



TENNESSEE
STATE UNIVERSITY

38th
ANNUAL UNIVERSITY-WIDE RESEARCH SYMPOSIUM

April 4 - 8, 2016



Research:
Celebrating Excellence



Division of Research and Sponsored Programs
38th Annual University-Wide Research Symposium
Official Symposium Program Booklet — Commemorative Issue

Research: Celebrating Excellence

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Tennessee State University Executive photography and inside book photography courtesy of John Cross, Media Services. Cover page photographs courtesy Vando L. Rogers Photography, Nashville, TN, 2016. Cover: Undergraduate student researcher majoring in computer science, Jeremiah Cooper, operates the CAVE (Cave Automatic Virtual Environment) which is a fully-immersive, navigable and interactive virtual reality (VR) system located in the TIGER (TSU Interdisciplinary Graduate Engineering Research) Institute. CAVE provides advanced scientific visualization (ASV) support to multidisciplinary research projects in areas of science and engineering. The CAVE research group is led by Associate Professor Sachin Shetty, Ph.D., from the Department of Electrical and Computer Engineering, College of Engineering.

April 2016 issue. This booklet is published by the Division of Research and Sponsored Programs and is published once a year. Copyright 2016 © Tennessee State University

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*(former Co-chair)

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OFFICE OF
THE PRESIDENT

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



April 4, 2016

Dear Colleagues:

It gives me great pleasure to welcome each of you to our 38th Annual University-Wide Research Symposium, themed, "Research: Celebrating Excellence". I also want to extend a heartfelt welcome to our distinguished speakers, Dr. Earnestine Easter, Program Director of the Division of Graduate Education at The National Science Foundation; Dr. Ivory Toldson, Executive Director of the White House Initiative on Historically Black Colleges and Universities; and Dr. Rhonda Franklin, a professor in the College of Science and Engineering at the University of Minnesota.

As we continue to enhance our initiatives and lead other HBCUs in STEM studies, we are enlightened by the innovative research and findings conducted by Drs. Easter, Toldson and Franklin. Their representation and engagement on various foundation boards and committees signifies the unwavering support for our students in all fields of study but especially in the field of science and engineering.

I am encouraged by the passion of our students and faculty as they continue to embrace multi-disciplinary research along with the advancement of technology in science, engineering, business, and the emerging humanities disciplines. This knowledge is transmitted to our students by the collaborative educational interactions and networking which this annual Symposium at TSU provides. Our students are offered a challenging and supportive arena for presenting their undergraduate and graduate research. I congratulate them all for their outstanding work – a celebration of excellence.

The 2016 Symposium continues to serve as a bridge to the TSU family and broader community. It also provides an additional opportunity for me to reach out to faculty, students, alumni, and the community of institutions and people for innovative ideas and inspiration.

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

Sincerely,

A handwritten signature in blue ink that reads "Glenda Glover".

Glenda Glover, Ph.D.
President

"Think • Work • Serve"

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F



"Think • Work • Serve"

Office of the Vice President
Academic Affairs
3500 John A. Merritt Boulevard
Nashville, Tennessee 37209-1561
Office: (615) 963-5301
Fax: (615) 963-5597



April 4, 2016

Dear Colleagues:

I am excited to welcome you to the 38th Annual University-Wide Research Symposium. The theme, *Research: Celebrating Excellence at Tennessee State University* expresses our desire to be one of the top Historically Black Colleges and Universities (HBCUs) in the country in research and sponsored programming. I am also pleased to know that Dr. Earnestine Easter, Program Director from the National Foundation; Dr. Ivory Toldson, Executive Director, White House Initiative on HBCUs; and Dr. Rhonda Franklin, Professor of Electrical and Computer Engineering at the University of Minnesota will be our symposium keynote speakers.

We are proud of our history and accomplishments in the research arena at Tennessee State University. Yet there is still work we must do to achieve the goals we have set for ourselves. Given the extraordinary opportunities that exist, our aspirations are attainable as we continue to pursue our goals and objectives allowing us to shape and mold our future. There is no doubt we will continue the rich legacy we have obtained given the success we have enjoyed and the work we continue to do through our strategic research agenda.

This week we celebrate the creative research our faculty and student researchers have generated this past year. There will be an exchange of knowledge and ideas through stimulating dialogue and collaborative interactions graduate and undergraduate students engage in during the symposium. It is through these sessions faculty and students engage in conversations specific to research topics investigated across the globe.

I extend my congratulations to Dr. Lesia Crumpton-Young and all of the TSU family for the effort that has been expended to sponsor this symposium. It is a capstone event that provides value not only to our student participants, but to the broader research community.

Sincerely,

Mark G. Hardy Ph.D.
Provost and Executive Vice President of Academic Affairs



Research and Sponsored Programs
3500 John A. Merritt Boulevard
Nashville, Tennessee 37209-1561
Office: (615) 963-7631
Fax: (615) 963-5068



Office of the Chief Research Officer and Associate Vice President

March 30, 2016

Dear Colleagues:

Welcome to the 38th Annual University-Wide Research Symposium at Tennessee State University.

The purpose of the Symposium is to highlight and celebrate the multi-disciplinary research experiences of TSU students. The oral and poster presentations of students from across the university spectrum help to foster a greater understanding of the core research areas of excellence.

The Symposium also showcases university-wide research that delivers academic value to TSU students, faculty, and society-at-large. Educational environments that include research opportunities help to increase the academic skills and preparation necessary in a global economy. The growth in research activity has tremendously impacted the academic environment for students and faculty at TSU by producing ground breaking solutions to various national challenges.

Please join me in supporting our students, faculty, and researchers as they continue to grow and embark upon future research activities. I ask you to encourage, inspire, and applaud our students as they prepare for a lifetime of achievement and service, with research as a cornerstone of their continuing accomplishments.

Sincerely,

Lesia L. Crumpton-Young, Ph.D.
Chief Research Officer
Associate Vice President

The Research Symposium

The Annual University-Wide Research Symposium at Tennessee State University is celebrating 38 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 has honored Dr. Torrey at milestone years during annual research symposia.

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.

Over the ensuing 38 years of annual symposia, the following persons have served as symposium chairs; Rubye Torrey (1979-1981), Jacquelyn Martin (1982-1986), Joan Elliot (1987-1994), Carolyn Caudle (1995-1999), E. Lewis Myles (2000-2004), Elaine Martin (2005-2007), Brenda McAdory and Valerie Williams (2008-2010), and Carolyn Caudle and Nannette Martin (2011-2013). Current symposium chairs are Nannette Martin (2011- present) and Tamara Rogers (2014-present).

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

Beginning in 2011, Interim Associate Vice President Dr. Michael Busby continued to support the Symposium with financial resources and by sanctioning the engagement of national and international acclaimed scientists to present Symposia keynote addresses and conduct faculty research team forums. In 2014, Chief Research Officer and Associate Vice President Dr. Lesia Crumpton-Young joined the Division of Research and Sponsored Programs, embracing the spirit and financial support of the Research Symposium, and continuing enhancement of partnerships with federal agencies for increasing research at the University.

38th
Research: Celebrating Excellence



Founder of Research Day at Tennessee State University, 1979

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

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

Visiting Chemist at the National Bureau of Standards (now the National Institute of Standards & Technology). She has held professorships in chemistry at TSU, the University of Tennessee-Nashville, and TTU.

How Research Day Began

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

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

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

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

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

OVERVIEW OF EVENTS

On-Site Registration Schedule

Presentation Type	Location	Monday, April 4, 2016	Tuesday, April 5, 2016	Wednesday, April 6, 2016	Friday, April 8, 2016
Oral RSP Building	1st Floor Lobby	8:30 a.m. – 1:00 p.m.	8:30 a.m. – 1:00 p.m.	8:30 a.m. – 1:00 p.m.	8:30 a.m. – 10:00 a.m.
Poster	Jane Elliott Hall Lobby	10:00 a.m. – 1:30 p.m.	9:00 a.m. – 3:00 p.m.		

MONDAY, APRIL 4, 2016

7:30 a.m. – 1:30 p.m.	School of Nursing Research Day: James E. Farrell – Fred E. Westbrook Building, 118 Poster Presentations. Oral Presentations. Awards. Speaker, Michelle C. Reece, Dr.PH.
9:00 a.m. – 10:15 a.m.	NSF Information Session A, The Graduate Research Fellowship Program (Faculty)
10:30 a.m. – 12:00 p.m.	NSF Information Session B, The Graduate Research Fellowship Program (Student)
2:00 p.m.	Opening Ceremony and Plenary Session – E.T. Goins Recital Hall, Performing Arts Center Symposium Keynote Speaker I – Earnestine Psalmonds Easter, Ph.D.

TUESDAY, APRIL 5, 2016

Presentations:	
9:00 a.m. – 12:00 p.m.	Graduate Engineering I Orals, RSP 009, TIGER Institute
9:00 a.m. – 12:15 p.m.	Graduate Science I Orals, RSP 163
12:30 p.m. – 4:30 p.m.	Undergraduate Science Orals, RSP 163
1:00 p.m. – 5:00 p.m.	Graduate Science II Orals, RSP 009, TIGER Institute
5:00 p.m. – 7:00 p.m.	Presidential Assembly

WEDNESDAY, APRIL 6, 2016

Presentations:	
9:00 a.m. – 11:30 a.m.	Graduate Engineering II Orals, RSP 163
9:00 a.m. – 12:00 p.m.	Graduate Science III Orals, RSP 009, TIGER Institute
1:00 p.m. – 4:00 p.m.	Graduate Science IV Orals, RSP 163
1:30 p.m. – 3:15 p.m.	Undergraduate Engineering Orals, RSP 209
9:30 a.m. – 11:00 a.m.	The Whitehouse Initiative on HBCUs Agricultural Information and Technology Center Symposium Keynote Speaker II – Ivory Toldson, Ph.D.
12:00 p.m. – 4:00 p.m.	College of Health Sciences Research Day: Poag Auditorium, Humanities Building Poster Presentations. Awards Ceremony. Speaker, Consuelo Wilkins, M.D.

THURSDAY, APRIL 7, 2016

Poster Presentations: Posters will be displayed in the Jane Elliott Hall Auditorium, April 5, 2016 – April 7, 2016	
9:00 a.m. – 11:00 a.m.	Faculty Poster Session, Jane Elliott Hall Auditorium
9:00 a.m. – 11:00 a.m.	Graduate Poster Session and Judging, Jane Elliott Hall Auditorium
1:00 p.m. – 3:00 p.m.	Undergraduate Poster Session and Judging, Jane Elliott Hall Auditorium
11:00 a.m. – 12:30 p.m.	College of Engineering Research Day: RSP 163 Speaker, Frances Williams, Ph.D.
3:15 p.m. – 7:30 p.m.	Psychology Research Day: James E. Farrell – Fred E. Westbrook Building, 118 Poster Presentations. Faculty Research Slam. Awards. Speaker, Lisa L. Barnes, Ph.D.

FRIDAY, APRIL 8, 2016

Presentations:	
8:30 a.m. – 10:45 a.m.	Faculty Orals, RSP 163
12:00 p.m. – 2:00 p.m.	Awards Luncheon and Closing Ceremony, James E. Farrell – Fred E. Westbrook Building, 118 Luncheon. Awards. Symposium Keynote Speaker III – Rhonda Franklin, Ph.D.

Posters will be displayed in the Jane Elliott Hall Auditorium from Monday, April 4, 2016 – Thursday, April 7, 2016



Earnestine Psalmonds Easter, Ph.D.
Symposium Keynote Speaker I

*Maximizing the Potential for Excellence:
Capitalizing on Current and Future NSF Funding Initiatives and
Programs to Enhance Education and Research Capacity*

Earnestine Psalmonds Easter, Ph.D. is a program director in the Division of Graduate Education at the National Science Foundation (NSF). Her current responsibilities include serving as program director for the EHR Core Research program and Historically Black Colleges and Universities Undergraduate Program broadening participation research track. She is the lead program officer for the directorate-wide STEM Professional Workforce Development Core area and represents the NSF on the National Science and Technology Council interagency working group on broadening participation to implement the Committee on STEM Education's Five-year Strategic Plan.

As senior program officer and visiting scholar in the Policy and Global Affairs Division, National Academies, Psalmonds Easter served as study director for the 2009 Academies report entitled Partnerships for Emerging Research Institutions and co-study director of the report Expanding Underrepresented Minority Participation: America's Science and Technology Talent at the Crossroads (2010), a congressionally mandated study focused on the underrepresentation of minorities in science and engineering. She has represented the NSF on interagency science and engineering workforce initiatives including the Education and Workforce Development Subgroup of the National Science and Technology Council and consultation committee for the Department of Education Jacob K. Javits Fellowship Program.

Psalmonds Easter served on the board of directors for Oak Ridge Associated Universities, North Carolina Board for Science and Technology, NASA Minority Business Resource Advisory Council, and executive committee of the Council on Research Policy and Graduate Education of the Association of Public and Land Grant Universities. She has held administrative positions at the Georgia Institute of Technology and Georgia State University, and she became the first vice chancellor for research at North Carolina A&T State University where she was also a professor of education. Psalmonds Easter served as principal investigator for projects funded by the National Science Foundation, National Institutes of Health, Department of Agriculture, Martin Marietta Energy Systems, Caterpillar Foundation, Environmental Protection Agency, and Department of Energy. She has made numerous presentations, and co-authored copyrights to two software systems. She was honored by the Republic of Senegal through acceptance into the Order of the Lion. She received the baccalaureate and master's degree in education from Tuskegee University and Ph.D. in higher education leadership with a concentration in management information systems from Georgia State University.

PROGRAM

MONDAY - APRIL 4, 2016 – E. T. Goins Recital Hall, Performing Arts Center
2:00 P.M. – 4:00 P.M.

Mistress of Ceremonies, Kimberly P. Johnson, Ph.D., Assistant Professor of Communication Studies

Prelude, Soprano

Welcome and Greetings, Dr. Mark Hardy, Provost and Vice President

Occasion, Mrs. Nannette C. Martin, Research Symposium Co-chair

Introduction of Keynote Speaker, Dr. Lesia Crumpton-Young
Chief Research Officer and Associate Vice President for Research and Sponsored Programs

Keynote Address, Dr. Earnestine Psalmonds Easter
Program Director, Division of Graduate Education

Remarks and Presentation of Award, Dr. Lesia Crumpton-Young

Closing Remarks, Dr. Tamara Rogers, Research Symposium Co-chair

Special Music, Tennessee State University "Alma Mater", Laura M. Averitte, 1918

Reception to follow in the Rotunda

Ivory A. Toldson, Ph.D.
Symposium Keynote Speaker II

The White House Initiative on Historically Black Colleges and Universities



Dr. Ivory A. Toldson was appointed by President Barack Obama to devise national strategies to sustain and expand federal support to HBCUs, as the executive director of the White House Initiative on Historically Black Colleges and Universities. He is currently on leave from his position as full professor at Howard University. He has also served as senior research analyst for the Congressional Black Caucus Foundation, and editor-in-chief of *The Journal of Negro Education*, and contributing education editor for *The Root*, where he debunked some of the most pervasive myths about African-Americans in his *Show Me the Numbers* column.

In addition to ongoing work with elected officials, government executives, HBCU leaders and advocacy groups, Dr. Toldson conceptualized the White House Initiative on HBCUs All-Stars program, which identifies and engages the top HBCU scholars. He also co-authored a series of blogs on federal sponsorships for various federal agencies and hosted a series of webinars, in an effort to increase the approximately \$5 billion of federal revenue that flows to 100 HBCUs.

Dr. Toldson has more than 65 publications, including 4 books, and more than 150 research presentations in 36 US states, Puerto Rico, Dominican Republic, Scotland, South Africa, Paris, and Barcelona. He has been featured on MSN-BC, C-SPAN2 Books, NPR News, POTUS on XM Satellite Radio, and numerous local radio stations. His research has been featured in *The Washington Post*, *The New York Times*, *The Root*, *The National Journal*, *Essence Magazine*, and *Ebony Magazine*.

Dubbed a leader “who could conceivably navigate the path to the White House” by the *Washington Post*, one of “30 leaders in the fight for Black men,” by *Newsweek Magazine*, and the “Problem Solver” by *Diverse: Issues In Higher Education*, Dr. Toldson, according to U.S. Secretary Arne Duncan, is “a prolific young scholar and myth buster.” According to *Capstone Magazine*, “Toldson has spent a lot of time traveling across the country talking with teachers about misleading media statistics that invariably either link Black males to crime or question their ability to learn.” Dr. Toldson was named in the 2014 and 2013 *The Root* 100, an annual ranking of the most influential African-American leaders.

After completing coursework for a Ph.D. in Counseling Psychology at Temple University, Dr. Toldson became a correctional and forensic psychology resident at the United States Penitentiary. There, he completed his dissertation on Black Men in the Criminal Justice System. Upon completion, Dr. Toldson joined the faculty of Southern University and became the fourth recipient of the prestigious DuBois Fellowship from the US Department of Justice. He also served as the clinical director of the Manhood Training Village. He has received formal training in applied statistics from the University of Michigan, and held visiting research and teacher appointments at Emory, Drexel, and Morehouse School of Medicine.

PROGRAM

WEDNESDAY - APRIL 6, 2016 – Agricultural Information and Technology Center
 9:30 A.M. – 11:00 A.M.

Master of Ceremonies, Dr. John Robinson, Associate Professor

Welcome and Greetings, Dr. Lesia Crumpton-Young
 Chief Research Officer and Associate Vice President, Division of Research and Sponsored Programs

Dr. Hardy

Occasion, Dr. Tamara Rogers, Research Symposium Co-chair

Introduction of Keynote Speaker, Dr. Lesia Crumpton-Young

The Keynote Address, Dr. Ivory Toldson
 Executive Director, White House Initiative on HBCUs

Remarks and Presentation of Award, Dr. Lesia Crumpton-Young

Closing Remarks, Mrs. Nannette C. Martin, Research Symposium Co-chair

Coffee Reception in lobby

PLENARY SESSION:
 WHITE HOUSE
 INITIATIVE ON HBCUS

PRESENTATION SCHEDULES

ORAL PRESENTATIONS - Tuesday, April 5, 2016

GRADUATE ENGINEERING I

9:00 a.m. - 12:00 p.m. - Research and Sponsored Programs Bldg., Tiger Institute, Room 009

9:00 AM	GR ENGR 1	An Access-Based Decision Support Tool For Assessing Bicycle And Pedestrian Safety Abram Musinguzi*. <i>Civil and Architectural Engineering</i> , College of Engineering. Advisor(s): Deo Chimba
9:15 AM	GR ENGR 2	Secure Measurement Based Geolocation To Locate Data In The Cloud Datacenters Biswajit Biswal*. <i>TIGER Institute</i> , College of Engineering. Advisor(s): Sachin Shetty
9:30 AM	GR ENGR 3	Cooperative Image Transmission For Underlay Cognitive Radio Network Using Software Defined Radio Kamrul Hasan*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Liang Hong and Sachin Shetty
9:45 AM	GR ENGR 4	Vibration Attenuation Of Cylindrical Structures Using Constrained Layer Damping Bashir Al Saidi*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Hamid Hamidzadeh
10:00 AM	GR ENGR 5	Colluding Jamming Attack On A Grand Coalition By Aggrieved Nodes Ashraf Al Sharah* and Taiwo Oyedare*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Sachin Shetty
10:15 AM	GR ENGR 6	Secured Formation Control For Multi-Agent Systems Under DOS Attacks Esther Amullen*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Lee Keel
10:30 - 10:45 BREAK		
10:45 AM	GR ENGR 7	Portable Low-Vision Obstacle Detection System Yvette Tolliver*. <i>Computer Science</i> , College of Engineering. Advisor(s): Erdem Erdemir and S. Keith Hargrove
11:00 AM	GR ENGR 8	An Exploration Of Wind Stress Calculation Techniques In Hurricane Storm Surge Modeling Kyra Bryant*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar
11:15 AM	GR ENGR 9	User Behavior Modeling And Profiling For Smartphones (UMAPS) Divya Guntu*. <i>TIGER Institute</i> , College of Engineering. Advisor(s): Sachin Shetty
11:30 AM	GR ENGR 10	Design Of Intelligent Reconfigurable Controllers For Lateral Control Of Aircraft Models Kevin Terrell*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Kevin Terrell and Saleh Zein-Sabatto
11:45 AM	GR ENGR 11	Droiddoker: Dynamic Analysis Of Android Applications Using Docker Gauree Barve*. <i>TIGER Institute</i> , College of Engineering. Advisor(s): Sachin Shetty

GRADUATE SCIENCE I

9:00 a.m. - 12:15 p.m. - Research and Sponsored Programs Building, Room 163

9:00 AM	GR SCI 1	Genetic Diversity Analysis Of Grain Amaranths Ranjita Thapa*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair
9:15 AM	GR SCI 2	Characterizing Phb Produced By Bacillus Cereus Tsu1 And Analyzing Recombinant Proteins By 1D And 2D Gel Electrophoresis Hui Li*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Suping Zhou
9:30 AM	GR SCI 3	Microsatellite Markers' Based Assessment In Individual Pollen Of Cotton Chromosomal Substitution Lines Abdul Yakubu*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Ahmad Aziz, Sukumar Saha and David M. Stelly
9:45 AM	GR SCI 4	Microbiological Quality Of Fresh Produce And Growers Acquaintance With Good Agriculture Practices In Small And Medium-Sized Produce Farms In Middle And West Tennessee Jessica Dompheh*. <i>Family and Consumer Sciences</i> , College of Agriculture. Advisor(s): Agnes Kilonzo-Nthenge

10:00 AM	GR SCI 5	Molecular Characterization Of Mung Bean Germplasm Diversity With Genetic Markers Faridul Islam*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair
10:15 AM	GR SCI 6	Management Of Fungal Diseases In Snap Beans Using Biological Control Agents Jacqueline Joshua*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Margaret Mmbaga
10:30 - 10:45 BREAK		
10:45 AM	GR SCI 7	Isolation And Characterization Of Probiotic Bacteria From The Gastrointestinal (GI) Tract Of Chickens Joseph Donkor*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Samuel Nahashon
11:00 AM	GR SCI 8	Characterization And Expression Of The Serotonin 2C Receptor In Chicken Bipradas Roy*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Hugh Fentress and Samuel Nahashon
11:15 AM	GR SCI 9	Down-Regulation Of Tissue N:p Ratios In Terrestrial Plants By Elevated Co2 Qi Deng*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Dafeng Hui
11:30 AM	GR SCI 10	Role Of MAPK/NF-KB Signaling And Tace Activation In Tributyltin-Mediated Alteration Of Pro-Inflammatory Cytokine Levels In Human Immune Cells Shanieck Lawrence*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
11:45 AM	GR SCI 11	Tissue-Specific And Dietary Regulation Of Glucose Transporter Expression M. Shannon Byers* and Ann Bohannon-Stewart*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Xiaofei Wang and Samuel Nahashon
12:00 PM	GR SCI 12	Intelligibility Ratings Of Faculty With Foreign Accents Isabella Kearney*, Stephanie Dixon*, Marcela Beals*, Lindsey Slaughter*, and Stephanie Austin*. <i>Speech Pathology and Audiology</i> , College of Health Sciences. Advisor(s): Iris Johnson and Owen Johnson

ORAL PRESENTATIONS - Tuesday, April 5, 2016

UNDERGRADUATE SCIENCE

12:30 p.m. - 4:30 p.m. – Research and Sponsored Programs Building, Room 163

12:30 PM	UG SCI 1	Morphological Evaluation Of Amaranth Accessions Obtained From Seed Savers' Exchange Matthew Edwards* and Ranjita Thapa*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair and Tim Johnson
12:45 PM	UG SCI 2	Yield Potential Of Traditional Grain Amaranth Varieties From Around The World Mawel Jok* and Ranjita Thapa*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair
1:00 PM	UG SCI 3	Determination Of Variability In Waste Vegetable Oil Resources For Biodiesel Production Alexius Dingle*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Jason de Koff
1:15 PM	UG SCI 4	Greenhouse And In Vitro Evaluation Of Amaranth Seedling Characteristics Matthew Edwards*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair
1:30 PM	UG SCI 5	Salmonella Continues To Exist On The Surface Of Plastic Grocery Bags Through Leakage From Raw Chicken Packages Jolynn Franklin* and Devendra Bhandari*. <i>Family and Consumer Sciences</i> , College of Agriculture. Advisor(s): Fur-Chi Chen and Sandria Godwin
1:45 PM	UG SCI 6	A Comparison Of Physical And Sensory Properties Of Chocolate Bars Fortified With Four Variations Of Hemp Protein Powders Austin Hulsey*. <i>Family and Consumer Science</i> , College of Agriculture. Advisor(s): Sandria Godwin

2:00 PM	UG SCI 7	Generation And Characterization Of The Proline 108 Serine Single Nucleotide Polymorphism In The Human Serotonin 2C Receptor Gerald Nwosu*, Mia Krout* and Quzonna Reed*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Hugh Fentress
2:15 PM	UG SCI 8	Impact Of The Proline 280 Leucine Single Nucleotide Polymorphism In The Human Serotonin 2C Receptor On The Interaction With Protein Phosphatase And Tensin Homolog Leonel Herrera-Flores*, Bipradas Roy, Mary Curtis* and Letimicia Fears. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Hugh Fentress and Michael Ivy
2:30 -2:45 BREAK		
2:45 PM	UG SCI 9	The Distribution Of Calcium Binding Proteins In The Frontal Cortex Kiona Coleman*. <i>Psychology</i> , College of Education. Advisor(s): Lisa de la Mothe
3:00 PM	UG SCI 10	Auditory Input To Ventrolateral Prefrontal Cortex Elisabeth Stansberry*. <i>Psychology</i> , College of Education. Advisor(s): Lisa de la Mothe
3:15 PM	UG SCI 11	Triclosan-Induced Alterations Of Interleukin 1 Beta Secretion From Human Immune Cells Dylan Brooks*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
3:30 PM	UG SCI 12	Dibutyltin Alters Secretion And Production Of Interleukin 6 In Human Immune Cells Nafisa Hamza* and Monique Marshall*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
3:45 PM	UG SCI 13	Potential Role Of HIF1 In High Salt Induced Inflammatory Response Karina Lopez-Wells*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Venkataswarup Tiriveedhi
4:00 PM	UG SCI 14	Unprecedented Application Of Tertiary Alcohols With Arcopdcl Species For Making Highly Substituted Esters Carsyn Snagg* and Sara Chrisman*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum
4:15 PM	UG SCI 15	Sea Anemone Monitoring While Feeding Chase C. Richard* and Mason Caples. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Michael T. Ivy

GRADUATE SCIENCE II

1:00 p.m. - 4:00 p.m. – Research and Sponsored Programs Bldg., Tiger Institute, Room 009

1:00 PM	GR SCI 13	Evaluation Of An F2 Mapping Population Of Amaranth For Herbicide Tolerance And Other Traits Ranjita Thapa* and Matthew Edwards*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair
1:15 PM	GR SCI 14	Lignocellulolytic Bacteria And Fungi Isolated From Hydrothermal-Vegetative Environments Joshua OHair*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Suping Zhou and Terrance Johnson
1:30 PM	GR SCI 15	Evaluation Of Winter Canola For Biodiesel Production In Tennessee Edmund Tetteh*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Jason de Koff
1:45 PM	GR SCI 16	Simultaneous Encapsulation Of Antibiotic Alternatives For Targeted Delivery Into Poultry Gastrointestinal Tract Cosmas Mwendwa*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Ying Wu, Fur-Chi Chen and Agnes Kilonzo-Nthenge
2:00 PM	GR SCI 17	Transformation Efficiency Of Soybean Varieties Under Maturity Group IV And Optimization Of CRISPR Mary Jane Espina*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Ali Taheri and Korsi Dumenyo
2:15 PM	GR SCI 18	Garlic: A Natural Antibiotic, Effective On Campylobacter Species Richard Yorke*. <i>Family and Consumer Sciences</i> , College of Agriculture. Advisor(s): Fur-Chi Chen

2:30 - 2:45 BREAK

2:45 PM	GR SCI 19	Effects Of Supplemental Glutamine And Lysine On Growth Performance Of Broiler Chickens Boniface Kimathi* and Ali Alsogair*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Samuel Nahashon
3:00 PM	GR SCI 20	Analysis Of Consumption Behavior Of Fresh Fruits And Vegetables Among US Households Pramatma Khanal*. <i>Agriculture and Environmental Sciences</i> , College of Agriculture. Advisor(s): Prabodh Illukpitiya
3:15 PM	GR SCI 21	Climate Warming Elevated Laccase Gene Abundance And Diversity Along A Boreal Latitudinal Climate Transect Sherly Celada* and Siyang Jian*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Jianwei Li
3:30 PM	GR SCI 22	Exome Sequencing Of Pancreatic Cancer Genome Tiara Smith*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Xiaofei Wang and Elbert Myles
3:45 PM	GR SCI 23	A New Process Of Synthesizing Aliphatic Amides And Anandamides Under Microwave Irradiation Linda Quinones*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum

ORAL PRESENTATIONS - Wednesday, April 6, 2016

GRADUATE ENGINEERING II

9:00 a.m. – 11:30 a.m. – Research and Sponsored Programs Building, Room 163

9:00 AM	GR ENGR 13	Openflow Security Assessment Using Bayesian Network-Based Attack Graph Laila Almutairi*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Sachin Shetty
9:15 AM	GR ENGR 14	Design Of An Experimental Platform For Cloud Based Real Time Control Systems Mohammad Arafatur Rahman*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Lee Keel
9:30 AM	GR ENGR 15	Machine Learning For Big Data With Spark Asmah Muallem*. <i>TIGER Institute</i> , College of Engineering. Advisor(s): Sachin Shetty and Juan Zhao
9:45 AM	GR ENGR 16	Effect Of Bottom Friction And Surface Roughness In Hurricane Storm Surge Simulation Using Adcirc+Swan Model Simbarashe Kanjanda*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar
10:00 AM	GR ENGR 17	Scalable Network Traffic Analysis On Cloud Computing Platform Sabah Alzahrani*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Sachin Shetty
10:15 AM	GR ENGR 18	A Reputation-Based Coalition Game To Prevent Smart Insider Jamming Attacks In Manets Taiwo Oyedare* and Ashraf Al Sharah*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Sachin Shetty

10:30 - 10:45 BREAK

10:45 AM	GR ENGR 19	Design Of Fault Tolerant Height Controller Set For An Unmanned Aerial Vehicle Pavanasirisha Kallakuri*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Lee Keel
11:00 AM	GR ENGR 20	Film Cooling Analysis For Gas Turbine Blades Using Numerical Simulation Methods Bashir Alsaidi*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar, Roger Painter, and Lonnie Sharpe
11:15 AM	GR ENGR 21	Moving Target Defense On Dynamic And Heterogeneous Attack Surfaces Tulha Al Salah*. <i>TIGER Institute</i> , College of Engineering. Advisor(s): Sachin Shetty

GRADUATE SCIENCE III

9:00 a.m. – 12:00 p.m. – Research and Sponsored Programs Bldg., Tiger Institute, Room 009

9:00 AM	GR SCI 24	Evaluation Of Photosynthetic Rate And Yield Potential Of Four Commercial Cowpea Varieties For Tennessee Growing Conditions Yahaya Damba* and Xingbo Wu*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair
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9:15 AM	GR SCI 25	Identification Of The Quantified Root Proteome Expression Of Switchgrass (<i>Panicum Virgatum</i>) Under Drought Stress Zhujia Ye*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Suping Zhou and Theodore W. Thannhauser
9:30 AM	GR SCI 26	Evaluating The Efficacy Of Selected Probiotic To Reduce The Colonization Of <i>Salmonella</i> Spp In Broilers Joy Igbafe*. <i>Family and Consumer Sciences</i> , College of Agriculture. Advisor(s): Agnes Kilonzo-Nthenge and Samuel Nahashon
9:45 AM	GR SCI 27	Adaptation Of 408 Mung Bean Genotypes To Middle Tennessee Growing Conditions Faridul Islam*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair
10:00 AM	GR SCI 28	Cytotoxic And Anti-Microbial Activities Of Endophytic Fungal Crude Extracts Isolated From Flowering Dogwoods (<i>Cornus Florida</i> L.) Asha Maheshwari*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Margaret Mmbaga
10:15 AM	GR SCI 29	Dietary Lysine: Effects On Lysine Homeostasis And Performance Of Broiler Chickens Collins Khwatenge*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Samuel Nahashon
10:30 - 10:45 BREAK		
10:45 AM	GR SCI 30	The Changing Faces Of Agricultural Business Mikhail Miller* and Faith Sang. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Enefiok Ekanem and Mary Mafuyai
11:00 AM	GR SCI 31	Characterization Of The Cytoskeletal Protein MACF1 In Lung Cancer Najlaa Afghani*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Quincy Quick
11:15 AM	GR SCI 32	Bioinformatics Analysis Of Adipose Tissue Transcriptome Of Broiler Chickens Nicholas Cook*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Xiaofei Wang
11:30 AM	GR SCI 33	Molecular Mechanisms Underlying Stereotyped Axonal Pruning Of The Dentate Gyrus Infrapyramidal Tract Sana Gilani*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Brenda McAdory
11:45 AM	GR SCI 34	Dual Catalyst System For Direct Amidation Reaction From Potassium Organotrifluoroborates And Amides Mohammad Shahidul Islam* and Wejdan Shaban*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum

ORAL PRESENTATIONS - Wednesday, April 6, 2016

GRADUATE SCIENCE IV

1:00 p.m. - 5:00 p.m. - Research and Sponsored Programs Building, Room 163

1:00 PM	GR SCI 35	Differential Expression Profiling Of Upland Cotton Chromosomal Substitution Lines Selected For Oilseed Traits Deependra Bhatta*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Ahmad Aziz and Ali Taheri
1:15 PM	GR SCI 36	Yield Potential Of Novel Semi-Dwarf Grain Amaranths Tested For Tennessee Growing Conditions Yahaya Damba* and Ranjita Thapa*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair
1:30 PM	GR SCI 37	Evaluation Of Industrial Oilseed Crops For Biodiesel Production In Tennessee Shivam Chawla*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Jason de Koff and Prabodh Illukpitiya
1:45 PM	GR SCI 38	A Comparison Of Bitter Melon Varieties And Their Antioxidant Properties And In Vitro Anti-Diabetes Effects Li Wang*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Ying Wu and Arvazena Clardy

2:00 PM	GR SCI 39	Expression And Characterization Of Immune Function Genes And Toll-Like Receptors In The Adult Guinea Fowl Using Transcriptome Analysis Gabriel Ekereke*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Samuel Nahashon
2:15 PM	GR SCI 40	Developing Novel Probiotics And Evaluating Their Mechanisms Of Interaction With Host Environment To Enhance Poultry Performance Sarayu Bhogaju*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Samuel Nahashon
2:30 - 2:45 BREAK		
2:45 PM	GR SCI 41	Examining The Outcome Expectations And Level Of Commitment For Agricultural Sciences Students Attending An 1890 Land-Grant University Sarah Girresch*. <i>Psychology</i> , College of Education. Advisor(s): John Hall and Marie Hammond
3:00 PM	GR SCI 42	My Experience With A Graduate Class In Advance Plant Propagation Zhujia Ye*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Suping Zhou
3:15 PM	GR SCI 43	Responses Of Corn Physiology And Yield To Six Agricultural Practices Over Three Years In Middle Tennessee Chih-Li Yu*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Dafeng Hui and Sam Dennis
3:30 PM	GR SCI 44	Effect Of The Inhibitor (KR-185) On Calpain Activity In Lung Cancer (A549) And 3T3-L1 Preadipocytes Seyi Falekun*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): William Boadi, Elbert Myles and Isaac O. Donkor
3:45 PM	GR SCI 45	Preparation Of Fluoro-Compounds By Fluorination Of Organotrifluoroborates Satheesh Thatiparti*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum
4:00 PM	GR SCI 46	Rsmk Mutant Of The Soft-Rotting Enterobacterial Phytopathogen, Pectobacterium Carotovorum, Elicits Hypersensitive Response In Tobacco In Addition To Overproduction Of Plant Cell Wall-Degrading Enzymes Urmila Adhikari*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): C. Korsi Dumenyo
4:15 PM	GR SCI 47	Characterization Of The Incompatible Interaction Between Erwinia Tracheiphila And Non-Host Tobacco (Nicotiana Tabacum) Eric Nazareno*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): C. Korsi Dumenyo and Caleb Kersey
4:30 PM	GR SCI 48	Identification Of Parasporal Proteins In Bacillus Thuringiensis Strains Isolated From Middle Tennessee Alaa Bahannan*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Terrance Johnson and Anthony Ejiogor
4:45 PM	GR SCI 49	The Use Of Species Distribution Models (Sdms) To Evaluate The Distribution Of The Eastern Hellbender (Cryptobranchus Alleganiensis Alleganiensis) In Tennessee, U.S.A. Jeronimo Silva*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): William Sutton

UNDERGRADUATE ENGINEERING

1:30 p.m. - 3:15 p.m. – Research and Sponsored Programs Building, Room 209

1:30 PM	UG ENGR 1	Design And Optimization Of A Bio-Inspired Submersible Vehicle In A Hydroponic Environment Timothy Darrah* and Robert Turner*. <i>Computer Science</i> , College of Engineering. Advisor(s): Erdem Erdemir
1:45 PM	UG ENGR 2	Interactive And Immersive Visualization Of Engineering Systems Marc Primeau* and Dan Fishler*. <i>TIGER Institute</i> , College of Engineering. Advisor(s): Sachin Shetty
2:00 PM	UG ENGR 3	Design Of An Efficient Catalytic Converter With Increased Flow Rate And Minimum Pressure Drop Using CFD Techniques Ayele Tegegne*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar
2:15 PM	UG ENGR 4	Optimum Reaction Conditions For The Design Of An Efficient Catalytic Converter Brent Warner*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar

2:30 - 2:45 BREAK

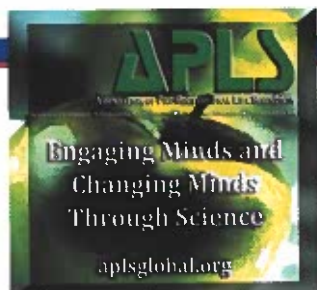
2:45 PM	UG ENGR 5	Quantized Stabilization Of Stochastic Systems With Multiplicative Noise Under Markovian Switching Netra Dahal*. <i>Mathematics</i> , College of Life and Physical Sciences. Advisor(s): Sivapragasam Sathananthan and L.H. Keel
3:00 PM	UG ENGR 6	Design And Kinematic Analysis Of A Mechanical Tentacle System For Small Unmanned Aerial Vehicles Donald Toohey* and Michael Pat Harrigan*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): W. Yeol Joe

ORAL PRESENTATIONS - Friday, April 8, 2016

FACULTY

8:30 a.m. - 10:45 a.m. – Research and Sponsored Programs Building, Room 163

8:30 AM	FAC-O 1	Measuring Health And Wellness Of International College Students: Initial Construction Of A Multicultural, Cross-Sectional Instrument Francis Pleban* and Samir Patel. <i>Public Health, Healthcare Administration, and Health Sciences</i> , College of Health Sciences
8:45 AM	FAC-O 2	Can Polysaccharides Act As Enzymes? Studies On Polysaccharide-Mediated Synthesis Of Pigments. Koen Verduyck*. <i>Chemistry</i> , College of Life and Physical Sciences
9:00 AM	FAC-O 3	Bonding Super-Hard Ceramics To Polymers Ranganathan Parthasarathy*, Lizhi Ouyang, Forrest Hoff, and Jeremiah Beam. <i>Mathematical Sciences</i> , College of Life and Physical Sciences
9:15 AM	FAC-O 4	Using The EDTPA Portfolio To Sustain Excellence In Preparing Minority Teachers John Tiller*, Judith Presley, and Beth Christian. <i>Teaching and Learning</i> , College of Education
9:30 AM	FAC-O 5	Metabolomics And Physiological Studies Of Grafted Tomatoes Suping Zhou*, Wei Liu, Sarabjit Bhatti, and Theodore Thannhauser. <i>Agricultural and Environmental Sciences</i> , College of Agriculture
9:45 AM	FAC-O 6	Impact Of Access Management Practices On Pedestrian Safety Deo Chimba*, Kevin Soloka, and Henry Ajieh. <i>Civil and Architectural Engineering</i> , College of Engineering
10:00 AM	FAC-O 7	Using Single-Cell Type Proteomics To Develop Protein Profiles For Distinct Cell Layers Of Tomato Roots Suping Zhou* and Yingde Zhu, Hui Li, and Theodore Thannhauser. <i>Agricultural and Environmental Sciences</i> , College of Agriculture
10:15 AM	FAC-O 8	Atomistic To Continuum Homogenization Method Ranganathan Parthasarathy*, Lizhi Ouyang and Anil Misra. <i>Mathematical Sciences</i> , College of Life and Physical Sciences
10:30 AM	FAC-O 9	The Changing Faces Of Agricultural Business Enefiok Ekanem* and Mary Mafuyai*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture



APLS

The Association of Pre-Professional Life Scientists
contributed the moderators and time keepers for the Symposium.

POSTER PRESENTATIONS

Posters will be displayed in the Jane Elliott Hall Auditorium, April 5, 2016 – April 7, 2016

FACULTY POSTERS

- FAC-P 1 **Introduction Of Bottle Gourds And Bitter Melons To Tennessee**
Arvazena Clardy* and Sherry Crudup. *Cooperative Extension*, College of Agriculture
- FAC-P 2 **Prevalence And Antimicrobial Resistance Of Enterobacteriaceae On Shell Eggs And Egg Contents From Poultry Farms And Farmers' Markets**
Agnes Kilonzo-Nthenge*, Samuel Nahashon, Sandria Godwin, and Edgar Chambers IV. *Family and Consumer Sciences*, College of Agriculture
- FAC-P 3 **Study On Genomics And Physiology Of Transgenic Tomato Under Abiotic Stress**
Yuping Jiang*, Xiaobo Pei, and Suping Zhou. *Agricultural and Environmental Sciences*, College of Agriculture
- FAC-P 4 **Growing And Analyzing International And Alternative Vegetables For Production, Marketing And Medicinal Properties In Tennessee**
Arvazena Clardy* and Sherry Crudup. *Cooperative Extension*, College of Agriculture
- FAC-P 5 **Evaluation Of Yield Performance Of Leafy Greens In Organic Vertical Garden For Urban Settings**
Darlene Gunther*, Dilip Nandwani, and Saidullah Chowdhary. *Agricultural and Environmental Sciences*, College of Agriculture
- FAC-P 6 **Treatment Evaluations For Rapid Elimination Of Imported Fire Ant Colonies**
Jason Oliver*, Karla Adesso, Nadeer Youssef, Paul O'Neal, Manoj Pandey, and Sujana Dawadi. *Agricultural and Environmental Sciences*, College of Agriculture
- FAC-P 7 **Improving Spectral Resolution With An Externally Dispersed Interferometric Spectrograph**
James Maxwell*, Matthew Muterspaugh, Aarin Whitehurst, and Michael Williamson. *Center of Excellence - Information Systems*, Research and Sponsored Programs
- FAC-P 8 **Addressing The Challenges Of HIV/Aids In Tennessee**
Elizabeth Brown*, Charles Virgill, Brandeshia Nelson, and John Michael. *Public Health, Healthcare Administration, and Health Sciences*, College of Health Sciences

GRADUATE POSTERS

GRADUATE POSTER JUDGING – THURSDAY, APRIL 7, 2016

9:00 a.m. – 11:00 a.m. in Elliott Hall Auditorium

- GR-P 1 **The Impact Of Media Commentary On The Perceptions Of Black Athletes**
Sydney Collins*. *Psychology*, College of Education. Advisor(s): James Brooks
- GR-P 2 **Morphological Evaluation Of Amaranth Accessions Obtained From USDA**
Ranjita Thapa*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Matthew Blair
- GR-P 3 **DNA Analysis Of Individual Microspores Of Upland Cotton Chromosome Substitution Line**
Shreya Singh Hamal*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Ahmad Aziz and Sukumar Saha
- GR-P 4 **Cloning And Characterization Of Cellulolytic Enzymes Screened From Goat Rumen Metagenome**
Santosh Thapa*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Suping Zhou
- GR-P 5 **A Study On The Epigenetic Mechanism For The Drought Stress Tolerance In Panicum Halli Var Halli**
Shohana Huq*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Suping Zhou
- GR-P 6 **Finding The Value In The Vault: An Examination Of FFA Member Value In The Tennessee FFA Convention Media Vault**
Beverly Flatt*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): John Ricketts

- GR-P 7 **Evaluation Of Biorational Products And Fungicides For The Control Of Powdery Mildew Of Dogwood**
Prabha Liyanapathirana^{*}, Terri Simmons^{*} and Niamul Kabir^{*}. *Agricultural and Environmental Sciences*, College of Agriculture.
Advisor(s): Fulya Baysal-Gurel and Karla Addresso
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- GR-P 8 **Stem Inoculation Rechnique To Assess Tesistance In Hydrangea Cultivars To Phytophthora Nicotianae**
Niamul Kabir^{*}, Prabha Liyanapathirana^{*} and Claudia Curry^{*}. *Oris L. Floyd Research Center*, College of Agriculture.
Advisor(s): Fulya Baysal-Gurel
-
- GR-P 9 **Adaptation Of 408 Mung Bean Genotypes To Middle Tennessee Growing Conditions**
Farid Islam^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Matthew Blair
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- GR-P 10 **Prevalence Of Antibiotic Resistant Bacteria From Imported And Local Fresh Produce**
Siqin Liu^{*}. *Family and Consumer Sciences*, College of Agriculture. Advisor(s): Agnes Kilonzo-Nthenge
-
- GR-P 11 **Developing An Association Network From Proteome Changes To Root Phenotypic Properties For Aluminum Tolerance In Switchgrass**
Mahesh Rangu^{*} and Zhuujia Ye^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Suping Zhou, Theodore Thanhauser, and Erdem Erdemir
-
- GR-P 12 **Yield Potential Of Fourteen Organic Sweet Potato Cultivars Grown In Various Mulches**
Sochinwechi Nwosisi^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Dilip Nandwani
-
- GR-P 13 **Cultivar Evaluation Of Six Leafy Green Vegetables In Urban Organic Management System**
Ravneet Sandhu^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Dilip Nandwani
-
- GR-P 14 **Yield Performance Of Twenty-Six Organic Tomato Cultivars Grown In Tennessee**
Varinder Sidhu^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Dilip Nandwani
-
- GR-P 15 **A Meta-Analysis Of Effects Of Nitrogen Fertilization On Soil Extracellular Enzyme Activities And Soil Carbon And Nitrogen Dynamics**
Siyang Jian^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Jianwei Li, Dafeng Hui, and E. Kudjo Dzantor
-
- GR-P 16 **Generation Of Ems-Induced Soybean Mutants And Screening For Herbicide Tolerance**
Mary Jane Espina^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Ali Taheri, Korsi Dumenyo, and Dharma Pitchay
-
- GR-P 17 **Farm Computer Ownership And Usage: Findings From A Survey By The National Agricultural Statistical Service**
James Wairimu^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Fisseha Tegegne, Enefiok Ekanem, Prabode Illikupitya, and Hiren Bhavsar
-
- GR-P 18 **Virus Induced Gene Silencing In Tomato**
Yingde Zhu^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Suping Zhou
-
- GR-P 19 **Pectobacterium Carotovorum And E. Coli Elicit Hypersensitivity Response (HR)-Like Reaction In Soybean (Glycine Max) Plants**
Sabbir Ahmed^{*} and Rabiul Islam^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Ali Taheri and Korsi Dumenyo
-
- GR-P 20 **Immunochemical Fingerprint Analysis For Identification And Subtyping Of Salmonella**
Devendra Bhandari^{*}. *Family and Consumer Sciences*, College of Agriculture. Advisor(s): Fur-Chi Chen
-
- GR-P 21 **Identifying Themes To Guide Curriculum Development For The Poultry And Egg Education Project (PEEP)**
Morgan Beaty^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): John Ricketts
-
- GR-P 22 **Integrating Food Science Into High School Agricultural Education In Tennessee**
Morgan Beaty^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): John Ricketts
-
- GR-P 23 **Diversity Of Endophytic Organisms In Flowering Dogwoods (Cornus Florida L.)**
Asha Maheshwari^{*}. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Margaret Mmbaga
-
- GR-P 24 **Preventive Effects And Molecular Mechanisms Of Phytochemicals In Breast Cancer Cells**
Xiaoyong Wang^{*}. *Family and Consumer Sciences*, College of Agriculture. Advisor(s): Hongwei Si

- GR-P 25 **Potassium Supply And Uptake In Hydroponically Grown Romaine Lettuce (*Lactuca Sativa*) And Broccoli (*Brassica Oleracea*)**
Grija Vijayan*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Dharma Pitchay
- GR-P 26 **Screening Of Three Phosphate Solubilizing Probiotics Microorganism In National Botanical Research Institute (NBRIP) And Pikovskaya (PVK) Growth Media**
Joseph Donkor*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Samuel Nahashon
- GR-P 27 **A Comparative Analysis Of Microbial Profile Of Chicken And Guinea Fowl Using Metagenomic Approach**
Sarayu Bhogoju*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Samuel Nahashon
- GR-P 28 **Utility Of Normalized Difference Vegetation Index (NDVI) To Predict Aboveground Forest Biomass In Tennessee**
Man Kumari Giri*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Bharat Pokharel
- GR-P 29 **Growing Jalapeno (*Capsicum Annuum L.*) In Tennessee**
Dijuana Davis*. *Agricultural Sciences*, College of Agriculture. Advisor(s): Arvazena Clardy
- GR-P 30 **Impact Of Nitrogen Rate On Shoot Development In Blueberry (*Vaccinium Ashei*)**
Steven Kennedy*. *Agricultural Sciences*, College of Agriculture. Advisor(s): Dharma Pitchay
- GR-P 31 **Secure Aware VM Placement In Openstack Cloud**
Reza Amin*. *TIGER Institute*, College of Engineering. Advisor(s): Sachin Shetty
- GR-P 32 **Modeling A Cyber Resilient Smart Grid Using Software Defined Networking**
Hellen Maziku*. *TIGER Institute*, College of Engineering. Advisor(s): Sachin Shetty
- GR-P 33 **Cross-Layer Attacks On Mobile Networks**
Kamrul Hasan* and Taiwo Oyedare*. *Electrical and Computer Engineering*, College of Engineering. Advisor(s): Sachin Shetty
- GR-P 34 **Scredent: Scalable Real-Time Anomalies Detection And Notification Of Targeted Malware In Smartphones**
Paul McNeil*. *TIGER Institute*, College of Engineering. Advisor(s): Sachin Shetty
- GR-P 35 **Cross Layers Decision Making And Fusion Models For Automated**
Bakhita Salman*. *Electrical and Computer Engineering*, College of Engineering. Advisor(s): Saleh Zein-Sabatto
- GR-P 36 **Anti-Tumor Effect Of Onosoma On Mammalian Cell Lines**
Jawaher Albaqami*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Elbert Myles
- GR-P 37 **Inhibition Of Cancer Growth By Synthetic And Natural Compounds**
Zaina Alqahtani*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Elbert Myles and Mohammed Karim
- GR-P 38 **Growth Analysis Of The Herbs Pomegranate And Chill On Tumor Cells**
Tathi Alshamm*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Elbert Myles
- GR-P 39 **The Effect Of Synthetic And Natural Compounds On Tumor Cell Lines**
Kholoud Alhaidari*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Elbert Myles and Mohammed Karim
- GR-P 40 **Cytotoxic Activity Of Ferula Assa-Foetide Extract On SW620 And Hela Cancer Cell Lines In Vitro**
Shifaa Al Shammari*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Elbert Myles
- GR-P 41 **Impacts Of WNT Inhibitory Factor-1 (WIF-1) On The Differentiation Of Preadipocytes And Inhibition Of WNT Signaling Suppresses Cancer Relapse**
Duaa Babaer*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Xiaofei Wang
- GR-P 42 **The Effect Of Sewak On Oral Microbiota Genome**
Yosra Modafar*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Xiaofei Wang
- GR-P 43 **Cytotoxicity Of Calpain Inhibitors KR-180**
Roba Alzahrani* and Azzah Baashirah*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Xiaofei Wang, William Boadi and Elbert Myles

- GR-P 44 **Polysaccharide-Mediated Formation Of Pigments From Serotonin**
Noor Alattas*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Koen Vercruyse
-
- GR-P 45 **Dibutyltin Exposures Alter Secretion Of Interleukin 6 From Human Immune Cells**
Shyretha Brown* and Wendy Wilburn*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
-
- GR-P 46 **Effects Of Pentachlorophenol (PCP) On Secretion Of Interferon Gamma (IFN) From Human Immune Cells**
Reda Massawe*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
-
- GR-P 47 **Pentachlorophenol And Dichlorodiphenyltrichloroethane Alter Secretion Of Interleukin 1 ETA (IL-1) From Human Immune Cells**
Tamara Martin*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
-
- GR-P 48 **Effects Of Flame Retardants, HBCD And TBBPA, On Secretion Of Tumor Necrosis Factor Alpha (TNF) From Human Immune Cells**
Sharia Yasmin*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
-
- GR-P 49 **Assessment Of Tributyltin-Induced Dysregulation Of Inflammatory Cytokine Levels In Human And Mouse Immune Cells**
Shanieck Lawrence*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
-
- GR-P 50 **Synthesis And Biological Activities Of New Class Of Schiff Bases And Their Metal Complexes**
Md Islam*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Mohammad Karim
-
- GR-P 51 **Synthesis And Biochemical Evaluation Of Fluorinated 9-Amino Acridone Derivatives On Human Type II Topoisomerase**
Alexis Sledge*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Cosmas Okoro
-
- GR-P 52 **Use Of Ozone For The Degradation Of Pharmaceutical Products As Emerging Environmental Contaminants**
Tasnim Rahman*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Tasneem Siddiquee
-
- GR-P 53 **Compression Garments: Recovery Myth Or Fact?**
Michael Donaldson*, Matt Fleming*, Tera Giese*, Courtney Peterson* and Lauren Waller*. *Physical Therapy*, College of Health Sciences.
Advisor(s): Edilberto Raynes
-
- GR-P 54 **Barefoot Versus Shod Running: Does Either Truly Reduce Or Prevent Repetitive Injuries In Runners?**
Matthew Gallien*, Seth McDonald*, Stefen Petry* and Elizabeth McGowan*. *Physical Therapy*, College of Health Sciences.
Advisor(s): Deborah Edmondson
-
- GR-P 55 **Tai Chi And Quality Of Life: A Review Of Research Evidence**
Jessica Phillips*, Christy Hardy*, Byron Moore* and Chris Bishop*. *Physical Therapy*, College of Health Sciences.
Advisor(s): Ronald Barredo
-
- GR-P 56 **Incorporating Yoga In Physical Therapy To Reduce Fall Risk In Older Adults**
Caitlyn Rumsey*, Reed Carter*, Diana Conner* and Mia McCall*. *Physical Therapy*, College of Health Sciences.
Advisor(s): Deborah Edmondson
-
- GR-P 57 **Safety Of Year Round Athletic Specialization In Children Aged 12 And Under**
Caitlyn Galloway*, Alex Hutto*, Emily McCaig* and Megan Shade*. *Physical Therapy*, College of Health Sciences. Advisor(s): Edilberto Raynes
-
- GR-P 58 **Reaction Time Related To Fall Prevalence In The Elderly Population**
Gabrielle Capron*, Lauren Roy*, Kelly Tyler*, Haley Wallace* and Courtney Zahn*. *Occupational Therapy*, College of Health Sciences.
Advisor(s): Larry Snyder
-
- GR-P 59 **Influence Of Chronic Illnesses On Smoking Cessation: Data From The Nashville Racial And Ethnic Approaches To Community Health (Reach) 2010 Project**
Erika Stanley* and Melissa Diniz*. *Public Health, Healthcare Administration and Health Sciences*, College of Health Sciences.
Advisor(s): Kushal Patel
-
- GR-P 60 **Pairing Instructional Games With Traditional Lecture To Determine Associated Retention Of Content For Masters Of Occupational Therapy Students**
Jill Covington*, Quinn Beck*, Libby Skolnik*, Ruth Kurzrock* and Laura Clouse*. *Occupational Therapy*, College of Health Sciences.
Advisor(s): Larry Snyder
-
- GR-P 61 **Backpack Weight Influence On Body Functions In College Students**
Alison Kearns*, Brandi Malick*, Mary Kate Gillispie*, Elizabeth Carter* and Amy Burns*. *Occupational Therapy*, College of Health Sciences. Advisor(s): Christine Watt

- GR-P 62 **The Incidence Of Symptoms Of Cumulative Trauma Disorders In The Upper Extremities Of Cosmetology Professionals**
Okoye Cothrine*, Ashunte Heard*, Nicole Jones*, Ray Lora* and Linda Luinetti*. *Occupational Therapy*, College of Health Sciences. Advisor(s): Larry Snyder
-
- GR-P 63 **The Effect Of Educational Methods On Perceived Self-Efficacy Of Students In Occupational Therapy Graduate Programs**
Caitlin Staed*, Mallory Bushee*, Allison Day*, Emily Kadeq*, Lindsey Rose* and Emily Wallace*. *Occupational Therapy*, College of Health Sciences. Advisor(s): Christine Watt
-
- GR-P 64 **How Does Education On Individuals With Disabilities And Sexuality Impact Perception: Fact Based Vs. Personal Account**
Erica Ekvall*, Hanna Ames*, Nick Demetros*, Chelsea Feachen* and Dustin Wharton*. *Occupational Therapy*, College of Health Sciences. Advisor(s): Christine Watt
-
- GR-P 65 **A Comparison Of Fee-For-Service Reimbursement Versus A Cash-Based Payment Model On Physical Therapists' Clinical Decision Making And Patient Outcomes**
Sylvester Boyd*, Austin Lake*, Logan Heckert* and Kevin Petersen*. *Physical Therapy*, College of Health Sciences. Advisor(s): Derek Charles
-
- GR-P 66 **Surface Complexation Of Tungstate (VI) On Iron Oxide Mineral**
Bryan Sallman*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Sadipta Rakshit
-
- GR-P 67 **In Situ ATR-FTIR Spectroscopic Study Of Antibiotic Oxytetracycline Adsorption On Variable Charge Minerals**
Manisha Dolui*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Sadipta Rakshit
-
- GR-P 68 **Detection Of Parasporin Genes In Bacillus Thuringiensis Strains**
Mailene King*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Anthony Ejiofor and Terrance Johnson
-
- GR-P 69 **NAD-Dependent Epimerase/Dehydratase Affects Cell Surface Properties, Virulence And Extracellular Enzyme Production In The Soft Rot Phytopathogen, Pectobacterium Carotovorum**
Rabiul Islam* and Shyretha Brown. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): C. Korsi Dumenyo
-
- GR-P 70 **Anti-Inflammatory Effects Of Phytochemicals Combinations On Cardiovascular Disease**
Lijuan Zhang*. *Family and Consumer Sciences*, College of Agriculture. Advisor(s): Hongwei Si
-
- GR-P 71 **Assessing The Presence Of Bacteriophage In Bacillus Thuringiensis Strains**
Sarah Filfilan*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s) Terrance Johnson and Anthony Ejiofor

UNDERGRADUATE POSTERS

UNDERGRADUATE POSTER JUDGING – THURSDAY, APRIL 7, 2016

1:00 p.m. – 3:00 p.m. in Elliott Hall Auditorium

- UG-P 1 **Developing The Control Systems Of An Instrument For The Study Of Exo-Planets**
Aarin Whitehurst*. *Center of Excellence - Information Systems*, Research and Sponsored Programs. Advisor(s): James Maxwell, Matthew Muterspaugh and Michael Williamson
-
- UG-P 2 **Role Of ERK1/2 And P38 MAPKS In Tributyltin-Stimulated Interleukin 1 Beta Secretion And Production From Human Immune Cells**
Mariam Boules* and Shyretha Brown*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
-
- UG-P 3 **Real Time Detection Of Threats To Wireless Networks**
Blake Bowers*. *TIGER Institute*, College of Engineering. Advisor(s): Sachin Shetty
-
- UG-P 4 **Role Of Protease-Activated Receptor-4 In Vascular Smooth Muscle Cells**
Jackson Jamill*, Jordan Spencer* and Mariam Deryas*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Carla Gardner-Jones
-
- UG-P 5 **Yield Potential Of Traditional Grain Amaranth Varieties From Around The World**
Mawel Jok* and Ranjita Thapa*. *Agricultural Sciences and Environmental*, College of Agriculture. Advisor(s): Matthew Blair

- UG-P 6 **Implementation Of Cancer Cell Necrosis By Individualizing And Organizing Nanostructures For The Activation Of An Immunosuppressive Drug Called Mustargen**
Aaliyah Jetton* and Juanita Richmond*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Lois Harlston
-
- UG-P 7 **Effect Of Human Liver Microsomes On The Metabolism Of Pharmaceutical Compounds**
Aleczander Garcia*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): William Boadi and Koen Vercruyse
-
- UG-P 8 **A Web Based Data Center For The Distribution Of Automated Astronomical Data Products**
Daniel Fishler*. *Center of Excellence - Information Systems*, Research and Sponsored Programs. Advisor(s): Matthew Muterspaugh and Michael Williamson
-
- UG-P 9 **A Comparison Of Recommendations For Determining Doneness Found In Poultry Recipes To USDA Guidelines**
Jared Brodeur* and Hillary Cartmell*. *Family and Consumer Sciences*, College of Agriculture. Advisor(s): Sandria Godwin
-
- UG-P 10 **Racial And Ethnic Approaches To Community Health (REACH) Dietary Survey In North Nashville**
Kelsey Houston*. *Center for Prevention Research (CPR)*, College of Agriculture. Advisor(s): Rebecca Selove, Margaret Hargreaves and Cynthia Jackson
-
- UG-P 11 **Weed Management Potential Of Various Mulches In Organically Grown Japanese Purple And Centennial Sweet Potato Cultivars**
Taqiyyah Muhammad* and Sochinwechi Nwosisi*. *Agricultural Sciences and Environmental*, College of Agriculture. Advisor(s): Dilip Nandwani
-
- UG-P 12 **Factors That Influence How African American Men Cope With A Diagnosis Of Prostate Cancer Or Colorectal Cancer**
Kenay Horne*. *Center for Prevention Research (CPR)*, College of Agriculture. Advisor(s): Derek Griffith and Rebecca Selove
-
- UG-P 13 **Tributyltin Alters Secretion Of Interleukin 6 (IL-6) From Human Immune Cells**
Wendy Wilburn* and Shyretha Brown*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
-
- UG-P 14 **Growth Analysis Of Lung Cancer Cell Line A549 After Exposure To Phytochemicals Extracted From Fennel Plants**
Latriana Boone*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Elbert Myles
-
- UG-P 15 **Breast Cancer Survival In Tennessee: Disparities Amongst Races And Ethnicities**
Loni Parrish*. *Public Health, Healthcare Administration and Health Sciences*, College of Health Sciences. Advisor(s): Owen Johnson
-
- UG-P 16 **Data Analytics And Early Childhood Education**
Anthony Wadsworth* and Blake Bowers*. *TIGER Institute*, College of Engineering. Advisor(s): Sachin Shetty and Martene Stanberry
-
- UG-P 17 **LED Lighting And Effect On Wildtype Soybeans**
Angelina Bernardini*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Ali Taheri
-
- UG-P 18 **Cytotoxic Activity Of Enantia Chlorantha, Nauclea Latifolia, And Citrus Medica Extracts On Carcinoma Cells**
Chanel Alford*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Elbert Myles
-
- UG-P 19 **Identifying Students' Perceptions And Interest In STEM College Majors And Career Opportunities At An 1890 Land-Grant University**
Marwa Sharif*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): John Hall
-
- UG-P 20 **The Role Of Notch Signaling In T Lymphocytes**
Kalyann Parks*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Anil Shanker
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- UG-P 21 **Examining The Preferred Leadership Style Of Undergraduate Nursing Students At An 1890 Land-Grant University**
Meghan Lambert*. *Nursing*, College of Health Sciences. Advisor(s): John Hall
-
- UG-P 22 **Who Needs Local Food?**
J'Darvous Cross* and Harry Felder. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Mary Mafuyai, Enefiok Ekanem, and Arvazena Clardy
-
- UG-P 23 **Streamside Salamanders As Indicators Of Environmental Stress: Impacts Of Acid-Rock Drainage On Stream Integrity**
Brittaney Hogan* and Calandrea Williams. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): William Sutton, Tom Byl, and De'Ettra Young

The Impact of National Evidence-based Recommendations on Provider-Patient Communication and Associated Health Outcomes

Michelle C. Reece, Dr.P.H.
Assistant Professor
College of Health and Human Services
Department of Public Health
Western Kentucky University



Dr. Michelle Reece is an assistant professor at Western Kentucky University (WKU) in the College of Health and Human Services, Department of Public Health. Prior to joining WKU, Dr. Reece served as clinical instructor in the Department of Health Services Management and Policy and the interim coordinator of the Master of Public Health program at East Tennessee State University. She completed a Master of Psychology degree at Tennessee State University (TSU) and a Doctor of Public Health degree in Community and Behavioral Health at East Tennessee State University.

Dr. Reece has given numerous presentations at national scientific meetings and other research conferences, and some of her work has been published in peer-reviewed academic journals. Her professional experience also includes having served as research associate for the Center for Prevention Research at TSU and as a temporary research analyst at Vanderbilt University's Department of Epidemiology.

Dr. Reece is a member of various community and regional health equity councils including the National Partnership for Action to End Health Disparities, Southeastern Health Equity Council. She was a member of the 2014 Tennessee Men's Health Report Panel.

Dr. Reece is originally from the island Barbados but has also lived in Trinidad and Tobago and in St. Vincent and the Grenadines.

SCHEDULE OF EVENTS

MONDAY, APRIL 4, 2016 — James E. Farrell-Fred E. Westbrook Building, 118

7:30 A.M. – 8:15 A.M.	Continental Breakfast
9:00 A.M. – 9:30 A.M.	Poster Presentations
9:35 A.M. – 10:55 A.M.	Oral Presentations
11:00 A.M. – 12:00 P.M.	Luncheon
12:05 P.M. – 12:35 P.M.	The Address: Dr. Michelle C. Reece, Keynote Speaker
12:40 P.M. – 1:30 P.M.	Awards Ceremony Closing Remarks

38th
Research: Celebrating Excellence

NURSING DAY



Translational Research: Moving from the Classroom to the Clinic and Community

Consuelo H. Wilkins, M.D., M.SCI.
Associate Professor of Medicine
Executive Director, Meharry-Vanderbilt Alliance
Vanderbilt University and Meharry Medical College

Consuelo H. Wilkins, MD, MSCI, is the executive director of the Meharry-Vanderbilt Alliance – a strategic partnership between Meharry Medical College and Vanderbilt University Medical Center. Her primary responsibilities include developing and supporting collaborative initiatives in biomedical research, community engagement and interprofessional learning. Dr. Wilkins holds faculty appointments as associate professor of Medicine at Vanderbilt and Meharry. She is widely recognized for her work in stakeholder engagement, and is principal investigator of a Patient-Centered Outcomes Research Institute award, *Improving Patient Engagement and Understanding its Impact on Research through Community Review Boards*. As co-director of the Meharry-Vanderbilt Community Engaged Research Core in the Vanderbilt Institute for Clinical and Translational Science, she brings together academic researchers and community members to improve community health and healthcare through community-engaged research. She earned a Bachelor of Science in microbiology and a Doctor of Medicine from Howard University. She completed residency training in Internal Medicine at Duke University Medical Center and a Geriatric Medicine fellowship at Washington University School of Medicine/ Barnes-Jewish Hospital. Following medical training, Dr. Wilkins earned a Master of Science in Clinical Investigation from Washington University School of Medicine.

COLLEGE OF
HEALTH SCIENCES DAY

SCHEDULE OF EVENTS

WEDNESDAY, APRIL 6, 2016 — Poag Auditorium, Humanities Building

12:00 P.M. – 2:00 P.M.

Poster Presentations

2:00 P.M. – 3:00 P.M.

**Introduction of Speaker: Dr. Stephanie Bailey,
Dean, College of Health Sciences**

The Address: Dr. Consuelo H. Wilkins, Keynote Speaker

3:00 P.M. – 4:00 P.M.

Awards Ceremony

*38th
Research: Celebrating Excellence*

Integrating Sensors with Nanostructures for Environmental and Biomedical Applications

Frances Williams, Ph.D.
Associate Dean for Graduate Studies and Research
Professor of Electrical and Computer Engineering
College of Engineering
Tennessee State University



Dr. Frances Williams is the Associate Dean for Graduate Studies and Research in the College of Engineering and Professor of Electrical and Computer Engineering at Tennessee State University (TSU). In this capacity, Dr. Williams manages the graduate programs in the College of Engineering with the departments, provides oversight and coordination of research grants and contracts in the College, and identifies and initiates new research opportunities and collaborative partnerships.

Dr. Williams conducts research in the areas of advanced materials and devices, biosensors, and nano- and micro-electromechanical systems (NEMS/MEMS) processing and devices. She has been awarded grants totaling \$14M as a principal investigator (PI) or Co-PI. In 2010, she was awarded a patent (#7,784,346) for developing a micro-machined sensor for monitoring electrochemical deposition. For her contributions in teaching, scholarship, and service, she has received various awards including the 2013 State Council of Higher Education for Virginia (SCHEV) Outstanding Faculty Award, the State of Virginia's highest faculty award. In 2012, she was named an "Emerging Scholar" by the *Diverse Issues in Higher Education* magazine. Further, she was awarded Norfolk State University's top distinguished faculty award, the University Award of Excellence in 2010.

Dr. Williams received the B.S. and M.S. degrees in electrical engineering from North Carolina Agricultural & Technical (A&T) State University, Greensboro, NC and the Ph.D. degree in electrical and computer engineering from the Georgia Institute of Technology, Atlanta, GA.

SCHEDULE OF EVENTS

THURSDAY, APRIL 7, 2016 — Research and Sponsored Programs Building, 163

11:00 A.M. – 11:10 A.M.	Welcome and Occasion Introduction of Speaker: Dr. S. Keith Harrove Dean, College of Engineering
11:10 A.M. – 12:15 P.M.	The Address: Dr. Frances Williams, Keynote Speaker Dialogue Session
12:15 P.M. – 12:30 P.M.	Recognition Ceremony

38th
Research: Celebrating Excellence

ENGINEERING DAY



Lisa L. Barnes, Ph.D.
Professor, Department of
Neurological Sciences and Behavioral Sciences
Rush University Medical Center

Lisa L. Barnes, Ph.D. is a professor in the departments of neurological sciences and behavioral sciences at Rush University Medical Center, and a cognitive neuropsychologist in the Rush Alzheimer's Disease Center. She earned her Ph.D. in biopsychology from the University of Michigan in 1996 and completed post-doctoral training in cognitive neuroscience from the University of California, Davis, before joining the faculty at Rush in 1999.

Dr. Barnes' research focus is on social determinants of health and cognitive aging among minority populations. She is principal investigator of the Minority Aging Research Study (MARS; R01 AG22018), core leader of the Clinical Core of the Rush Alzheimer's Disease Core Center (CORE; P30 AG10161), and director of the Rush Center of Excellence on Disparities in HIV and Aging (CEDHA; P20 MD6886). Barnes has received numerous honors and awards, and has published extensively on risk factors for cognitive aging and dementia in older African Americans. She is nationally recognized for her contributions to the study of minority aging and health disparities and is an advocate for Alzheimer's disease awareness in the minority communities in which she serves.

PSYCHOLOGY DAY

SCHEDULE OF EVENTS

THURSDAY, APRIL 7, 2016 — James E. Farrell-Fred E. Westbrook Building, 118

3:30 P.M. – 4:45 P.M.	Poster Session
3:30 P.M. – 4:30 P.M.	Judging of Posters
4:45 P.M. – 4:50 P.A.M.	Welcome Address
4:50 P.M. – 5:30 P.M.	Faculty Research Slam
5:30 P.M. – 6:30 P.M.	The Address: Dr. Lisa L. Barnes, Keynote Speaker
6:30 P.M. – 7:30 P.M.	Student Awards

38th
Research: Celebrating Excellence

Rhonda Franklin, Ph.D.
Symposium Keynote Speaker III

Pathways to Research - Past, Present, and Future



Dr. Rhonda Franklin is an electrical engineer who received her B.S. degree in 1985 from Texas A&M University in College Station, TX and M.S. and Ph.D. degrees in 1990 and 1995, respectively, from The University of Michigan in Ann Arbor, MI.

She is a full Professor in the Department of Electrical and Computer Engineering at the University of Minnesota and ECE Director of the Undergraduate Studies program. Her research area is applied electromagnetics for RF/microwave and millimeter wave applications. Her research interest are passive circuit and antenna design, advanced interconnects/integration/packaging design techniques using MEMS, microfluidics applications to RF design, and novel materials (e.g. bacteria) and magnetic nano-material's characterization. She has co-authored over 85 refereed journal/conference publications and 4 book chapters as well as supervised 25 graduate students (MS and PhD) and 25 undergraduate students in research.

Dr. Franklin is a 1998 National Science Foundation (NSF) CAREER award recipient and 1998 Presidential Early Career Award for Scientists and Engineers recipient from President Clinton. She is an active member of the IEEE Microwave Theory and Techniques (MTT-S) society. She served as an Associate Editor for the IEEE Microwave Wireless Components Letters (2012-2015). She also supports the International Microwave Symposium (IMS) as member of the technical planning and steering committees.

On her campus, she is a 2012 CIC Academic Leadership Fellow and the 2014 Sara Evans Faculty Scholar/Leader Awardee. She is also a Morse Alumni Teaching Award finalist (2012 and 2013). *In her profession*, she advocates for microwave engineering education and has served as the MTT-S undergraduate student scholarship program chair from 2007-2012 and as a judge and chair for the IMS Best Student Paper Competition several times. She promotes microwave-engineering education to minority students and women through IMS Project Connect, a program co-organized with a group of colleagues in 2014. *In the academy*, she served and represented STEM women faculty in her college on the University of Minnesota's Provost Women Faculty Cabinet (2005-2010) and supported the formation the IEEE Women in Engineering (WIE) affinity group for undergraduate women in ECE, where she served as their advisor until 2015. She has given presentations to women faculty and women faculty of color in engineering at various NSF Advanced Program meetings on work-life balance. She also is an advocate for graduate education in engineering and presenter at the University of Michigan's NextProf future faculty program.

PROGRAM

FRIDAY - APRIL 8, 2016

James E. Farrell – Fred E. Westbrook Building, 118
12:00 P.M. – 2:00 P.M.

Mistress of Ceremonies, Ms. Valerie Williams

Prelude (Instrumental Music)

Welcome, Mrs. Nannette Carter Martin, Symposium Co-chair

Invocation, Ms. Felita Smith

The Luncheon

Presentation of Speaker, Lesia Crumpton-Young, Ph.D.
Chief Research Officer and Associate Vice President for Research and Sponsored Programs

The Keynote Address, Rhonda R. Franklin, Ph.D.
Professor, Department of Electrical and Computer Engineering, University of Minnesota
ECE Director, Undergraduate Studies program

Presentation of Awards – Symposium co-chairs, Lesia Crumpton-Young, Ph.D., and Mrs. Phyllis Danner, RSP Director
• Speaker Award • Student Awards • Research Mentor Award
• Million Dollar Club for Research Induction and Award(s) • Blue Jacket Society Awards

Acknowledgements and Closing Remarks, Dr. Tamara Rogers, Symposium Co-chair

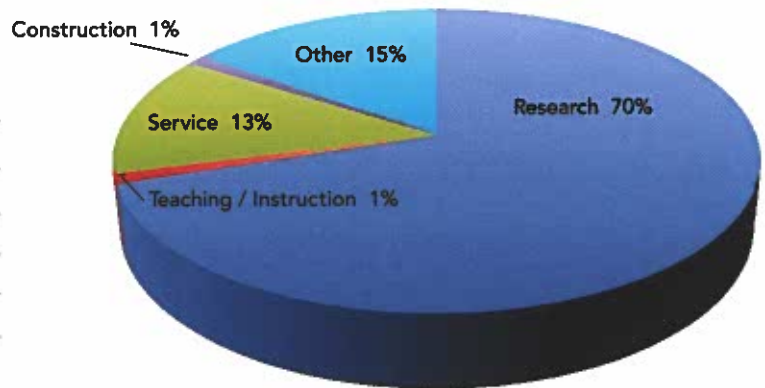
AWARDS LUNCHEON
AND CLOSING SESSION

AWARDS AND SUBMISSIONS

Fiscal Year 2015

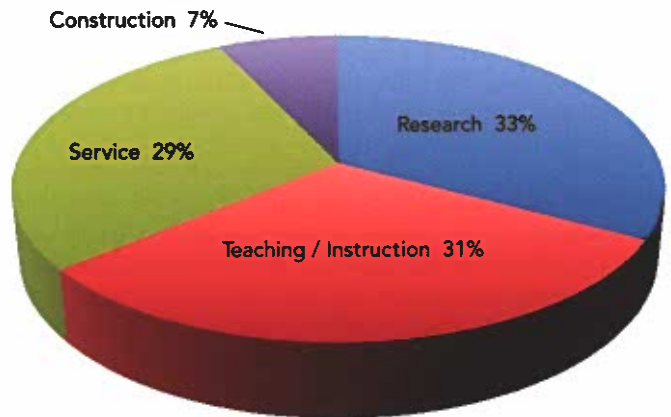
Submissions By Project Type

Research	\$72,234,610	(147)
Teaching / Instruction	891,800	(6)
Service	13,534,217	(12)
Construction	1,089,543	(1)
Other	15,739,915	(25)
Total	\$103,490,085	(191)



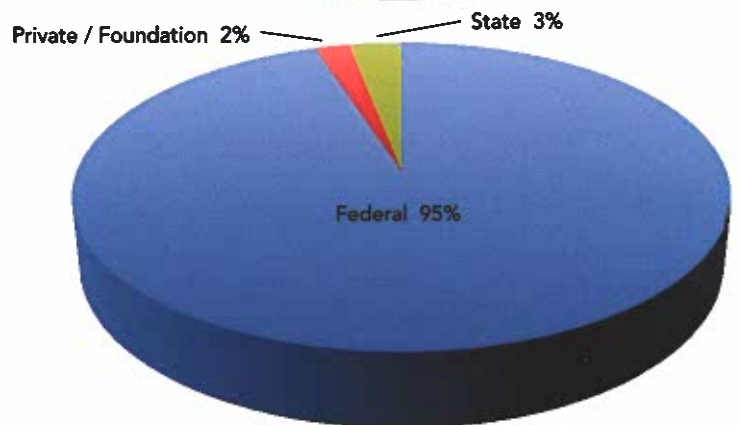
Awards By Project Type

Research	\$16,824,372	(81)
Teaching / Instruction	16,196,205	(49)
Service	14,823,018	(40)
Construction	3,685,200	(2)
Total	\$51,528,795	(172)



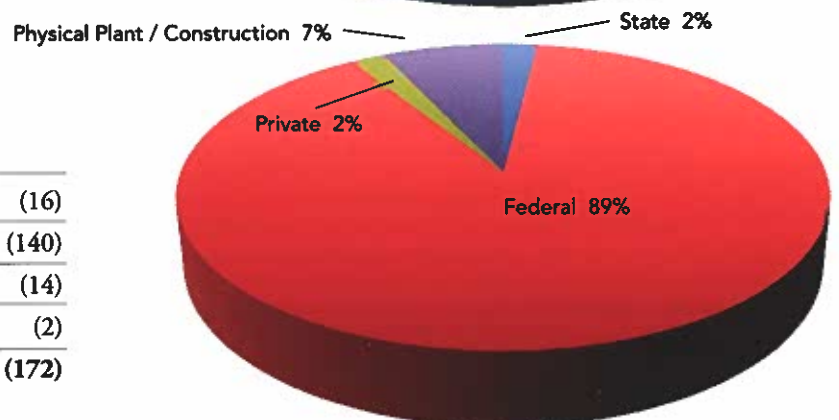
Submissions By Source

Federal	\$99,070,101	(161)
Private / Foundation	1,812,100	(14)
State	2,607,884	(16)
Total	\$103,490,085	(191)



Awards By Source

State	\$1,271,914	(16)
Federal	\$45,655,168	(140)
Private	\$916,513	(14)
Physical Plant / Construction	\$3,685,200	(2)
Total	\$51,528,795	(172)



MILLION DOLLAR CLUB

Congratulations to the Newest Members

Celebrating Researchers Awarded \$1,000,000 or More Per Grant



Arvazena E. Clardy, Ph.D.

Assistant Professor in Horticulture and Extension Specialist

**Department of Agricultural and Environmental Sciences, Cooperative Extension Program
College of Agriculture**

Dr. Clardy provides statewide education and training in Ornamental Horticultural for the Cooperative Extension Program at Tennessee State University and works with county agents and the Tennessee producers and consumers in areas of Horticulture. She is principal investigator for the federally funded Office of Advocacy and Outreach Program for the *Outreach and Assistance for Socially Disadvantaged and Veteran Farmers and Ranchers Program*, which provides education and training to Tennessee small and disadvantaged producers and veteran farmers statewide. Dr. Clardy teaches undergraduate plant science courses and advises undergraduate students and serves on the graduate admission committee for the College of Agriculture. She has a B.S. in Plant Science and M.S in Agriculture from Tennessee State University and Ph.D. in Plant and Soil Sciences-Plant Physiology from Alabama A. & M. University.



Sachin Shetty, Ph.D.

Associate Professor

**Electrical and Computer Engineering Department
College of Engineering**

Dr. Shetty directs the Cyber Security laboratory at Tennessee State University. His research interests lie at the intersection of computer networking, network security and machine learning. His laboratory conducts cloud and mobile security research. Since joining TSU in 2009, he has received over \$10 million in funding from the National Science Foundation, Air Office of Scientific Research, Air Force Research Lab, Office of Naval Research, Department of Homeland Security, Department of Energy, and Boeing. He has authored and co-authored over 80 research articles in journals and conference proceedings and books. He is the recipient of the DHS Scientific Leadership Award and TSU Research Mentorship Award. Two current projects with funding in excess of \$1,000,000 are *Blue-Shirt Program: Engineering Clinic-Based Curriculum* (NSF) and *Data Analytics for Securing Critical Infrastructure* (DHS).



Tina T. Smith, Ph.D.

Associate Professor

**Department of Speech Pathology and Audiology
College of Health Sciences**

Dr. Tina T. Smith has received a 2 million dollar grant award entitled, *Provision of Online and On Campus Coursework Leading to the Master's Degree in Speech-Language Pathology* which was funded by the Tennessee Department of Education. She is the Chair of the Department of Speech Pathology and Audiology and coordinates the distance education delivery of the Master of Science degree program in Speech and Hearing Science. Dr. Smith has presented over 100 papers at conferences in the areas of multicultural diversity, language/phonology, treatment efficacy, and distance education. She holds the distinction of having developed and implemented the first distance education master degree programs in speech-language pathology in the states of South Carolina and Tennessee and in the United States Virgin Islands.



Martene Stanberry, Ph. D.

**Assistant Professor, Department of Mathematical Sciences
College of Life and Physical Sciences**

Dr. Stanberry is the principal investigator on the award entitled, *Department of Homeland Security Scientific Leadership Award (DHS-SLA): An Integrated Undergraduate Research and Education Program in Data Analytics for Securing Critical Infrastructure at Tennessee State University*. She worked with an external group of faculty in developing course modules to equip students with skills and tools to enable them to analyze data, understand network relationships, and interpret their findings using graph theory. Dr. Stanberry also served as the Co-PI on two other grants: NSF HBCU-UP Targeted Infusion Project: New Curriculum and Undergraduate Research in Applied Mathematics at Tennessee State University and Tennessee State University Mathematics Academy for Teachers in partnership with Metropolitan Davidson County School System. Dr. Stanberry is also committed to mentoring and advising students.

MILLION DOLLAR CLUB MEMBERS

Mr. Ronnie G. Brooks, *Facilities Management*
 Dr. Michael Busby, *Center for Excellence in Information Systems and Engineering Management*
 Dr. Arvazena Clardy, *College of Agriculture*
 Dr. Katari Coleman, *Center of Excellence for Learning Sciences*
 Dr. Satinderpaul Devgan, *College of Engineering, Technology, and Computer Science*
 Dr. Soumen N. Ghosh, *Office of Business and Economic Research*
 Dr. Sandria Godwin, *College of Agriculture, Human, and Natural Sciences*
 Dr. Robert Hampton, *Academic Affairs*
 Dr. S. Keith Hargrove, *College of Engineering, Technology, and Computer Science*
 Dr. Pamela Hull, *Center for Health Research*
 Dr. Baqar A. Husaini, *Center for Health Research*
 Dr. Jeanetta W. Jackson, *College of Engineering (Mathematical Sciences)*
 Dr. Prem S. Kahlon, *Department of Biological Sciences*
 Dr. Lee-Hyun Keel, *Center for Excellence in Information Systems and Engineering 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. Elaine D. Martin, *College of Agriculture, Human, and Natural Sciences (Biological Sciences)*
 Dr. Peter E. Millet, *College of Education*
 Dr. E. Lewis Myles, *Department of Biological Sciences*
 Dr. Robert F. Newkirk, *Department of Biological Sciences*
 Dr. Barbara Nye, *Center of Excellence: Basic Skills*
 Dr. Chinyere Onwubiko, *College of Engineering, Technology, and Computer Science*
 Dr. Landon Onyebueke, *College of Engineering*
 Dr. Heraldo Richards, *College of Education (Teaching and Learning)*
 Dr. Edward L. Risby, *Graduate School and Office of Sponsored Research*
 Dr. Decatur B. Rogers, *College of Engineering, Technology, and Computer Science*

Dr. Lonnie Sharpe, *Massie Chair of Excellence in Environmental Engineering*
 Dr. Sachin Shetty, *College of Engineering*
 Dr. Amir Shirkhodaie, *College of Engineering, Technology, and Computer Science*
 Dr. Tina Smith, *College of Health Sciences*
 Dr. Marcus W. Shute, *Research and Sponsored Programs*
 Dr. Willard Smith, *Center for Excellence in Information Systems and Engineering Management*
 Mrs. Leslie Speller-Henderson, *College of Agriculture, Human, and Natural Sciences*
 Dr. Martene Stanberry, *College of Liberal Arts*
 Dr. Jennifer Stewart-Wright, *Center of Excellence for Learning Sciences*
 Dr. Maria Thompson, *Division of Research and Sponsored Programs*
 Ms. Valerie Williams, *Center of Excellence for Learning Sciences*
 Dr. Artenzia Young-Seigler, *College of Agriculture, Human, and Natural Sciences (Biological Sciences)*

Congratulations to the 40 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 40 distinguished scientists, engineers, and educators. Their efforts, although measurable in dollars, are immeasurable in terms of the positive impact their work has had on the University's ability to achieve its mission.

JUDGES

Dr. Leah Alexander, *Meharry Medical College*
 Dr. Carmen April, *The Foot & Ankle Healthcare CTR*
 Dr. Maria Teresa de Aquino, *Meharry Medical College*
 Dr. Mary Ann Asson-Batres, *Tennessee State University*
 Elder Alex Atkinson, *Tennessee State University*
 Dr. Vishwas N. Bedekar, *Middle Tennessee State University*
 Dr. Jewell Brazelton, *American Baptist College*
 Dr. Celeste Brown, *Tennessee State University*
 Dr. Carolyn Caudle, *Tennessee State University*
 Dr. Alphonse Carter, Jr., *Middle Tennessee State University*
 Dr. Katari Coleman, *State of TN, Dept. of Human Services*
 Dr. Conrad Douglas, *Capital City Dentistry*
 Dr. Christopher F. Cummings, *Sulfila Company*
 Dr. Jennifer Cunningham, *Meharry Medical College*
 Dr. Steven Damo, *Fisk University*
 Dr. David Danner, *Tennessee State University*
 Dr. Carl E. Darris, *Vanderbilt University*
 Dr. Chandravanu Dash, *Meharry Medical College*
 Dr. Edgar Diaz-Cruz, *Belmont University*
 Dr. Anthony Ejiofor, *Tennessee State University*
 Dr. Sakina Eltom, *Meharry Medical College*
 Dr. C. Scott English, *Vanderbilt University*
 Dr. Hugh Fentress, *Tennessee State University*
 Mr. Andre Fouche, *SSR-Incorporation*
 Dr. Pandu Gangula, *Meharry Medical College*
 Dr. Phil Ganter, *Tennessee State University*
 Dr. Carla Gardner-Jones, *Tennessee State University*
 Dr. Monique Gibbs, *Middle Tennessee State University*
 Dr. Lois Harlston, *Tennessee State University*
 Dr. David Hatfield, *Middle Tennessee State University*
 Dr. Greg Henry, *Tennessee State University*
 Dr. Robert Holt, *Meharry Medical College*
 Dr. Justus Ike, *Fisk University*
 Dr. Prem Kahlon, *Tennessee State University (emeritus)*
 Dr. Jeff Kent, *Volunteer State Community College*
 Dr. Ewa A. Kowal, *Vanderbilt University*

Dr. Harvey Latimer, *Associated Dental Group*
 Dr. Amanda R. Lowery, *Vanderbilt University*
 Dr. Eun-Sook Lee, *Meharry Medical College*
 Dr. Jiann-Shiun Lew, *Tennessee State University*
 Dr. Amanda Lowery, *Vanderbilt University*
 Dr. Dana Marshall, *Meharry Medical College*
 Dr. Cathy Martin, *Fisk University*
 Dr. Elaine Martin, *Tennessee State University*
 Dr. Glenroy Martin, *Fisk University*
 Dr. Kathy Mathis, *Middle Tennessee State University*
 Dr. Tilicia Mayo-Gamble, *Meharry Medical College*
 Dr. Monique McCallister, *Tennessee State University*
 Dr. Patricia McCarroll, *Fisk University*
 Dr. Natalie Michaels, *Belmont University*
 Dr. Stephania Miller-Hughes, *Meharry Medical College*
 Mr. Fletcher Moon, *Tennessee State University*
 Dr. Samantha Morgan-Curtis, *Tennessee State University*
 Dr. Steven Morgan, *Fisk University*
 Dr. Evangeline Motley-Johnson, *Meharry Medical College*
 Dr. Richard Mu, *Fisk University*
 Dr. Amosy M'Koma, *Meharry Medical College*
 Dr. Sekou Molette, *Top Flight Medical*
 Dr. Susan Morley, *Lipscomb University*
 Dr. Brittany Mortensen, *Vanderbilt University*
 Dr. Shyamali Mukherjee, *Meharry Medical College*
 Dr. Subhog Nag, *Meharry Medical College*
 Dr. Brian Nelms, *Fisk University*
 Dr. Robert F. Newkirk, *Tennessee State University (retired)*
 Dr. Josiah Ochieng, *Meharry Medical College*
 Dr. David Padgett, *Tennessee State University*
 Dr. Ranganathan Parthasarathy, *Tennessee State University*
 Dr. Cynthia Paschal, *Vanderbilt University*
 Mr. Marbin Pazos-Revilla, *Tennessee Technology University*

Dr. Shelia Peters, *Fisk University*
 Dr. Marion Pratt, *Vanderbilt University*
 Dr. Lei Qian, *Fisk University*
 Dr. Quincy Quick, *Tennessee State University*
 Dr. Girish Rachakonda, *Meharry Medical College*
 Dr. Periasamy Rajan, *Tennessee Technology University*
 Dr. Aramandla Ramesh, *Meharry Medical College*
 Dr. Tanu Rana, *Meharry Medical College*
 Dr. Douglas Robinson, *Meharry Medical College*
 Dr. John Robinson, *Tennessee State University*
 Dr. William Robinson, *Vanderbilt University*
 Dr. Maureen Sanderson, *Meharry Medical College*
 Dr. Rebecca Selove, *Tennessee State University*
 Dr. Anil Shanker, *Meharry Medical College*
 Dr. Akiko Shimamoto, *Meharry Medical College*
 Dr. Kshipra Singh, *Vanderbilt University*
 Dr. Tina Smith, *Tennessee State University*
 Dr. Angela Southwell, *Associated Children's Dentistry*
 Dr. DeWayne Stallworth, *American Baptist College*
 Dr. LaMonica Stewart, *Meharry Medical College*
 Dr. Thyneice Taylor-Bowden, *Tennessee State University*
 Dr. Marilyn Thompson-Odom, *Belmont University*
 Dr. Christine Trupin, *Meharry Medical College*
 Mrs. Barbara Vanhooser, *Tennessee State University*
 Dr. Andrew Van Schaack, *Vanderbilt University*
 Dr. Carlos Virgous, *Meharry Medical College*
 Dr. Bryan Kent Wallace, *Fisk University*
 Dr. Roslynn Webb, *State of TN, Dept. of Disability Services*
 Dr. Ebony Weems, *Meharry Medical College*
 Dr. Benny Washington, *Tennessee State University*
 Dr. Windia Wilbert, *Tennessee State University*
 Dr. Elizabeth Williams, *Tennessee State University*
 Dr. Valerie Williams, *Tennessee State University*
 Mr. Michael Williamson, *Tennessee State University*
 Dr. Robert Wingfield, *Fisk University*
 Dr. Letha Woods, *Meharry Medical College*

STUDENT AWARDS

from the
37th Annual University-Wide Research Symposium 2015

Congratulations to the Tennessee State University researchers and faculty advisors for their winning entries in the oral and poster presentation competitions during the Research Symposium for 2015. There were 141 student presentations (183 authors) and 20 faculty presentations (38 authors).

ORAL PRESENTATIONS: March 30 – April 1, 2015

Oral – Graduate Engineering I

3rd Place	GR ENGR 9	Emmanuel Kidando
2nd Place	GR ENGR 5	Hellen Maziku
1st Place	GR ENGR 6	Sirisha Kallakuri

Oral Presentation – Graduate Science I

3rd Place	GR SCI 7	Toral Mehta
2nd Place	GR SCI 8	Montwaun Young
1st Place	GR SCI 10	Hui Li

Oral Presentation – Graduate Engineering II

3rd Place	GR ENGR 21	Evarist Ruhazwe
2nd Place	GR ENGR 19	James Savage
1st Place	GR ENGR 12	Adrian Parker

Oral Presentation – Graduate Science II

3rd Place	GR SCI 16	Jacqueline Joshua
2nd Place	GR SCI 21	M. Niamul Kabir
1st Place	GR SCI 15	Joshua O'Hair

Oral Presentation – Graduate Science III

3rd Place	GR SCI 29	Lipi Parikh
2nd Place	GR SCI 27	Letimicia Fears
1st Place	GR SCI 28	Eric Nazareno

Oral Presentation – Graduate Science IV

3rd Place	GR SCI 43	Rachael Price, Melissa Bukovi, Rachel Loggins and Samantha Williams
2nd Place	GR SCI 40	Tamara Martin
1st Place	GR SCI 42	Zhujia Ye and Chihli Yu

Oral Presentation – Graduate Science V

3rd Place	GR SCI 48	Melissa Diniz and Erika Stanley
2nd Place	GR SCI 47	Marybeth Curtis
1st Place	GR SCI 45	Asha Maheshwari

Oral Presentation – Undergraduate Engineering

3rd Place	UG ENGR 5	Jared Wagnac
2nd Place	UG ENGR 8	Corey Zusin
1st Place	UG ENGR 6	Marc Primeau and Dan Fishler

Oral Presentation – Undergraduate Science

3rd Place	UG SCI 3	Marian Wakefield and Himabindu Gazula
2nd Place	UG SCI 4	Sterling Hubbard
1st Place	UG SCI 6	Rebecca Welch

POSTER PRESENTATIONS: Thursday, April 2, 2015

Graduate Poster – Science

3rd Place	GR-P 10	Kofi Baryeh and Samuel Gray
2nd Place	GR-P 7	Ranjita Thapa and Matthew Edwards
1st Place	GR-P 33	Lipi Parikh

Graduate Poster – Health Science and Social Science

2nd Place	GR-P 4	Jesse Davenport, Scott Dunham, Drew Kiel, and Lucas Wall
1st Place	GR-P 30	Timothy Walker

Undergraduate Poster – Science

3rd Place	UG-P 6	Chelsea Marlin
2nd Place	UG-P 2	Michael Alexander
1st Place	UG-P 3	Wendy Wilburn

AWARDS

Oral Presentation:

First place = \$250
Second place = \$100
Third place = \$50

Poster Presentation:

First place = \$150
Second place = \$75
Third place = \$25

2015 Research Mentorship Award Winner

Sachin Shetty, Ph.D.

Congratulations to Dr. Sachin Shetty, Assistant Professor, Department of Electrical and Computer Engineering in the College of Engineering. Dr. Sachin Shetty was awarded this honor for serving as mentor and/ or advisor to the greatest number of winning student research entries during the 37th Annual University-Wide Research Symposium, 2015. Five (5) of Dr. Shetty's thirteen student entries placed in the student research competitions. He received \$1,000 cash in recognition for his research mentorship.

List of Dr. Shetty's Winning Student Researchers

ORAL – GRADUATE ENGINEERING I
2nd Place, Hellen Maziku

ORAL – GRADUATE ENGINEERING II
2nd Place, James Savage

ORAL – UNDERGRADUATE ENGINEERING
3rd Place, Jared Wagnac
1st Place, Marc Primeau and Dan Fishler

POSTER – UNDERGRADUATE
2nd Place, Michael Alexander

