (ACS). In her 19 years as an ACS member, she has served as chair of the Nashville Section, Public Relations chair in two local sections, NCW coordinator in two local sections, Government Relations chair; and she has served on the American Chemical Society Committee on Community Activities for 16 years and the Committee on Public Relations and Communications for six years. She is the past chair of the Tennessee Science Teachers Association, chair of the ACS Tennessee Government Affairs committee, a member of Tennessee ACT Policy Council, NSTA Life Members Advisory Committee chair, helped draft the current Tennessee Diploma Path for high school graduation, and is on the board of directors of the Neurological Sciences Foundation to help educate the public about neurological diseases of the brain.

Woodall graduated from Union University in Jackson, Tennessee where she received a degree in chemistry in 1977. She was named Alumni of the Year in 2004 from the Chemistry Department. In 1984, Woodall earned a Masters degree in science education from the University of Memphis. She earned another Masters degree in 1984 and has continued to earn graduate hours in chemistry and education since.

In her personal time, Woodall enjoys traveling, golfing, singing, music, swimming, playing with her three nieces and four nephews, and doing chemistry activities.

Thursday, March 18, 2010

Schedule of Events

Alger V. Boswell Building

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am - 10:00 am</td>
<td>Tour of Chemistry Department</td>
</tr>
<tr>
<td>9:00 am - 12:00 noon</td>
<td>Career Fair</td>
</tr>
<tr>
<td>10:00 am - 11:00 am</td>
<td>Chemistry Demonstrations</td>
</tr>
<tr>
<td>11:00 am - 12:00 noon</td>
<td>Chemistry Challenge</td>
</tr>
<tr>
<td>12:00 noon - 2:30 pm</td>
<td>Student Research Poster Presentations</td>
</tr>
<tr>
<td>2:40 pm - 4:00 pm</td>
<td>Introduction of Speaker by Dr. Cosmas Okoro, Chemistry presentation by Ruth Woodall, Director of Tennessee Scholars Program, speaker</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:00 pm</td>
<td>Awards Dinner</td>
</tr>
</tbody>
</table>
Psychology Day

James M. O’Neil, Ph.D. is Professor of Educational Psychology and Family Studies at the University of Connecticut and a licensed psychologist in private practice in South Windsor, Connecticut. In 1975, he received his doctorate from the Department of Counseling and Personnel Services at the University of Maryland.

Dr. O’Neil is one of the founding members of the Society for the Psychological Study of Men and Masculinity (SPSMM), Division 51 of the American Psychological Association. SPSMM named him Researcher of the Year in 1997 for his 20-year research program on men’s gender role conflict. He is the author of the Gender Role Conflict Scale, a widely used measure of men’s conflict with their gender roles. In 1995, he was awarded Teaching Fellow status by the University of Connecticut for his outstanding excellence and dedication to the university teaching profession.

In August 2008, Dr. O’Neil received the Distinguished Professional Service Award from Division 51 of the American Psychological Association for his 25-year research program on men’s gender role conflict and his advocacy for teaching of the psychology of men in the United States. His article, “Summarizing 25 years of research on men’s gender role conflict using the Gender Role Conflict Scale: New research paradigms and clinical implications” won the SAGE and The Counseling Psychologist Outstanding Contribution Award in 2009. He has advocated professional activism with gender role and social justice issues throughout his 35 years as a counseling psychologist.

Thursday, March 18, 2010

Schedule of Events

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

11:30 am Luncheon  Presentation by Dr. James M. O’Neil, speaker
Summarizing 25 years of Men’s Gender Role Conflict Research: What We Know and Its Implications for Men, Women, and the Psychology of Men

Research and Sponsored Programs Building, Room 209

1:00 pm - 2:30 pm Poster Session  (Student Research Poster Presentations)

2:30 pm - 4:00 pm Workshop: Forgiveness: An Important but Misunderstood Process that Can Heal the Wounded and the World We Live in Presentation by Dr. James M. O’Neil, speaker

2:30 pm - 4:00 pm Panel Discussion: Completing Your Senior Project, Thesis, and Dissertation

5:45 pm - 7:00 pm Awards Ceremony
Student Awards Ceremony

Friday, March 19, 2010   11:30 a.m. - 1:00 p.m.

Welcome  Dr. Brenda McAdory, Symposium Co-Chair

Luncheon

Presentation of Awards  Dr. Maria Thompson, Vice President for Research and Sponsored Programs

Acknowledgements and Closing Remarks  Valerie Williams, Symposium Co-Chair

Adjournment
Research and Sponsored Project Awards FY 2009

Submittions by Project Type

- Research: $84,990,182 (118)
- Instruction/Training: $8,102,031 (23)
- Service: $15,315,708 (16)
- Other: $13,024,937 (20)

Total: $121,432,858 (177)

Awards by Project Type

- Research: $10,933,381 (60)
- Instruction/Training: $20,487,379 (69)
- Service: $6,318,643 (20)
- Construction/Renovation: $2,606,903 (3)

Total: $40,346,306 (152)

Submittions by Source

- Federal: $113,520,060 (112)
- State: $5,335,510 (39)
- Corporations: $492,053 (3)
- Private Foundations: $970,531 (9)
- Local: $1,052,100 (10)
- Other: $62,605 (4)

Total: $121,432,858 (177)

Awards by Source

- Federal: $36,175,748 (124)
- State: $3,204,435 (14)
- Corporations: $685,083 (6)
- Private: $281,040 (8)

Total: $40,346,306 (152)
# Student Awards

## Graduate Student Oral Competition - Health, Education & Social Sciences
- **First Place**: A6 Meegan Lambert, Ayile’ Arnett
- **Second Place**: A5 Christian Bishop, Gregg Hamilton, Shelina Heerdink, Raven Ingram
- **Third Place**: A4 Adina Gociu, Selina Hill

## Undergraduate Student Oral Competition - Health, Education & Social Sciences
- **First Place**: A1 Whitney White
- **Second Place**: A2 Susan West

## Graduate Student Oral Competition - Humanities and Arts
- **First Place**: A9 Kerry Simon
- **Second Place**: A8 Jason Peterson
- **Third Place**: A7 Ai Ishihara

## Undergraduate Student Oral Competition - Humanities and Arts
- **First Place**: B3 Warren Dean
- **Second Place**: B2 Carlton Cobb
- **Third Place**: B5 Olukemi Gbemisola Jolayemi

## Graduate Student Poster Presentation - Health, Education & Social Sciences
- **First Place**: P7 Kyle Cochran, Lauren Eskew-Rogers, Kiel Huston, Jamette Hickman
- **Second Place**: P5 Lauren Rudd, Marcus Pearson, Nikki Orazine
- **Third Place**: P6 Alan Bunger, Dona Davis, Swaina Dhawan, LaNedra Lee

## Undergraduate Student Poster Presentation - Health, Education & Social Sciences
- **First Place**: P40 Michael Davidson
- **Second Place**: P38 Amber Clayborne
- **Third Place**: P42 Josh White, Susan West, McKinley Woodson, Michael Thompson

## Graduate Student Poster Presentation - Life and Molecular Sciences
- **First Place**: P18 Caleb Kersey, Xuan Le
- **Second Place**: P20 Sabah Odman-Ghazi
- **Third Place**: P12 Abraham Abraha
- **Third Place**: P17 Natasha Hinkson

## Undergraduate Student Poster Presentation - Life and Molecular Sciences
- **First Place**: P49 Esther Coline Kibakaya
- **Second Place**: P53 Felicia Udoji
- **Third Place**: P55 Jin Zhou
- **Third Place**: P45 Gregory Coates

## Graduate Student Poster Presentation - Engineering, Computational & Physical Sciences
- **First Place**: P27 Olorupu Charles Agbaje
- **Second Place**: P32 Murali Krishna Marneni
- **Third Place**: P26 Shahrina Alam

## Undergraduate Student Poster Presentation - Engineering, Computational & Physical Sciences
- **First Place**: P67 Leon Tillman
- **Second Place**: P68 Ashley West
- **Third Place**: P57 Rachel Etherton, Falaknaz Gundi

## Oral Presentations
- 1st Place - $250
- 2nd Place - $100
- 3rd Place - $50

## Poster Presentations
- 1st Place - $150
- 2nd Place - $75
- 3rd Place - $25
Million Dollar Club Members

Dr. Michael Busby, Center for Excellence in Information Systems Engineering and Management
Dr. Satinderpaul Devgan, College of Engineering, Technology, and Computer Science
Dr. Soumen N. Ghosh, Office of Business and Economic Research
Dr. Robert Hampton, Academic Affairs
Dr. Baqar A. Husain, 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. Justus Ike, Fisk University
Dr. Mohammed A. Maleque, Meharry Medical College
Dr. Leah Miller, Vanderbilt University
Dr. Marilyn Odom, Belmont University
Aramandla Ramesh, Meharry Medical College
Dr. Jimmy B. Sheats II, Sheats Endodontic Group
Dr. James Farmer, U.S. Geological Survey
Dr. Rosalyn Webb, formerly Vanderbilt University

2010 Research Symposium Committee

Terri Allgood, Center for Academic Excellence in Intelligence Studies
Sarahjiti Bhatti, School of Agriculture and Consumer Sciences
Guler Boyraz, Psychology
Mark Brinkley, Center for Academic Excellence in Intelligence Studies
Reginald Cannon, Research and Sponsored Programs
David Danner, Research and Sponsored Programs
Phyllis Danner, Research and Sponsored Programs
Todd Gary, Research and Sponsored Programs
Linda Lewis Goodman, Research and Sponsored Programs
Denisha Griffey, Chemistry
S. Keith Hargrove, Engineering, Technology, and Computer Science
Christianna Howard, APLS
Pamela Hull, Center for Health Research
Michael Ivy, Biological Sciences
Everett Jolley, Admissions
Deborah Long, School of Agriculture and Consumer Sciences
Mohan Malkani, Engineering, Technology, and Computer Science

Nannette Martin, School of Agriculture and Consumer Sciences, (former symposium co-chair)
Brenda McAdory, Biological Sciences (symposium co-chair)
David Miller, Psychology
Yvonne Myles, Biological Sciences
Marilyn Parks, Center of Excellence in Information Systems Engineering and Management
Belinda Patterson, Nursing
Moinuddin Sarka, Physics and Astronomy
James Tyus, APLS
Verla Vaughan, Nursing
Valerie Williams, Center of Excellence for Learning Sciences (symposium co-chair)

EX-OFFICIO MEMBERS

Maria Thompson, Ph.D., Vice-President, Research and Sponsored Programs
Gloria Johnson, Ph.D., Interim Dean, College of Arts and Sciences
Michael Freeman, Ph.D., Vice-President, Student Affairs

Judges

Dr. Twum Ansah, Meharry Medical College
Dr. Anthony Baucum, Vanderbilt University
Dr. Jacqueline Burgess, Integrity Dental Care
Dr. Sanika Chirwa, Meharry Medical College
Dr. Saudat Fadeyi, Meharry Medical College
Dr. Hugh Fentress, Vanderbilt University
Dr. Robert Holt, Meharry Medical College
Dr. Heinrich Matthies, Vanderbilt University

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

Congratulations to the 21 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 21 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.
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
AIR FORCE ROTC
Detachment 790

WE PROVIDE THE KNOWLEDGE
AND YOU GAIN THE POWER!

CHARTING YOUR PATH
TO LEADERSHIP
STARTS HERE!

EXPERIENCE
THE CUTTING EDGE TECHNOLOGIES
OF AIR, SPACE & CYBERSPACE

Call AFROTC DET 790
at Tennessee State University
615-963-5977

DIVISION OF BUSINESS AND FINANCE

Supports the
32nd Annual
University-Wide Research Symposium

Cynthia B. Brooks, Vice President
615.963.7411

TENNESSEE STATE UNIVERSITY
Outstanding Programs at the Associate, Bachelor, and Master Levels
Special Post-Master Certificate Programs

Leading the Way in Nursing Education and Research for a Bright Future in Health Care

Tennessee State University
School of Nursing
Dr. Kathy L. Martin, Dean

TENNESSEE STATE UNIVERSITY
School of Graduate Studies and Research
Nashville, TN

Master's degrees offered in these departments:
• Agricultural Sciences
• Biological Sciences
• Business
• Chemistry
• Criminal Justice
• Educational Administration
• Electrical & Computer Engineering
• Engineering
• Human Performance & Sports Sciences
• Languages, Literature & Philosophy

Doctoral Degrees offered in:
• Administration & Supervision
• Biological Sciences
• Computer & Information Systems Engineering
• Curriculum & Instruction
• Physical Therapy
• Psychology
• Public Administration

For More Info Contact: Phone: 615.963.5901 Email: gradschool@tnstate.edu Web: www.tnstate.edu/grad
School of Agriculture and Consumer Sciences
Transforming the Agricultural Environment and Changing Lives

We perform public service throughout the State of Tennessee in areas of food, agriculture, the environment and consumer sciences.

Academic Degree Offerings

Department of Agricultural Sciences
We offer the Bachelor of Science degree in Agricultural Sciences with concentrations in:

- Agribusiness
- Animal Science/Pre-Veterinary Medicine
- Food Technology
- Agricultural Education
- Applied Geospatial Information Systems
- Plant and Soil Science

We offer the Master of Science degree in Agricultural Sciences with options in:

- Agribusiness
- Animal Science
- Agricultural Education
- Plant Science

GIS Graduate Certificate
Ph.D. in Agricultural Biotechnology through the Biological Sciences Department

Department of Family and Consumer Sciences
We offer the Bachelor of Science degree in Early Childhood Education, and Family and Consumer Sciences with concentrations in:

- Child Development and Family Relations
- Fashion Merchandising
- Food Service Management
- Design
- Food and Nutrition
- Family and Consumer Sciences Education

Teaching * Research * Extension
Chandra Reddy, Ph.D.
Dean, Director of Research and Administrator of Extension
Email: creddy@tnstate.edu • Telephone: (615) 963-7561
Nano-Bio Core Research Facility

State-of-the-Art Science at your Fingertips

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...

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:
Susan Sutton
Laboratory Director
RSP Building, Room 226
615-963-2537
sverbernesutto@tnstate.edu
The Scholar in U experience enhances the teaching and learning process that occurs during formal class work. These experiences build on TSU’s long tradition and commitment to “Think, Work, and Serve.” The Scholar in U is a virtuous cycle of value creation for the student. Each module incorporates qualified experiences, integration of knowledge, reflection, and assessment and will be documented on the student’s records. The student’s undergraduate experiences include continuous intellectual growth; and they graduate with greater preparation to face global challenges. The Scholar in U experience is distinctive because it intentionally uses experiential learning to prepare students for graduate school, careers, and citizenship. It provides skills, knowledge, and experiences that are highly prized by employers and establishes the foundation for future leaders.
MISSION:
The mission of the College of Business is to educate future business professionals through innovative teaching and applied research focused on contemporary business operations for the global economy, complemented with outreach services directed toward enhancing entrepreneurship and economic development.

Undergraduate Program - BBA
The College of Business offers Bachelor of Business Administration (BBA) programs to undergraduates in:
- Accounting
- Business Administration
- Business Information Systems
- Economics and Finance

Graduate Program - MBA
The MBA program offers the following concentrations:
- Accounting
- Management of Information Systems
- Healthcare Economics and Management
- Supply Chain Management

Dr. Tilden Curry, Dean
615-963-7121
www.cob.tnstate.edu
cobinfo@tnstate.edu

RESEARCH AREAS

CANCER
Colorectal
Prostate
Breast
Cervical

MENTAL HEALTH

Obesity
Diabetes
Heart Disease
Stroke

Prevention
Community Outreach
Reduce Health Disparities

CROSSCUTTING THEMES

Baqar A. Husaini, Ph.D., Director
Pamela C. Hull, Ph.D., Associate Director
3500 John Merritt Blvd. • Box 9580 Nashville, TN 37209
Phone: (615) 320-3005 • Fax: (615) 320-3071 • www.tnstate.edu/healthresearch

MISSION: To conduct interdisciplinary research aimed at improving health outcomes and reducing health disparities.
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.
Tennessee State University

College of Engineering, Technology and Computer Science
S. Keith Hargrove, Ph.D., Dean

B.S. Degrees
Architectural Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering
Computer Science
Aeronautical and Industrial Technology

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