

Th ANNUAL
UNIVERSITY WIDE RESEARCH SYMPOSIUM
APRIL 3-6, 2006

#### INSTITUTE OF AGRICULTURAL AND ENVIRONMENTAL RESEARCH

TENNESSEE STATE UNIVERSITY



Building Partnerships To Pursue New Frontiers In Agricultural and Environmental Research

### SALUTES

the University-Wide Research Symposium on the 28th Anniversary

**Institute Information** 

Otis L. Floyd Nursery Research Center

**Events and News** 

**Employee Resources** 

Research Teams
Animal and Alternative Livestock
Economics and Policy
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Food Safety, Nutrition and Family Well-Being
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### Research Teams











#### 28TH ANNUAL UNIVERSITY-WIDE RESEARCH SYMPOSIUM APRIL 3-6, 2006

TENNESSEE STATE UNIVERSITY
OFFICIAL 2006 SYMPOSIUM PROGRAM





Office of the President Tennessee State University 3500 John A. Merritt Blvd. Nashville, TN 37209-1561

April 3, 2006

Dear Faculty, Staff and Students,

On behalf of the Tennessee State University administration, I welcome you to the 28th Annual Research Symposium. The symposium has been so vital to showcasing the work of our colleagues and their students, and the entire university community looks forward to it each spring. Indeed, I hope each of you will take in as many of the presentations and plenary sessions as possible.

Your theme for the 28th Annual Research Symposium, "Research: Celebrating Excellence," resonates with my goal and vision for Tennessee State University to become classified as a research intensive university, as noted by the Carnegie Foundation for the Advancement of Teaching. But, more important, I simply want to see research continue to thrive at the university, so that we need to expand the symposium to a week-long event to cover all the quality research, discoveries and knowledge our faculty and staff have uncovered.

Over the last decade or so, funding for sponsored research has grown tremendously, and Tennessee State University continues to be a leader among Tennessee Board of Regents institutions and all colleges and universities in the state in terms of funding for research. That funding translates into meaningful exploration for all faculty and students at the university. I encourage each of you to use the time you have at the symposium to reinvigorate and motivate yourselves to reach new heights for next year.

I welcome each of our distinguished speakers to campus and hope you enjoy your time with us. I congratulate each of our participants for their effort, creativity and ingenuity.

Sincerely,

Melvin N Johnson

President





Research and Sponsored Programs Tennessee State University 3500 John A. Merritt Blvd. Nashville, TN 37209-1561

Office of the Vice President

April 3, 2006

Dear Colleagues:

It is with great pleasure that I welcome you to the 28th Annual University-wide Research Symposium celebrating the accomplishments of our students, distinguished researchers, and faculty. Our theme for this year is "Research: Celebrating Excellence." The technical presentations and posters presented during the symposium this year demonstrate the success and contributions of the research enterprise at Tennessee State University.

Research at Tennessee State has received considerable attention over the past several years due to the success and accomplishments of our students, faculty, and researchers such as the recent discovery of a second extra-solar planet. We look forward to increased participation by all disciplines at the University in extramurally funded research and sponsored programs as well as celebrating additional accomplishments in the future. As we continue to align our research agenda with the needs of our external partners, we look forward to supporting interdisciplinary, collaborative efforts across high growth areas such as biotechnology, homeland security and intelligence studies, learning sciences, nanotechnology, and several others. By leveraging our expertise and past success, and focusing on the critical needs of our government and corporate partners, we hope to continue to fuel the growth of the research enterprise.

On behalf of the Division of Research and Sponsored Programs, I congratulate and celebrate the outstanding accomplishments of our students, researchers, and faculty. At Tennessee State, we believe research is essential to excellence in education as it informs the learning process and enhances the experience of our students by providing outstanding opportunities. We remain committed to excellence in research and are pleased to join you in celebrating our accomplishments!

As always, I remain

Sincerely,

Marcus W. Shute, P.E., Ph.D.

Marcus W. Shute

Vice President



#### **OVERVIEW OF EVENTS**

#### MONDAY, APRIL 3, 2006

12:00 pm – 4:30 pm	Registration	Farrell-Westbrook Bldg 118
12:30 pm – 4:30 pm	Graduate Student Presentations, Math, Engineering, Computer Science	Farrell-Westbrook Bldg 11
	TUESDAY, APRIL 4, 2006	
8:00 am – 4:30 pm	Registration	Farrell-Westbrook Bldg 118
8:00 am – 10:30 am	Graduate Student Presentations, Math, Engineering, Computer Science	Farrell-Westbrook Bldg 118
10:45 am – 10:45 am	Undergraduate Student Presentations, Math, Engineering, Computer Science	Farrell-Westbrook Bldg 118
2:00 pm – 2:00 pm	<b>Keynote Speaker, Mr. John Miller,</b> Director, U.S. Army Research Laboratory (by invitation only)	Farrell-Westbrook Bldg 118
2:30 pm - 3:45 pm	Undergraduate Student Presentations, Life Sciences	Farrell-Westbrook Bldg 118
4:30 pm	Dr. Larry Valero, Sponsored by Pilot Center for Academic Excellence in Intelligence Studi	es Student Center Forum
	WEDNESDAY, APRIL 5, 2006	
8:00 am –   4:30 pm	Registration	Farrell-Westbrook Bldg 118
8:00 am – 4:30 pm 8:00 am – 11:15 am	Registration  Graduate Student Presentations, Life Sciences	
		Farrell-Westbrook Bldg 118
8:00 am – 11:15 am	Graduate Student Presentations, Life Sciences	Farrell-Westbrook Bldg 118
8:00 am – 11:15 am 11:30 am – 12:00 pm	Graduate Student Presentations, Life Sciences  Graduate Student Presentations, Education, Social Sciences, Humanities	Farrell-Westbrook Bldg 118 Farrell-Westbrook Bldg 118
8:00 am – 11:15 am   1:30 am – 12:00 pm   2:00 pm – 2:00 pm	Graduate Student Presentations, Life Sciences  Graduate Student Presentations, Education, Social Sciences, Humanities  Lunch On Your Own	Farrell-Westbrook Bldg 118 Farrell-Westbrook Bldg 118 Farrell-Westbrook Bldg 118
8:00 am - 11:15 am 1:30 am - 12:00 pm 2:00 pm - 2:00 pm 2:30 pm - 3:00 pm	Graduate Student Presentations, Life Sciences  Graduate Student Presentations, Education, Social Sciences, Humanities  Lunch On Your Own  Graduate Student Presentations, Education, Social Sciences, Humanities	Farrell-Westbrook Bldg 118 Farrell-Westbrook Bldg 118 Farrell-Westbrook Bldg 118
8:00 am - 11:15 am 1:30 am - 12:00 pm 2:00 pm - 2:00 pm 2:30 pm - 3:00 pm	Graduate Student Presentations, Life Sciences  Graduate Student Presentations, Education, Social Sciences, Humanities  Lunch On Your Own  Graduate Student Presentations, Education, Social Sciences, Humanities  Undergraduate Students Presentations, Education, Humanities, Social Sciences  THURSDAY, APRIL 6, 2006	Farrell-Westbrook Bldg 118



#### Opening Session Keynote Speaker

#### MR. JOHN M. MILLER

Director, U.S. Army Research Laboratory

Mr. John Miller is the Director of the U.S. Army Research Laboratory, the Army's premier laboratory for basic and applied research and analysis. ARL conducts research and analysis in weapons and materials, sensors and electron devices, computational and information sciences, human research and engineering, vehicle technology, and survivability and lethality analysis. ARL's Army Research Office executes the extramural basic research program in scientific and engineering disciplines. The Laboratory consists of approximately 2,000 military and civilian employees with an annual revenue of over \$1,000,000,000. Prior to his assignment as ARL Director in March 2003, Mr. Miller was the ARL Associate Director for Plans, Programs and Budget, with responsibility for strategic and operational planning, revenue allocations, and program formulation and direction.



Mr. Miller entered federal civil service in 1971. He was appointed to the Senior Executive Service (SES) in 1998. During his civil service career, he has served in a number of positions in the U.S. Army Research Laboratory and prior to that in the U.S. Army Harry Diamond Laboratories. From 1992 through 1998, Mr. Miller held positions as Division Chief, Acting Director of the ARL Sensors Directorate, and Deputy Director of the ARL Sensors and Electron Devices Directorate. During this time he was responsible for directing basic and applied research in RF, EO, acoustic sensor technologies, and signal and image processing.

From 1971 through 1992, Mr. Miller held positions as Project Engineer, Branch Chief, and Deputy Laboratory Director of the U.S. Army Harry Diamond Laboratories. During this time he was responsible for research and development in radar fuzing, telemetry, battlefield radars, and automatic target recognition.

From 1969 through 1971, Mr. Miller was a Project Engineer at the Pratt and Whitney Aircraft Company where he was responsible for design of components for advanced turbofan engines for the F14 and F15 aircraft.

Mr. Miller holds a bachelors degree in Aerospace Engineering and a masters degree in Mechanical Engineering, both from the University of Maryland. He is a past recipient of the U.S. Army Research and Development Award (1980), and the Army Superior Civilian Service Award (2003).

#### **Keynote Address**

Tuesday, April 4, 2006, 12:	00pm Farrell-Westbrook Bldg., Agricultural Research and Extension Complex Auditorium
Mistress of Ceremonies	Dr. Elaine Martin, Symposium Chair
Welcome	Dr. Melvin N. Johnson, President, Tennessee State University
Introduction of Speaker	Dr. Decatur Rogers, Dean, College of Engineering, Technology and Computer Science
Keynote Speaker	Mr. John Miller, Director, U.S. Army Research Laboratory





Pilot Center for Academic Excellence in Intelligence Studies

#### LARRY VALERO

Larry Valero is a Lecturer in Intelligence and International History and the Programme Tutor for the M.A./Postgraduate Diploma in Intelligence and Security Studies (MAISS) at the University of Salford, Manchester, U.K. His research and teaching interests focus upon U.S intelligence and national security, contemporary American foreign policy, strategy, and modern warfare. He received his Ph.D. in the History of International Relations from St. Catharine's College, University of Cambridge and earned his M.A. in War Studies from King's College, University of London and his B.A. in Political Science from the University of California, Los Angeles. Prior to his current academic post he was a teaching fellow at Indiana University, Bloomington and a graduate student summer associate at the RAND

Corporation in Santa Monica, California. He has published articles in Intelligence and National Security, the International Journal of Intelligence and CounterIntelligence, and Studies in Intelligence. Dr. Valero is the Scholar-in-Residence at the National Security Agency for 2005-2006.

#### Tuesday, April 4, 2006, 4:30 PM

Floyd-Payne Student Campus Center, Forum

**Welcome and Presentation of Speaker** 

**Dr. William Lawson**, Dean, Arts and Sciences

**Speaker** 

**Dr. Larry Valero,** Director, Pilot Center for Academic Excellence in Intelligence Studies

Reception to follow

Congratulations to the 2005 Distinguished Researchers

#### DR. SANDRIA GODWIN, IAGER AND DR. GREG HENRY, COE-ISEM









## Awards Luncheon Speaker BRIAN EGESTON

When asked to identify who he is, Brian has been known to bellow out, "I'm John & Delores' eldest boy." His jovial demeanor is but a mere facade for this rising writer.

"I make people smile and feel comfortable because this thing that I do is not about me. Not about the accolades I can collect nor the notoriety I can attain. It's about the transferal of emotion through words."

Often times, if I interact with people, it's a lighthearted or humorous environment. Then, when we're alone, just you and me, represented by my words in a book, I'm trying to touch your life in a matter of moments."

Perhaps it was in his formal education where Brian grasped the easy free-flowing spirit. While attending Tennessee State University, he earned a degree

in Mechanical Engineering. Post college, he began work as an engineer for Thomson Consumer Electronics and then for Motorola, Inc.

Writing became a solution to boredom for Brian. During the summer months in Nashville, Brian worked at Kinko's and during his off days he would come in and use the store's computers to compose literature. His first creation was an essay entitled, A Black Eye: Views of the Black College Experience which received rave reviews from students on campus. After using his employee discount to mass-produce the essay, he decided to write a short story. The short story became a long story and the long story ultimately transpired into his first novel, *Crossing Bridges: A Testimony Of Brotherhood.* 

When asked about his long-term goals as a writer, Brian will tell you, he simply wants to leave a legacy. "I look forward to being read by your grandchildren and your grandchildren's children."

He and his lovely wife, Latise, reside in Stone Mountain, Georgia.

#### **Awards Presentation Luncheon**

. Farrell-Westbrook Bldg., Agricultural Research and Extension Complex Auditorium		
Dr. Elaine Martin, Symposium Chair		
Dr. Marcus W. Shute, P.E., Vice President, Research and Sponsored Programs		
Brian Egeston		
Dr. Maria Thompson, Director, Research and Sponsored Programs		
Dr. Marcus W. Shute, P.E., Vice President, Research and Sponsored Programs		
Dr. Elaine Martin, Symposium Chair		

### ORAL PRESENTATIONS Monday, April 3, 2006

All Students Will Present in Room 118, Farrell-Westbrook Building

#### MATH, ENGINEERING and COMPUTER SCIENCE Graduate Students

Presiding: April Peterson, Lynette	Tallv. Kori	Shaw.	Honapina Yu	ıan
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12:30 PM	A 1	AMMONIA OXIDATION BY BACTERIA COLLECTED FROM A KARST-BEDROCK WELL Kelly Ray*, and Tom Byl, Advisor: Tom Byl, Ph. D., Department of Civil and Environmental Engineering
12:45 PM	A 2	<b>LACTATE INDUCTION OF AMMONIA-OXIDIZING BACTERIA AND TCE COMETABOLISM</b> Charner Rodgers*1, Johnniece Williams1, Kendra Head1, Tarra Beach1, Roger Painter1 and Tom Byl12., Advisor: Tom Byl, Ph. D. Department of Civil and Environmental. United States Geological Survey2
1:00 PM	A 3	<b>DESIGN OF A SOCIALLY INTELLIGENT HUMAN-ROBOT INTERACTION SYSTEM</b> Alice C. Diggs* Advisor: Tamara Rogers, Ph. D., Department of Electrical and Computer Engineering
1:15 PM	A 4	<b>DESIGNING ADAPTIVE ARCHITECTURES FOR TRANSOCEANIC IN-FLIGHT COMMUNICATIONS</b> Bryan Green*, R. Slywczak, O. Mezu, Advisor: Didar Sohi, Ph. D., Department of Electrical and Computer Engineering
1:30 PM	A 5	<b>DESIGN OF AN ARTIFICIALLY INTELLIGENT FIREWALL</b> Kimberly Gold* Advisor: Didar Sohi, Ph. D., Department of Electrical and Computer Engineering
1:45 PM	A 6	ABSTRACT DATA PROTECTION SYSTEM FOR A WIRELESS INTRAVENOUS PUMP April Bush*, Advisor: Satinderpaul Devgan, Ph. D., Department of Electrical and Computer Engineering
2:00 PM	A 7	<b>DEVELOPMENT OF A MULTIMODAL HUMAN ROBOT INTERFACE</b> Martinez Chatman*. Advisor: Carlotta A. Berry, Ph. D.; Department of Electrical and Computer Engineering
2:15 PM	A 8	<b>CALCULATING DILUTION OF CONTAMINANTS IN GROUNDWATER</b> William Spitzenberg*, Advisor: Tom Byl, Ph. D., Department of Civil and Environmental Engineering
2:30 PM	A 9	<b>DEVELOPMENT OF A LINUX BASED MULTIMEDIA SYSTEM USING OPEN SOURCE SOFTWARE</b> Christopher D.Coneway* Adivsor: Fenghui Yao Ph. D., Department of Electrical and Computer Engineering
3:00 PM	A 11	<b>REAL TIME LOCALIZATION AND TRACKING OF MALICIOUS MOBILE NODES IN ANY GIVEN WIRELESS ENVIRONMENT WITHOUT GPS</b> Didar Sohi*, Advisor: Satinderpaul Devgan, Ph. D., Department of Electrical and Computer Engineering
3:15 PM	A 12	WIRELESS SECURITY AUTHENTICATION METHODS  Murray Murray* Advisor: Didar Sohi, Ph. D., Department of Electrical and Computer Engineering
3:30 PM	A 13	<b>DESIGN OF VOICE LOCALIZATION SYSTEM FOR ROBOT HEAD CONTROL</b> Younes Benjelloun*, Advisor: Saleh Zein-Sabatto, Ph. D., Department of Electrical and Computer Engineering
3:45 PM	A 14	DESIGN OF A MOTION ANALYSIS SYSTEM TO MONITOR THE EFFECTS OF VISUAL COLOR STIMULATION ON THE COUPLING OF VISION AND POSTURAL SWAY
		Ogechi Anyatonwu* Advisor: Mohammad Bodruzzaman, Ph. D., Department of Electrical and Computer Engineering and Hamid Bateni, Ph. D.; Department of Physical Therapy
4:00 PM	A 15	<b>DEVELOPMENT OF A NUMERICAL MODEL FOR OXYGEN-ENHANCED FUEL BIODEGRADATION IN KARST AQUIFERS</b> Lashun King*, Tom Byl, and Roger Painter. Advisors: Tom Byl; Ph. D., Roger Painter, Ph. D., Department of Civil and Environmental Engineering
4:15 PM	A 16	DEVELOPMENT OF MESH NETWORK FOR UBIQUITOUS MOBILE ROBOT COMMUNICATION

#### ORAL PRESENTATIONS Tuesday, April 4, 2006

Presiding: Karen Burke

8:00 AM A 17 REFORM - PAPERLESS PROCESSING SYSTEM

Daniel Holt\* and Jonathan Obinna Obele Advisor: Ali Sekmen, Ph. D., Department of Engineering and Computer Science

Ayad Abdul-Malek\*, Advisor: Ali Sekmen, Ph. D., Department of Electrical and Computer Engineering

8:15 AM	A 18	SOCIAL HUMAN-ROBOT INTERACTIONS Swapna Palle* Advisor: Ali Sekmen, Ph. D., Department of Electrical and Computer Engineering
8:30 AM	A 19	MOBILE ROBOT LEARNING AND NAVIGATION WITH HUMAN-ROBOT INTERACTION Sheldon Greene* Advisor: Dr. Ali Sekmen, Ph. D. Department of Electrical and Computer Engineering
8:45 AM	A 20	SIMULTANEOUS LOCALIZATION AND MAPPING USING PARTIAL KNOWLEDGE Isaac Addae* Advisor: Ali Sekmen,Ph. D. Department of Electrical and Computer Engineering
9:00 AM	A 21	COOPERATIVE PATH AND TASK PLANNING FOR MULTIPLE UNMANNED AERIAL VEHICLES (UAVS) IN DYNAMIC ENVIRONMENT Charles D. McCurry*, Advisor Mohamed S. Zein-Sabatto, Ph. D., Department of Electrical and Computer Engineering
9:15 AM	A 22	A FLUX TERM TO DESCRIBE THE MOVEMENT OF FECAL BACTERIA BETWEEN THE SEDIMENT AND WATER COLUMN IN A RIVERINE SYSTEM  Tiffany Hines*, James Davis, Lonnie Sharpe and Tom Byl. Advisor: Thomas D. Byl, Ph. D., Civil and Environmental Engineering
9:30 AM	A 23	LABVIEW BASED DESIGN OF A HUMAN GAIT ANALYSIS SYSTEM THAT STUDIES THE EFFECT OF VISUAL STIMULUS ON THE COUPLING OF VISION AND POSTURAL SWAY Geminia Carey* Advisors: M. Bodruzzaman, Ph. D., Dept of Electrical and Computer Engineering, H. Bateni, Ph. D., Department of Physical Therapy
9:45 AM	A 24	<b>DEVELOPMENT OF SURVEILLANCE SOFTWARE FOR VEHICLE IDENTIFICATION AND TRACKING</b> *Richard Mgaya, Advisor: Mohamed Zein-Sabatto, Ph. D. Department of Electrical and Computer Engineering
10:00 AM	A 25	PATH MODELING AND DETECTION OF CAENORHABDITIS ELEGANS  *Yvette Rankin, Department of Engineering and Computer Sciences. Advisors: M. Boduzzamon, Ph. D., S. Devgan, Ph. D., E. L. Myles, Ph. D.; Department of Engineering and Computer Sciences; Department of Biological Sciences
10:15 AM	A 26	UNCERTAINTY MEASUREMENT AND ANALYSIS OF COORDINATE MEASURING MACHINES *Thomas Kpabar, Jr. Advisor: Amir Shirkhodaie, Ph. D., Department of Mechanical Engineering
MATH	, EN	IGINEERING and COMPUTER SCIENCE Undergraduates
Presidin	g: Erik	a Taylor, Rachel Person
11:00 AM	B 2	RESPONSE SURFACE MODELING OF AN INFLATABLE TORUS  Daniel Hibbert*, Advisor: Jiann-Shiun Lew, Center of Excellence in Information Systems and Engineering Management
11:15 AM	В 3	USING LEARNING TECHNOLOGIES TO DEVELOP EARTH SCIENCES CASES FOR EDUCATORS OF GRADES 7-12 Marshall A. Latimore*, Advisor: Montanez Wade, Center of Excellence for Information Systems and Engineering Management
11:30 AM	B 4	GEOGRAPHIC INFORMATION SYSTEMS AND GLOBAL POSITIONING SYSTEMS APPLICATIONS IN THE DEVELOPMENT OF A SUSTAINABLE CAMPUS-COMMUNITY RECYCLING PROGRAM Briana Davis*, Advisor: David A. Padgett, Ph. D., Department of History, Geography and Political Science
LIFE S	SCIE	NCES <b>Undergraduates</b>
Presidin	g: Dar	niel French, Joe Norman
2:30 PM	C 1	ETHANOL-INDUCED APOPTOSIS IN SPONTANEOUSLY HYPERTENSIVE VASCULAR SMOOTH MUSCLE CELLS *Gennifer Goode, Benny Washington, Advisor: Benny Washington, Ph. D., Department of Biological Sciences
2:45 PM	C 2	INVESTIGATION OF MUSCULAR PROTEINS IN CAENORHABDITIS ELEGAN Natoya Hopkins, Chasity Ducksworth, Yvonne Myles, Todd Gary and E. Lewis Myles, Department of Biological Sciences
	P 42	EXPRESSION OF FATTY ACID BINDING PROTEIN Amber Hampton*, John Robinson, Xiaofei Wang, Department of Biological Sciences
3:15 PM	C 4	ISOLATION AND CHARACTERIZATION OF THE ACTIVE COMPONENTS OF SETARIA MEGAPHYLLA *Carolyn Cummings, Olugbeminiyi Fadeyi, and Cosmas Okoro, Ph.D.Advisor: Cosmas Okoro, Ph.D Department of Chemistry
3:30 PM	C 5	PROSPECTING FOR NOVEL ANTI-CANCER AGENTS FROM SOIL METAGENOME Paula Jemes*, William Y. Boadi Ph. D., and John K. Mensah, Ph. D., Advisors William Y. Boadi Ph. D., and John K. Mensah, Ph. D., Department of Chemistry

### ORAL PRESENTATIONS Wednesday, April 5, 2006

LIFE SCIENCES

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Presidin	g: Clif	ton Randell
8:00 AM	D 1	IDENTIFICATION OF GENES IN TOMATO ROOTS INDUCED BY ALUMINUM STRESS  Tingting Chen *, S. Zhou, R. Sauvé and S. Smith, Advisor: Roger Sauve, Ph. D. and Suping Zhou, Ph. D., Institute of Agricultural Sciences and Environmental Research
8:15 AM	D 2	COMPARATIVE DNA FINGERPRINTING OF SELECT SOURCE-VEGETABLES FOR VITAMIN A AND E Kori Shaw*, A. Aziz, R. Sauve, C. Catanzaro, D. Long and M. Stevens. Advisor: Ahmad Naseer Aziz, Ph. D. Institute of Agricultural and Environmental Research
8:30 AM	D 3	MICROWAVE ENHANCED COUPLING REACTIONS INVOLVING POTASSIUM ORGANOTRIFLUOROBORATES AND VARIOUS AMINES IN THE PRESENCE OF t *Jesmin Akther, Advisor: Mohammad Al-Masum, Department of Chemistry
8:45 AM	D 4	pH-DEPENDENT METAL ION BINDING STUDIES ON 2-MERCAPTOPYRIMIDINE *Kamara, BaiBai, Advisor: Nsoki Phambu, Department of Chemistry
9:00 AM	D 5	BACILLUS THURINGIENSIS CRYSTAL ENDOTOXINS DISPLAY IN VIVO ENTOMOCIDAL EFFECTS ON A SPECIES OF THE AEDES MOSQUITO  Karen Burke*, Advisor, Ejiofor Ph.D., Anthony, Department of Biological Sciences
9:15 AM	D 6	ALTERATION OF AN ESSENTIAL NK SIGNALING PATHWAY BY LOW DOSES OF TRIBUTYLTIN IN HUMAN NATURAL KILLER CELLS Aloice Aluoch, Advisor: Margaret M Whalen, Ph. D. Department of Chemistry
9:30 AM	D 7	SYNTHESIS OF FLUORINATED CYCLIC S-TRANS VINYLOGOUS ACID: A ONE POT PROCEDURE VIA DBU Olugbeminiyi O. Fadeyi and Cosmas O. Okoro, Advisor: Cosmas Okoro, Department of Chemistry
9:45 AM	D 8	EFFECTS OF TRIBUTYLTIN ON ACTIN IN NATURAL KILLER CELLS R. Lane* and M. Whalen. Advisor: Margaret Whalen, Ph. D., Department of Chemistry
10:00 AM	D 9	ANTICARCINOGENIC EFFECT OF MILK THISTLE ON BREAST CANCER CELLS  LaKeisha Woods*, Deonna Bohannan, Advisors: E. Lewis Myles, Ph. D. and Todd Gary, Ph. D., Department of Biological Sciences and Center of Excellence for Information Systems and Engineering Management
10:15 AM	D 10	<b>EFFECTS OF MEDICINAL EXTRACTS WITH ANTICARCINOGENIC POTENTIAL ON BREAST CANCER</b> Saudat Adamson*, Todd Gary and E. Lewis Myles, Advisor. Todd Gary and E. Lewis Myles, Center of Excellence in Information Systems and Engineering Management, Department of Biological Sciences
10:30 AM	D 11	EFFECTS OF TRIBUTYLTIN EXPOSURES ON THE TRANSCRIPTION REGULATOR AP-1 Rachel J. Person * Advisor: M. Whalen, Ph. D., Department of Chemistry
10:45 AM	D 12	EFFECTS OF ZIRAM EXPOSURES ON THE TARGET-BINDING CAPACITY OF HUMAN NATURAL KILLER CELLS Thyneice Taylor* . Advisor: M. Whalen, Ph. D., Department of Chemistry
11:00 AM	D 13	THE EFFECT OF HYPERGRAVITY ON CAENORHABDITIS ELEGANS *Chasity R. Ducksworth, Yvette Rankin, Natoya Hopkins . Advisors: E. Lewis Myles, Ph. D. and Todd Gary, Ph. D., Department of Biological Sciences

**Graduate Students** 

#### EDUCATION, SOCIAL SCIENCES and HUMANITIES Graduate Students

Presiding: Danielle Martin, Aloice Orodo

11:30 AM	E 1	HISPANIC HIGH SCHOOL STUDENTS: ACCULTURATION, FAMILY DYNAMICS, AND VARIABLES IMPORTANT FOR SUCCESS Jim Rubin* Advisor: Carol Stice, Ph. D. Department of Teaching and Learning
11:45 AM	E 2	EFFECTS OF HIV/AIDS KNOWLEDGE AND STIGMA ON SEXUAL BEHAVIOR AMONG COLLEGE STUDENTS Africia Singleton*, R. Perine. Advisor: Michelle Reece, Ph. D., Tennessee State University Center for Health Research
2:30 PM	E 3	PERCEPTIONS OF AFRICAN AMERICAN DOCTORAL STUDENTS TOWARDS THE MENTORING AND COLLEGIAL SUPPORT OF THEIR UNIVERSITY Rubin Cockrell Advisor: Christon Arthur, Ph. D., Department of Educational Administration

#### 2:45 PM GENDER ROLE CONFLICT AND SELF-EFFICACY IN RELATIONSHIP TO AFRICAN AMERICAN MEN'S PROSTATE CANCER E 4 **SCREENING BEHAVIOR**

Samuel Scales\* Advisors: Christopher Blazina, Ph. D., Department of Psychology and Bagar Husaini, Ph. D., Center for Health Research

#### EDUCATION, SOCIAL SCIENCES and HUMANITIES Undergraduates

Presidir	Presiding: Dr. Lewis Myles		
3:15 PM	F 1	"TO BEGINNING OF WHITENESS": A CONTENT ANALYSIS OF THE EMERGENCE OF PREJUDICED BELIEFS AND STEROTYPES IN AMERICA R. Rothschild*, L. Freeman*, M. McClure, L. Wilmoth* Advisor: E. Kelly Sanford,Ph. D., Department of Sociology	
3:30 PM	F 2	GEOGRAPHIC INFORMATION SYSTEMS AND REMOTE SENSING IN SUPPORT OF URBAN FOREST PRESERVATION AND ENVIRONMENTAL EDUCATION Christopher Norwood*, J. Burgess, C. Creamer, S. Tassel, C. Wilmsen. Advisor: David A. Padgett Ph. D., Department of History, Geography, and Political Science	
3:45 PM	F 3	FROM SLAVERY TO FREEDOM: INTERGENERATIONAL DIETARY HABITS AMONG AFRICAN AMERICANS AS CAUSAL FACTORS RELATED TO HEALTH DESPARITIES  Derek Burnett*, J. Williams*, N. Brandon*, O. Atanda*, Advisor: E. Kelly Sanford, Department of Sociology	
4:00 PM	F 4	INSPIRING ENGINEERS OF TOMORROW THROUGH EXCITING COLLABORATION IN SOLVING ENGINEERING CHALLENGES Tracy Cummings* Advisor: Todd Gary, Ph. D. and Judy Butler, Director of Outreach, Center of Excellence for Information Systems and Engineering Management	
4:15 PM	F 5	CREATING THE NEXT GENERATION OF EXPLORERS AS ONLY NASA CAN!	

William Colbert\*, Advisor: Todd Gary, Center of Excellence for Information Systems and Engineering Management

#### **ORAL PRESENTATIONS**

#### Thursday, April 6, 2006

All Faculty Presentations are in the Agricultural Information Center

#### **Faculty Presentations**

Presiding: Dr. Jennifer Stewart-Wr.	rıar	П
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Presidin	g: Dr.	Jennifer Stewart-Wright
8:00 AM	G1	AUTOMATED EXTERNAL DEFIBRILLATOR PROGRAMS AT TENNESSEE BOARD OF REGENTS HIGHER EDUCATION INSTITUTIONS  Timothy P. Jones*, Ed. D., Department of Human Performance & Sports Science. Advisor: Roger W. Wiemers Ed. D, Department of Education Administration
8:15 AM	G2	CHARACTERISTICS OF ELDERLY AFRICAN-AMERICANS WITH TYPE 2 DIABETES LIVING IN PUBLICLY SUBSIDIZED SENIOR APARTMENTS  Verla Vaughan, Ph. D. <sup>1*</sup> , Michelle Reece, M.S. <sup>2*</sup> , <sup>1</sup> School of Nursing, <sup>2</sup> Center for Health Care Research
8:30 AM	G3	SELECTED FOOD HANDLING AND FOOD PREPARATION ATTITUDES AND PRACTICES OF LOW-INCOME FAMILY FOOD SHOPPERS Enefiok Ekanem*, F. Tegegne, S. Singh, and S. Muhammad. Institute of Agricultural and Environmental Research
8:45 AM	G4	BLENDING SERVICE LEARNING WITH MASS COMMUNICATION: A CREATIVE APPROACH TO EXPOSING STUDENTS TO PROFESSIONAL ROLES IN SERVICE *Coreen Jackson, Ph. D., Communication & Information Technologies
9:00 AM	G 5	FACILITATING CHANGE IN GENERAL CHEMISTRY STUDENTS' VIEWS OF THE NATURE OF SCIENCE Daniel S. Domin, Department of Chemistry
9:15 AM	G 6	MOLECUALR RESPONSE TO HIGH TEMPERATURE IN DIFFERENT CULTIVARS OF TURF GRASS Zhou Suping*, Ph. D., Roger Sauve, Ph. D., Fur-Chi Chen, Ph. D. The Institute of Agricultural and Environmental Research
9:30 AM	G 7	AMERICAN ENTERTAINMENT FILM TREATMENT OF ORGAN DONATION AND THE RELATIONSHIPS DONATION CREATES Bonnie Chakravorty, Ph. D., Institute of Health Administration and Health Sciences
9:45 AM	G 8	INSTITUTIONAL RACISM: CASE STUDIES OF HURRICANE KATRINA STUDENT VICTIMS E. Kelly Sanford*, Department of Sociology
10:00 AM	G 9	EL-HAJJ MALIK EL-SHABAZZ: MUSLIM AND PAN AFRICAN STATESMAN Amiri Yasin al-Hadid*, Department of Africana Studies

10:15 AM	G 10	COMPLEX DEFORMATION BEHAVIOR AT THE NANOMETER THIN INTERGRANULAR FILM IN SI3N4 CERAMICS Lizhi Ouyang, Ph. D.*, Department of Physics and Mathematics
10:30 AM	G 11	AN INVESTIGATION OF THE PHYSICS SELF-EFFICACY OF PHYSICS AND NON-PHYSICS STEM MAJORS AT A SOUTHERN URBAN HBCU AND PHYSIC Bignall, Orville N. Ph. D.; Department of Physics and Mathematics
10:45 AM	G 12	X-RAY INTENSITY BY PARACRYSTAL MODEL CALCULATIONS Moin Sarkar, Ph. D.*, Department of Physics and Mathematics
11:00 AM	G 13	THE FORMATION OF COOPERATIVE LEARNING TEAMS BASED UPON STUDENT DEMOGRAPHICS Carlotta A. Berry*, Department of Electrical and Computer Engineering

	POSTER PRESENTATIONS Faculty		
P 1	FLAME RETARDANTS, HBDE AND TBDD, INHIBIT CYTOTOXIC FUNCTION OF HUMAN NK CELLS  Jennifer Stewart-Wright *, Margaret Whalen, Sabah Ghazi, Department of Chemistry		
P 2	A MICRO-LEVEL APPROACH TO IDENTIFYING RETENTION ISSUES Lavia Bonner*, I. Johnson*, W.Burrell, D. Chatterji, R. Word, and S. Carey*, College of Health Science		
P 3	GROWING GOAT MEAT INDUSTRY: PROFILE, ISSUES AND OPPORTUNITIES Safdar Muhammad*, C. Doss, F. Tegegne, E. Ekanem and S. Singh, Institute of Agricultural and Environmental Research		
P 4	TENNESSEE STATE UNIVERSITY STUDENTS' PERCEPTION OF BIOTECHNOLOGY Fisseha Tegegne*, Safdar Muhammad, Enefiok Ekanem, and Crystal Doss, Institute of Agricultural and Environmental Research		
P 5	COMPARISON OF FOUR DIFFERENT TRAP TYPES FOR THE COLLECTION OF ASIAN AND OTHER SPECIES OF AMBROSIA BEETLES Nadeer N. Youssef* and J.B. Oliver, Institute of Agricultural and Environmental Research		
P 6	CONTROLLING DOGWOOD POWDERY MILDEW USING HOST RESISTANCE M.T. Mmbaga*1, A. Shi1, and S. Zhou2, Institute of Agricultural and Environmental Research, 10tis Floyd Nursery Research Center		
P 7	AN EXAMINATION OF FACTORS RELATED TO THE RETENTION OF NEW TEACHERS IN THE METROPOLITAN NASHVILLE TENNESSEE SCHOOL SYSTEM Marcia J. Millet*, Department of Teaching and Learning		
P 8	EVALUATION OF BLOOD MEAL AS PROTEIN SOURCE FOR SINGLE COMB WHITE LEGHORN CHICKS Samuel J Nahashon*, J. Tyus II, T. Payne, N. Adefope and A. Amenyenu, Institute of Agricultural and Environmental Research		

P 9 RESPONSE TO ALUMINUM TOXICITY IN TOMATOES

Suping Zhou, Tingting Chen, Stephen Smith, Roger Sauve, The Institute of Agricultural and Environmental Research

P 10 PRODUCTION OF MONOCLONAL ANTIBODIES TO FLAGELLAR ANTIGENS OF SALMONELLA TYPHIMURIUM

Fur-Chi Chen\*, Samuel N. Nahashon, Suping Zhou, Agnes Kilonzo-Nthenge, and Roger C. Bridgman; Institute of Agricultural and Environmental Research

P 11 TREATMENT OUTCOMES AND CUSTOMER SATISFACTION OF AN INTENSIVE SUMMER SPEECH CAMP

M. T. Fitzgerald\*, K.M. Herbert, M.M. Kendall, and J.A. Washington, Department of Speech Pathology and Audiology

P 12 MICROBIOLOGICAL SAFETY OF REFRIGERATORS IN CONSUMERS' HOMES

Agnes Kilonzo-Nthenge<sup>1\*</sup>, Fur-Chi Chen<sup>1\*</sup>, and Sandria L. Godwin<sup>1</sup>, <sup>2</sup>, <sup>1</sup>Institute of Agricultural and Environmental Research, <sup>2</sup>Department of Family and Consumer Sciences

P 13 AN EXAMINATION OF HIV-RELATED RISK/PROTECTIVE FACTORS AMONG AFRICAN-AMERICAN ADOLESCENTS USING THE ECOLOGICAL RISK/PROTECTIVE THEORY

Charles Brown\*, Department of Human Performance & Sport Sciences, Tennessee State University, Peggy O'Hara Murdock, Department of Health & Human Performance, Minsoo Kang, Health & Human Performance, Middle Tennessee State University

P 14 COMPARISON OF EFFECTS OF TRIBUTYLTIN TO THOSE OF INHIBITION OF ADENYLYL CYCLASE AND PKA ON HUMAN NK CELLS Margaret M. Whalen\* and Sabah O. Odman-Ghazi. Department of Chemistry

#### **Graduate** LIFE SCIENCES

P 15 EVIDENCE FOR THE INVOLVEMENT OF MULTIPLE GTPASES IN THE RETRIEVAL OF THE HIGH AFFINITY CHOLINE TRANSPORTER FROM THE PLASMA MEMBRANE

Gerard McShepard and J. G. Townsel. Advisor: Prof. R.F. Newkirk, Ph. D., Department of Biological Sciences

#### EFFECTS OF DIBUTYLTIN ON ENZYMES ESSENTIAL TO THE CYTOTOXIC PATHWAY OF NK CELLS P 16 Erica T. Isom\* Advisor: M. Whalen, Ph. D., Department of Chemistry REGENERATION OF PLANTS FROM LEAF TISSUES IN MONARDA X 'MARSHALL'S DELIGHT P 17 Stephen Smiath, Sarabjit M Bhatti, Suping Zhou, Roger Sauve Advisor: Suping Zhou, Ph. D. The Institute of Agricultural and Environmental Research REGULATION OF CHICKEN CRYPTOCHROMES BY LIGHT EXPOSURE IN SUBJECTIVE MORNING AND DUSK P 18 K.Mahautmr, R. Newkirk, J. Robinson, P. Ghose, L. Liu, X. Wang. Advisor Xiaofei Wang, Ph. D. Department of Biological Sciences P 19 ANTIBACTERIAL ACTIVITY OF VISNAGIN IN DIFFERENT CRUDE EXTRACTS OF AMMI VISNAGA FRUITS Lubna Al-sharif, Advisors, Nidal Zatar, Ph. D. and Sulieman Al-khalil Ph. D. Department of Medical Laboratory P 20 USE OF BIOSTIMULATION TO ENHANCE DISSIPATION OF PESTICIDES IN SOIL Christopher Beals\*, Kersey, Caleb\*, Daniel French\* Advisor: E. Kudjo Dzantor, Ph. D., Institute of Agricultural and Environmental Research P 21 DETERMINATION OF BIOGENIC AMINES IN SMALL SAMPLE VOLUME BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY INTEGRATED WITH ELECTR \*Crisanto Torres, Advisor: Benny Washington, Ph. D., Department of Biological Sciences REGULATION OF EPITHELIAL TIGHT JUNCTIONS BY TYROSINE PHOSPHORYLATION P 22 Jeralyn Powell¹ and R. K. Rao, Ph. D.² Advisors: E. Lewis Myles, Ph. D.¹ and R. K. Rao, Ph. D. Department of Biological Sciences, Tennessee State University<sup>1</sup>, and Department of Physiology, University of Tennessee at Memphis<sup>2</sup> **Undergraduate** LIFE SCIENCES SOLVENT EXTRACTION-EFFICIENCY OF TRICLOPYR ((3, 5, 6- TRICHLORO-2 PYRIDINYLOXYACETIC ACID FROM WATER AND SOILS P 23 Gary Kriner\* Advisor: Desh Duseja, Ph. D.; Department of Agricultural Sciences P 24 INVESTIGATIONS OF ANTI-CANCER COMPOUNDS FROM EXTRACT OF M. CHARANTIA Kiana Brooks, Saudat Adamson, Ashley Triplett, odd Gary and E. Lewis Myles, Advisor, Todd Gary and E. Lewis Myles, Center of Excellence in Information Systems and Engineering Management, Department of Biological Sciences P 25 PREVENTING RNA DETERIORATION IN CAENORHABDITIS ELEGAN Natoya Hopkins, Carla Coleman, Yvonne Myles, Todd Gary and E. Lewis Myles, Department of Biological Sciences P 26 ISOLATION AND IDENTIFICATION OF ANTI-CANCER CONSTITUENTS OF NIGELLA SATIVA Ayesha Mobeen\*, William Y. Boadi, Ph. D., and John K. Mensah Ph. D., Advisor: John K. Mensah, Ph.D., Department of Chemistry D1 and D2 DOPAMINE (DA) RECEPTOR MECHANISMS OF THE CENTRAL NUCLEUSOF THE AMYGDALA (CeA) REGULATE ETHANOL (EtOH) P 28 SELF- ADMINISTRATION TAMARA ELAM, JASON COOK Nathan Johnson, William J.A. Eiler li, Michael Skolnick And Harry L. June\* Advisor. Gwendolyn Johnson Ph.D., Department of Psychology EFFECT OF A SERIES OF TRIORGANOTINS ON THE IMMUNE FUNCTION OF HUMAN NATURAL KILLER CELLS P 29 Laurin N. Holloway\*, Fabiola D. Gomez, Paula Apodoca, Keith H. Pannell and Margaret M. Whalen. Advisor: M. Whalen, Ph. D. Department of Chemistry STUDY OF THE ENZYMATIC MECHANISM OF HYALURONAN LYASE P 31 Esther Udoji\*, Advisor: Koen P. Vercruysse, Ph. D., Department of Chemistry THE STUDY OF THE INTERACTION BETWEEN CHONDROITIN SULFATE AND MULTIVALENT CATIONS P 32 Graham McKissic\*, Advisor: Koen P. Vercruysse, Ph. D., Department of Chemistry P 33 STUDY OF THE BINDING OF MULTICOVALENT CATIONS TO CARTILAGE TISSUE Thy Tran, Advisor, Koen Vercruysse, Ph. D., Department of Chemistry ETHANOL-INDUCED APOPTOSIS IN VASCULAR SMOOTH MUSCLE CELLS P 34 Goode, Gennifer, Department of Biological Sciencs Advisor, Benny Washington, Department of Biological Sciences P 35 DEVELOPMENT OF A PROTOCOL FOR ENHANCED BIOREMEDIATION IN KARST USING A SINGLE INJECTION WELL Tarra M. Beach\*1, Lashun K. King1, Roger Painter1 and Tom D. Byl12, Advisors: Dr. Tom Byl, Ph. D., Roger Painter, Ph. D., Civil & Environmental

Engineering<sup>1</sup>, Tennessee State University, Nashville, TN <sup>2</sup>. US Geological Survey, Nashville, TN

#### **Graduate** COMPUTER SCIENCE, MATH and ENGINEERING

- P 36 INDUCTION OF THE AMMONIA-OXIDIZING BACTERIA AND TCE CO-METABOLISM Emmalyne Head\*, Advisor: Tom Byl, Ph. D., Department of Civil and Environmental Engineering
- P 37 SECURE ROUTING PROTOCOL FOR WIRELESS SENSOR NETWORKS

  McKenzie McNeal III \*, Advisor: Wei Chen, Ph. D., Department of Electrical and Computer Engineering

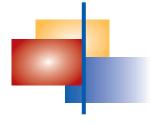
#### Undergraduate COMPUTER SCIENCE, MATH and ENGINEERING

- P 38 THE COMPOSITION OF GLOBULAR CLUSTER M3 USING A COMPARATIVE APPROACH
  Sharina Haynes\* Advisor: Caty Pilachowski, Ph. D. Indiana University-Bloomington Department of Physics and Astronomy, Geoffrey Burks, Ph. D., Orville N.
  Bignall, Ph. D. Tennessee State University Department of Physics and Mathematics
- P 39 HUMAN-ROBOT INTERACTION VIA CELLULAR PHONES
  Ima Ekwere and Andrea Minter\* Advisor: Ali Sekmen Ph. D. Department of Engineering, and Computer Science
- P 40 MULTI-ROBOT COOPERATION WITH COMPUTER VISION
  Patricia Burton\* and Therron Jones\* Advisor: Ali Sekmen, Ph. D., Department of Electrical and Computer Engineering

#### Undergraduate EDUCATION, HUMANITIES and SOCIAL SCIENCES

P 41 THE IMPORTANCE AND DIFFERENCES OF MAGAZINES THAT HELPED SHAPE THE HARLEM RENAISSANCE
Adrienne Denson\*. Advisor: Nels Pearson, Ph. D., Department of Language, Literature & Philosophy

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



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#### Celebrating 30 Years of Accomplishments

#### DR. BARBARA NYE

Education has always been a significant part of Barbara Nye's life. Her experiences with impoverished children and the influence of her mentor, Dr. Nicholas Hobbs, author of *The Futures of Children*, enhanced her belief and understanding that, "without evidence based programs and policies, developed through well designed research, improving all children's opportunities to learn and build on strengths of families would not be possible."

Dr. Nye has worn several hats at Tennessee State University – from director to professor to award-winning researcher. She has kept TSU's Center of Excellence – Research and Policy Center, of which she has been the director of since July 1989, on the cutting edge of educational issues. She has generated more than \$250 million in new research and program funding to improve the economic base in Tennessee through the center. As a result of Dr. Nye's thorough research, elementary schools throughout the country have reduced class sizes to benefit students' learning by lowering the student-to-teacher ratio.



Dr. Barbara Nye (left) and Dr. Maria Thompson (right)

Under her leadership, the Tennessee Early Childhood Training Alliance (TECTA), which was established in 1993, became the first statewide system in the nation for early childhood training. In addition to TECTA, the center sponsors Tennessee CAREs Early Head Start, a federally funded community-based program for low-income families with infants, toddlers, and pregnant women. Reducing class size, shedding light on the benefits and restrictions of homework, and conducting all the other extensive programs are a result of Dr. Nye's commitment to excellence.

We would like to congratulate Dr. Nye on her many accomplishments and her retirement after more than 30 years of service to the community, the University, and the nation.

#### Distinguished Professor

#### DR. NEBRASKA MAYS



Dr. Nebraska Mays has been a champion of education and research for more than 40 years. He is responsible for obtaining Tennessee State University's first million dollar federal grant. He currently holds the position of Distinguished Professor of Education in Post Retirement Research at TSU. Most recently, he served as Senior Vice Chancellor for Academic Affairs, Research and Planning, at the Tennessee Board of Regents.

At Tennessee State University, under the mentorship and vision of Dr. Walter S. Davis, 2nd President of TSU, Dr. Mays began the University's first research, sponsored programs and development efforts by coordinating the organization and development of the Office of Development and Research. As the first chief officer of Development and Research, he coordinated the activities in those sections as well as secured external funding for several buildings.



#### SCHEDULE OF EVENTS

#### All Student Presentations Will Be In Room 118, Farrell-Westbrook Building

Time	Monday April 3	Tuesday April 4	Wednesday April 5	Thursday April 6
8:00 AM		A17	D1	G1
8:15 AM		A18	D2	G2
8:30 AM		A19	D3	G3
8:45 AM		A20	D4	G4
9:00 AM		A21	D5	G5
9:15 AM		A22	D6	G6
9:30 AM		A23	D7	G7
9:45 AM		A24	D8	G8
10:00 AM		A25	D9	G9
10:15 AM		A26	D10	G10
10:30 AM			D11	G11
10:45 AM		B1	D12	G12
11:00 AM		B2	D13	G13
11:15 AM		В3		
11:30 AM		B4	E1	
11:45 AM			E2	
12:00 NOON				
12:15 PM		LUNCHEON AND		
12:30 PM	A1	KEYNOTE		
12:45 PM	A2	SPEAKER John Miller	LUNCH	STUDENT
1:00 PM	A3	DIRECTOR,	ON YOUR	AWARDS
1:15 PM	A4	U.S. ARMY	OWN	LUNCHEON
1:30 PM	A5	RESEARCH		P. P. C.
1:45 PM	A6	LABORATORY		BRIAN EGESTON
2:00 PM	A7			
2:15 PM	A8			
2:30 PM	А9	C1	E3	
2:45 PM	A10	C2	E4	
3:00 PM	A11	C3		
3:15 PM	A12	C4	F1	
3:30 PM	A13	C5	F2	
3:45 PM	A14		F3	
4:00 PM	A15		F4	
4:15 PM	A16	DR. LARRY VALERO	F5	
4:30 PM		African-American CodeBreakers During WWII		
		CoaeBreakers During WWII		

- A = Math, Engineering, Computer **Science Graduate Students**
- **B** = Math, Engineering, Computer **Science Undergraduate Students**
- and The Early Cold War Period. **Reception to follow Student Center** Forum Sponsored by The Pilot center for Academic Excellence in **Intelligence Studies**
- **D** = Life Science Graduate Students
- **E** = **Education**, **Social Sciences**, **Humanities Graduate Students**
- C = Life Science Undergraduate Students F = Education, Social
  D = Life Science Graduate Students Sciences, Humanities **Undergraduate Students** 
  - **G** = Faculty (All Faculty Presentations are in the **Communication center)**



#### **JUDGES**

Tennessee State University	■ Ms
Tennessee State University	■ Dr.
Tennessee State University	■ Dr.
H.G. Hills Middle School	■ Dr.
Tennessee State University	■ Dr.
Vanderbilt University	■ Dr.
Tennessee State University	■ Dr.
Tennessee State University	■ Dr.
Tennessee State University	■ Dr.
Meharry Medical College	■ Dr.
Tennessee State University	■ Dr.
Professor Emeritus, Fisk University	■ Dr.
Fisk University	■ Dr.
Tennessee State University	■ Dr.
Tennessee State University	■ Dr.
	Tennessee State University  Tennessee State University  H.G. Hills Middle School  Tennessee State University  Vanderbilt University  Tennessee State University  Tennessee State University  Tennessee State University  Meharry Medical College  Tennessee State University  Professor Emeritus, Fisk University  Fisk University  Tennessee State University

■ Ms. Candace Jones	Meharry Medical College
■ Dr. Gregory Komives	Tennessee State University
■ Dr. Brenda McAdory	Tennessee State University
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■ Dr. Samantha Morgan-Curtis	Tennessee State University
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■ Dr. John Robinson	Tennessee State University
■ Dr. Tamara Rogers	Tennessee State University
■ Dr. Erik Schmeller	Tennessee State University
■ Dr. Guifeng Shao	Tennessee State University
■ Dr. William Spencer	Tennessee State University
■ Dr. Isaac Thompson	Fisk University
■ Dr. Koen Vercruysse	Tennessee State University
■ Dr. Marsha Williams	Tennessee State University
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### 2005 PRESENTATION WINNERS

# GRADUATE EDUCATION, HUMANITIES, SOCIAL SCIENCES

1st Place	Regina V. Clark
2nd Place	Cynthia D. Jackson
3rd Place	Krystal Sandifer

#### GRADUATE COMPUTER SCIENCE, ENGINEERING, PHYSICS, MATHEMATICS

1st Place	Lashun King
2nd Place	Serge Mondesir
3rd Place	Yvette Rankin

#### GRADUATE LIFE SCIENCE

1st Place	Aloice O. Aluoch
2nd Place	S. Nicole Driggins
3rd Place	Armah R. Bell

#### UNDERGRADUATE LIFE SCIENCE

1st Place	Prashant Pandya
2nd Place	Markeesa Duke
3rd Place	Lakeshia Wright

# UNDERGRADUATE EDUCATION, HUMANITIES, SOCIAL SCIENCES

1st Place	Melanie Hawkins
2nd Place	Derryle Farmer
3rd Place	Christopher Taylor

#### UNDERGRADUATE COMPUTER SCIENCE, ENGINEERING, PHYSICS, MATHEMATICS

1st Place	Amelia Gillman
2nd Place	Frank Alston
3rd Place	Sharina Haynes

#### GRADUATE, Poster presentations

1st Place	Revell I. Ford
2nd Place	Dominic Anako, J. Suber, M. Ricks,
3rd Place	Ryan Fitzwater, Kori Shaw

### UNDERGRADUATE, POSTER PRESENTATIONS

1st Place	Telpriore Tucker
2nd Place	Marissa Love
3rd Place	Frank Alston



#### Congratulations to the Newest Million Dollar Club Member

Dr. Marcus W. Shute, P.E., Vice President, Division of Research and Sponsored Programs, has secured \$1,000,000 from the Institute of Library and Museum Services to establish a Museum of African-American History. The Museum will serve as an educational resource for all TSU students as well as be open to the community to experience its permanent and special exhibits. It will also contain exhibits about the role of African-Americans in the development of science and technology, specifically Engineering, Biological and Agricultural Sciences, and Nursing.

The Million Dollar Club celebrates researchers who have been awarded \$1,000,000 or more per grant.

#### MILLION DOLLAR CLUB MEMBERS

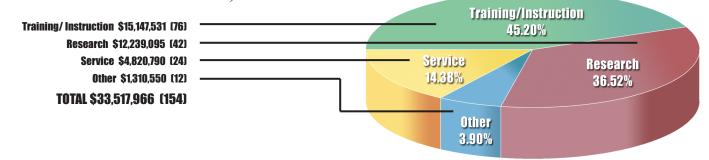
Dr. Michael Busby	Center for Excellence in Information Systems Engineering and Management
Dr. Satinderpaul Degvan	College of Engineering, Technology, and Computer Sciences
Dr. Baqar A, Husaini	Center for Health Research
Dr. Prem S. Kahlon	Department of Biological Sciences
Dr. Lee-Hyun Keel	Center for Excellence in Information Systems Engineering and Management
Mrs. Mary Love	TRIO Program
Dr. Mohan Malkani	College of Engineering, Technology, and Computer Sciences
Dr. Robert F. Newkirk	Department of Biological Sciences
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Dr. Marcus W. Shute, P.E.	Research and Sponsored Programs
Dr. Amir Shirkhodaie	College of Engineering, Technology, and Computer Sciences
Dr. Willard Smith	Center for Excellence in Information Systems Engineering and Management

Congratulations to the sixteen 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 16 distinguished scientists, engineers, and educators. Their efforts, although measurable in dollars, are immeasurable in terms of positive impact their work has had on the University's ability to achieve its mission.

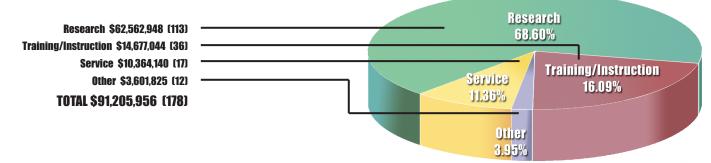


#### RESEARCH AND SPONSORED PROJECT AWARDS 2005

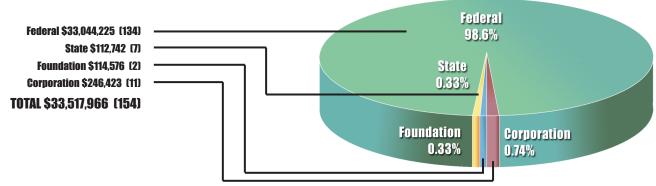
AWARDS BY PROJECT TYPE

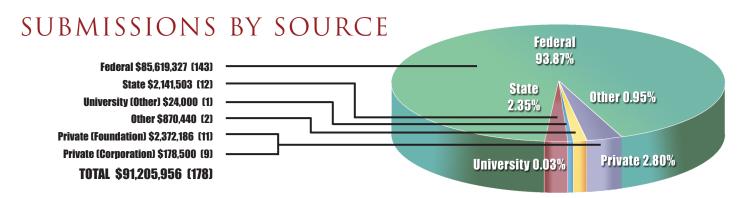


SUBMISSIONS BY PROJECT TYPE



#### AWARDS BY SOURCE







### The Research and Policy Center On Basic Skills

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The Research and Policy Center (RPC) at Tennessee State University is one of Tennessee's accomplished Centers of Excellence. The RPC's mission is to conduct multi-disciplinary research and demonstrations concerning the practices, policies and programs of institutions and communities that influence the educational, social, and psychological well-being of children and families. The RPC produces and disseminates research and information to support the formation of public policy and the programmatic decisions of agencies, schools, and communities in Tennessee and the nation.

The RPC has three departments: Academic and Basic Skills, Child and Family Studies, and School and Community Partnerships. The Center has a Bureau of Evaluation and Research Services. State funds and grant awards (from agencies such as the National Science Foundation, the Department of Health and Human Services/Administration for Children and Families/Head Start Bureau, the Tennessee Higher Education Commission, Tennessee Department of Human Services, and others) allow the Center to promote innovation, enhance collaboration, support the preparation of personnel and students and administer projects and programs of a research, service, and academic nature. RPC sponsors conferences, institutes and symposia to disseminate research on best practice. In addition, the Center is active in professional research organizations, proposal review panels, and in publishing referred research

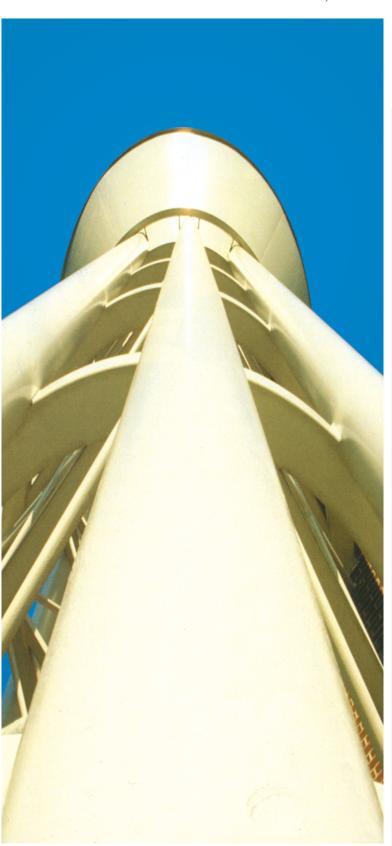
For information on the Center's Tennessee Early Childhood Training Alliance (TECTA), a statewide academic and professional recognition system with TBR sister institutions, please visit the RPC Web site.

Tennessee State University Center for Research & Policy on Basic Skills Main Office: (615) 277-1650

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William Lawson, Ph.D.

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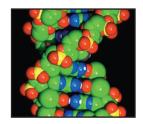
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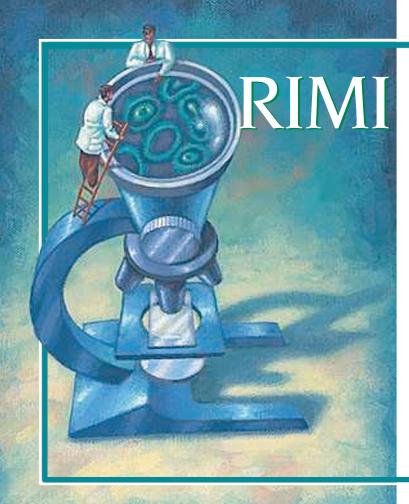
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### NOTES

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