

# PRESENTATIONS SCHEDULES

## ORAL PRESENTATIONS - Tuesday, April 5, 2016

### GRADUATE ENGINEERING I

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

- |                     |           |   |
|---------------------|-----------|---|
| 9:00 AM             | GR ENGR 1 | <b>AN ACCESS-BASED DECISION SUPPORT TOOL FOR ASSESSING BICYCLE AND PEDESTRIAN SAFETY</b><br>Abram Musinguzi*. <i>Civil and Architectural Engineering</i> , College of Engineering. Advisor(s): Deo Chimba                               |
| 9:15 AM             | GR ENGR 2 | <b>SECURE MEASUREMENT BASED GEOLOCATION TO LOCATE DATA IN THE CLOUD DATACENTERS</b><br>Biswajit Biswal*. <i>TIGER Institute</i> , College of Engineering. Advisor(s): Sachin Shetty   |
| 9:30 AM             | GR ENGR 3 | <b>COOPERATIVE IMAGE TRANSMISSION FOR UNDERLAY COGNITIVE RADIO NETWORK USING SOFTWARE DEFINED RADIO</b><br>Kamrul Hasan*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Liang Hong and Sachin Shetty |
| 9:45 AM             | GR ENGR 4 | <b>VIBRATION ATTENUATION OF CYLINDRICAL STRUCTURES USING CONSTRAINED LAYER DAMPING</b><br>Bashir Al Saidi*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Hamid Hamidzadeh                      |
| 10:00 AM            | GR ENGR 5 | <b>COLLUDING JAMMING ATTACK ON A GRAND COALITION BY AGGRIEVED NODES</b><br>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 | <b>SECURED FORMATION CONTROL FOR MULTI-AGENT SYSTEMS UNDER DOS ATTACKS</b><br>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 | <b>PORTABLE LOW-VISION OBSTACLE DETECTION SYSTEM</b><br>Yvette Tolliver*. <i>Computer Science</i> , College of Engineering. Advisor(s): Erdem Erdemir and S. Keith Hargrove   |
| 11:00 AM            | GR ENGR 8 | <b>AN EXPLORATION OF WIND STRESS CALCULATION TECHNIQUES IN HURRICANE STORM SURGE MODELING</b><br>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\*. *TIGER Institute*, 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\*. *Electrical and Computer Engineering*, College of Engineering. Advisor(s): Kevin Terrell and Saleh Zein-Sabatto
- 11:45 AM GR ENGR 11 **DROIDDOCKER: DYNAMIC ANALYSIS OF ANDROID APPLICATIONS USING DOCKER**  
Gauree Barve\*. *TIGER Institute*, 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\*. *Agricultural and Environmental Sciences*, 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\*. *Agricultural and Environmental Sciences*, 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\*. *Agricultural and Environmental Sciences*, 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 Dompreeh\*. *Family and Consumer Sciences*, 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\*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Matthew Blair

10:15 AM	GR SCI 6	<b>MANAGEMENT OF FUNGAL DISEASES IN SNAP BEANS USING BIOLOGICAL CONTROL AGENTS</b> 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	<b>ISOLATION AND CHARACTERIZATION OF PROBIOTIC BACTERIA FROM THE GASTROINTESTINAL (GI) TRACT OF CHICKENS</b> Joseph Donkor*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Samuel Nahashon
11:00 AM	GR SCI 8	<b>CHARACTERIZATION AND EXPRESSION OF THE SEROTONIN 2C RECEPTOR IN CHICKEN</b> 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	<b>DOWN-REGULATION OF TISSUE N:P RATIOS IN TERRESTRIAL PLANTS BY ELEVATED CO<sub>2</sub></b> Qi Deng*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Dafeng Hui
11:30 AM	GR SCI 10	<b>ROLE OF MAPK/NF-KB SIGNALING AND TACE ACTIVATION IN TRIBUTYLtin-MEDIATED ALTERATION OF PRO-INFLAMMATORY CYTOKINE LEVELS IN HUMAN IMMUNE CELLS</b> Shanieek Lawrence*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
11:45 AM	GR SCI 11	<b>TISSUE-SPECIFIC AND DIETARY REGULATION OF GLUCOSE TRANSPORTER EXPRESSION</b> 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	<b>INTELLIGIBILITY RATINGS OF FACULTY WITH FOREIGN ACCENTS</b> 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 | <b>MORPHOLOGICAL EVALUATION OF AMARANTH ACCESSIONS OBTAINED FROM SEED SAVERS' EXCHANGE</b><br>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 | <b>YIELD POTENTIAL OF TRADITIONAL GRAIN AMARANTH VARIETIES FROM AROUND THE WORLD</b><br>Mawel Jok* and Ranjita Thapa*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair  |
| 1:00 PM  | UG SCI 3 | <b>DETERMINATION OF VARIABILITY IN WASTE VEGETABLE OIL RESOURCES FOR BIODIESEL PRODUCTION</b><br>Alexius Dingle*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Jason de Koff   |
| 1:15 PM  | UG SCI 4 | <b>GREENHOUSE AND IN VITRO EVALUATION OF AMARANTH SEEDLING CHARACTERISTICS</b><br>Matthew Edwards*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair   |
| 1:30 PM  | UG SCI 5 | <b>SALMONELLA CONTINUES TO EXIST ON THE SURFACE OF PLASTIC GROCERY BAGS THROUGH LEAKAGE FROM RAW CHICKEN PACKAGES</b><br>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 | <b>A COMPARISON OF PHYSICAL AND SENSORY PROPERTIES OF CHOCOLATE BARS FORTIFIED WITH FOUR VARIATIONS OF HEMP PROTEIN POWDERS</b><br>Austin Hulsey*. <i>Family and Consumer Science</i> , College of Agriculture. Advisor(s): Sandria Godwin                                       |
| 2:00 PM  | UG SCI 7 | <b>GENERATION AND CHARACTERIZATION OF THE PROLINE 108 SERINE SINGLE NUCLEOTIDE POLYMORPHISM IN THE HUMAN SEROTONIN 2C RECEPTOR</b><br>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 | <b>IMPACT OF THE PROLINE280LEUCINE SINGLE NUCLEOTIDE POLYMORPHISM IN THE HUMAN SEROTONIN 2C RECEPTOR ON THE INTERACTION WITH PROTEIN PHOSPHATASE AND TENSIN HOMOLOG</b>  |

Leonel Herrera-Flores\*, Bipradas Roy, Mary Curtis\* and Letimicia Fears. *Biological Sciences*, 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\*. *Psychology*, College of Education. Advisor(s): Lisa de la Mothe
- 3:00 PM      UG SCI 10      **AUDITORY INPUT TO VENTROLATERAL PREFRONTAL CORTEX**  
Elisabeth Stansberry\*. *Psychology*, 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\*. *Chemistry*, 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\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
- 3:45 PM      UG SCI 13      **POTENTIAL ROLE OF HIF1A IN HIGH SALT INDUCED INFLAMMATORY RESPONSE**  
Karina Lopez-Wells\*. *Biological Sciences*, 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\*. *Chemistry*, 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. *Biological Sciences*, 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., RSP Basement, Tiger Institute 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\*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Matthew Blair

- |                   |           |   |
|-------------------|-----------|---|
| 1:15 PM           | GR SCI 14 | <p><b>LIGNOCELLULOLYTIC BACTERIA AND FUNGI ISOLATED FROM HYDROTHERMAL-VEGETATIVE ENVIRONMENTS</b></p> <p>Joshua OHair*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): Suping Zhou and Johnson Terrance</p>  |
| 1:30 PM           | GR SCI 15 | <p><b>EVALUATION OF WINTER CANOLA FOR BIODIESEL PRODUCTION IN TENNESSEE</b></p> <p>Edmund Tetteh*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): Jason de Koff</p>  |
| 1:45 PM           | GR SCI 16 | <p><b>SIMULTANIOUS ENCAPSULATION OF ANTIBIOTIC ALTERNATIVES FOR TARGETED DELIVERY INTO POULTRY GASTROINTESTINAL TRACT</b></p> <p>Cosmas Mwendwa*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): Ying Wu, Fur-Chi Chen and Agnes Kilonzo-Nthenge</p> |
| 2:00 PM           | GR SCI 17 | <p><b>TRANSFORMATION EFFICIENCY OF SOYBEAN VARIETIES UNDER MATURITY GROUP IV AND OPTIMIZATION OF CRISPR</b></p> <p>Mary Jane Espina*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): Ali Taheri and Korsi Dumenyo</p>                                |
| 2:15 PM           | GR SCI 18 | <p><b>GARLIC: A NATURAL ANTIBIOTIC, EFFECTIVE ON CAMPYLOBACTER SPECIES</b></p> <p>Richard Yorke*. <i>Family and Consumer Sciences</i>, College of Agriculture. Advisor(s): Fur-Chi Chen</p>   |
| 2:30 - 2:45 BREAK |           |   |
| 2:45 PM           | GR SCI 19 | <p><b>EFFECTS OF SUPPLEMENTAL GLUTAMINE AND LYSINE ON GROWTH PERFORMANCE OF BROILER CHICKENS</b></p> <p>Boniface Kimathi* and Ali Alsogair*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): Samuel Nahashon</p>                                      |
| 3:00 PM           | GR SCI 20 | <p><b>ANALYSIS OF CONSUMPTION BEHAVIOR OF FRESH FRUITS AND VEGETABLES AMONG US HOUSEHOLDS</b></p> <p>Pramatma Khanal*. <i>Agriculture and Environmental Sciences</i>, College of Agriculture. Advisor(s): Prabodh Illukpitiya</p>   |
| 3:15 PM           | GR SCI 21 | <p><b>CLIMATE WARMING ELEVATED LACCASE GENE ABUNDANCE AND DIVERSITY ALONG A BOREAL LATITUDINAL CLIMATE TRANSECT</b></p> <p>Sherly Celada* and Siyang Jian*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): Jianwei Li</p>                            |
| 3:30 PM           | GR SCI 22 | <p><b>EXOME SEQUENCING OF PANCREATIC CANCER GENOME</b></p>  |

Tiara Smith\*. *Biological Sciences*, 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\*. *Chemistry*, 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\*. *Electrical and Computer Engineering*, 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\*. *Electrical and Computer Engineering*, College of Engineering. Advisor(s): Lee Keel
- 9:30 AM GR ENGR 15 **MACHINE LEARNING FOR BIG DATA WITH SPARK**  
Asmah Muallem\*. *TIGER Institute*, 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\*. *Mechanical and Manufacturing Engineering*, College of Engineering. Advisor(s): Muhammad Akbar
- 10:00 AM GR ENGR 17 **SCALABLE NETWORK TRAFFIC ANALYSIS ON CLOUD COMPUTING PLATFORM**  
Sabah Alzahrani\*. *Electrical and Computer Engineering*, 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\*. *Electrical and Computer Engineering*, 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 AREAL VEHICLE**  
Pavanasirisha Kallakuri\*. *Electrical and Computer Engineering*, 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\*. *Mechanical and Manufacturing Engineering*, 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\*. *TIGER Institute*, College of Engineering. Advisor(s): Sachin Shetty

### GRADUATE SCIENCE III

9:00 a.m. - 12:00 p.m. – *Research and Sponsored Programs Bldg., RSP Basement, Tiger Institute 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\*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Matthew Blair

9:15 AM GR SCI 25 **IDENTIFICATION OF THE QUANTIFIED ROOT PROTEOME EXPRESSION OF SWITCHGRASS (PANICUM VIRGATUM) UNDER DROUGHT STRESS**  
 Zhujia Ye\*. *Agricultural and Environmental Sciences*, 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 SALMONELLA SPP IN BROILERS**  
 Joy Igbafe\*. *Family and Consumer Sciences*, 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\*. *Agricultural and Environmental Sciences*, 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 (CORNUS FLORIDA L.)**  
 Asha Maheshwari\*. *Agricultural and Environmental Sciences*, 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\*. *Agricultural and Environmental Sciences*, 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. *Agricultural and Environmental Sciences*, 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\*. *Biological Sciences*, 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\*. *Biological Sciences*, 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\*. *Biological Sciences*, 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\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum

## ORAL PRESENTATIONS - Wednesday, April 6, 2016

### GRADUATE SCIENCE IV

1:00 p.m. - 4:45 p.m. – Research and Sponsored Programs Building, Room 163

- |                   |           |   |
|-------------------|-----------|---|
| 1:00 PM           | GR SCI 35 | <b>DIFFERENTIAL EXPRESSION PROFILING OF UPLAND COTTON CHROMOSOMAL SUBSTITUTION LINES SELECTED FOR OILSEED TRAITS</b><br>Deependra Bhatta*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Ahmad Aziz and Ali Taheri               |
| 1:15 PM           | GR SCI 36 | <b>YIELD POTENTIAL OF NOVEL SEMI-DWARF GRAIN AMARANTHS TESTED FOR TENNESSEE GROWING CONDITIONS</b><br>Yahaya Damba* and Ranjita Thapa*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Matthew Blair                              |
| 1:30 PM           | GR SCI 37 | <b>EVALUATION OF INDUSTRIAL OILSEED CROPS FOR BIODIESEL PRODUCTION IN TENNESSEE</b><br>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 | <b>A COMPARISON OF BITTER MELON VARIETIES AND THEIR ANTIOXIDANT PROPERTIES AND IN VITRO ANTI-DIABETES EFFECTS</b><br>Li Wang*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Ying Wu and Arvazena Clardy                         |
| 2:00 PM           | GR SCI 39 | <b>EXPRESSION AND CHARACTERIZATION OF IMMUNE FUNCTION GENES AND TOLL-LIKE RECEPTORS IN THE ADULT GUINEA FOWL USING TRANSCRIPTOME ANALYSIS</b><br>Gabriel Ekereke*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Samuel Nahashon |
| 2:15 PM           | GR SCI 40 | <b>DEVELOPING NOVEL PROBIOTICS AND EVALUATING THEIR MECHANISMS OF INTERACTION WITH HOST ENVIRONMENT TO ENHANCE POULTRY PERFORMANCE</b><br>Sarayu Bhogoju*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture. Advisor(s): Samuel Nahashon         |
| 2:30 - 2:45 BREAK |           |   |
| 2:45 PM           | GR SCI 41 | <b>EXAMINING THE OUTCOME EXPECTATIONS AND LEVEL OF COMMITMENT FOR AGRICULTURAL SCIENCES STUDENTS ATTENDING AN 1890 LAND-GRANT UNIVERSITY</b><br>Sarah Girresch*. <i>Psychology</i> , College of Education. Advisor(s): John Hall and Marie Hammond                      |

3:00 PM	GR SCI 42	<p><b>MY EXPERIENCE WITH A GRADUATE CLASS IN ADVANCE PLANT PROPAGATION</b></p> <p>Zhujia Ye*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): Suping Zhou</p>
3:15 PM	GR SCI 43	<p><b>RESPONSES OF CORN PHYSIOLOGY AND YIELD TO SIX AGRICULTURAL PRACTICES OVER THREE YEARS IN MIDDLE TENNESSEE</b></p> <p>Chih-Li Yu*. <i>Biological Sciences</i>, College of Life and Physical Sciences. Advisor(s): Dafeng Hui and Sam Dennis</p>
3:30 PM	GR SCI 44	<p><b>EFFECT OF THE INHIBITOR (KR-185) ON CALPAIN ACTIVITY IN LUNG CANCER (A549) AND 3T3-L1 PREADIPOCYTES</b></p> <p>Seyi Falekun*. <i>Chemistry</i>, College of Life and Physical Sciences. Advisor(s): William Boadi, Elbert Myles and Isaac O. Donkor</p>
3:45 PM	GR SCI 45	<p><b>PREPARATION OF FLUORO-COMPOUNDS BY FLUORINATION OF ORGANOTRIFLUOROBORATES</b></p> <p>Satheesh Thatiparti*. <i>Chemistry</i>, College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum</p>
4:00 PM	GR SCI 46	<p><b>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</b></p> <p>Urmila Adhikari*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): C. Korsi Dumenyo</p>
4:15 PM	GR SCI 47	<p><b>CHARACTERIZATION OF THE INCOMPATIBLE INTERACTION BETWEEN ERWINIA TRACHEIPHILA AND NON-HOST TOBACCO (NICOTIANA TABACUM)</b></p> <p>Eric Nazareno*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): C. Korsi Dumenyo and Caleb Kersey</p>
4:30 PM	GR SCI 48	<p><b>THE USE OF SPECIES DISTRIBUTION MODELS (SDMS) TO EVALUATE THE DISTRIBUTION OF THE EASTERN HELLBENDER (CRYPTOBRANCHUS ALLEGANIENSIS) IN TENNESSEE, U.S.A.</b></p> <p>Jeronimo Silva*. <i>Agricultural and Environmental Sciences</i>, College of Agriculture. Advisor(s): William Sutton</p>

## UNDERGRADUATE ENGINEERING

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

- |                   |           |  |
|-------------------|-----------|--|
| 1:30 PM           | UG ENGR 1 | <b>DESIGN AND OPTIMIZATION OF A BIO-INSPIRED SUBMERSIBLE VEHICLE IN A HYDROPONIC ENVIRONMENT</b><br>Timothy Darrah* and Robert Turner*. <i>Computer Science</i> , College of Engineering. Advisor(s): Erdem Erdemir                                    |
| 1:45 PM           | UG ENGR 2 | <b>INTERACTIVE AND IMMERSIVE VISUALIZATION OF ENGINEERING SYSTEMS</b><br>Marc Primeau* and Dan Fishler*. <i>TIGER Institute</i> , College of Engineering. Advisor(s): Sachin Shetty  |
| 2:00 PM           | UG ENGR 3 | <b>DESIGN OF AN EFFICIENT CATALYTIC CONVERTER WITH INCREASED FLOW RATE AND MINIMUM PRESSURE DROP USING CFD TECHNIQUES</b><br>Ayele Tegegne*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar      |
| 2:15 PM           | UG ENGR 4 | <b>OPTIMUM REACTION CONDITIONS FOR THE DESIGN OF AN EFFICIENT CATALYTIC CONVERTER</b><br>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 | <b>QUANTIZED STABILIZATION OF STOCHASTIC SYSTEMS WITH MULTIPLICATIVE NOISE UNDER MARKOVIAN SWITCHING</b><br>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 | <b>DESIGN AND KINEMATIC ANALYSIS OF A MECHANICAL TENTACLE SYSTEM FOR SMALL UNMANNED AERIAL VEHICLES</b><br>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. – Presentations will be in the Research and Sponsored Programs Building, Room 163

8:30 AM	FAC-O 1	<b>MEASURING HEALTH AND WELLNESS OF INTERNATIONAL COLLEGE STUDENTS: INITIAL CONSTRUCTION OF A MULTICULTURAL, CROSS-SECTIONAL INSTRUMENT</b> Francis Pleban* and Samir Patel. <i>Public Health, Healthcare Administration, and Health Sciences</i> , College of Health Sciences
8:45 AM	FAC-O 2	<b>CAN POLYSACCHARIDES ACT AS ENZYMES? STUDIES ON POLYSACCHARIDE-MEDIATED SYNTHESIS OF PIGMENTS.</b> Koen Vercruysse*. <i>Chemistry</i> , College of Life and Physical Sciences
9:00 AM	FAC-O 3	<b>BONDING SUPER-HARD CERAMICS TO POLYMERS</b> 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	<b>USING THE EDTPA PORTFOLIO TO SUSTAIN EXCELLENCE IN PREPARING MINORITY TEACHERS</b> John Tiller*, Judith Presley, and Beth Christian. <i>Teaching and Learning</i> , College of Education
9:30 AM	FAC-O 5	<b>METABOLOMICS AND PHYSIOLOGICAL STUDIES OF GRAFTED TOMATOES</b> Suping Zhou*, Wei Liu, Sarabjit Bhatti, and Theodore Thannhauser. <i>Agricultural and Environmental Sciences</i> , College of Agriculture
9:45 AM	FAC-O 6	<b>IMPACT OF ACCESS MANAGEMENT PRACTICES ON PEDESTRIAN SAFETY</b> Deo Chimba*, Kevin Soloka, and Henry Ajieh. <i>Civil and Architectural Engineering</i> , College of Engineering
10:00 AM	FAC-O 7	<b>USING SINGLE-CELL TYPE PROTEOMICS TO DEVELOP PROTEIN PROFILES FOR DISTINCT CELL LAYERS OF TOMATO ROOTS</b> 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	<b>ATOMISTIC TO CONTINUUM HOMOGENIZATION METHOD</b> Ranganathan Parthasarathy*, Lizhi Ouyang and Anil Misra. <i>Mathematical Sciences</i> , College of Life and Physical Sciences
10:30 AM	FAC-O 9	<b>THE CHANGING FACES OF AGRICULTURAL BUSINESS</b> Enefiok Ekanem* and Mary Mafuyai*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture

# PRESENTATIONS SCHEDULES

## 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 TRANSGENETIC TOMATO UNDER ABIOTIC STRESS**  
Xiaobo Pei\*, Yuping Jiang, 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 Addesso, 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 Jane Elliott Hall Auditorium

- GR-P 1      **THE IMPACT OF MEDIA COMMENTARY ON THE PERCEPTIONS OF BLACK ATHLETES**  
Sydnee 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 Liyanapathiranage\*, Terri Simmons\* and Niamul Kabir\*. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Fulya Baysal-Gurel and Karla Addesso
- GR-P 8      **STEM INOCULATION TECHNIQUE TO ASSESS RESISTANCE IN HYDRANGEA CULTIVARS TO PHYTOPHTHORA NICOTIANAE**  
Niamul Kabir\*, Prabha Liyanapathiranage\* and Claudia Curry\*. *Otis 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



- 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 Zhujia 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      **SCREDDENT: 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 Modafer\*. *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 Vercruysse
- 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 $\gamma$ ) 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 BETA (IL-1 $\beta$ ) 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 $\alpha$ ) 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**  
Shanieek 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 Kadeg\*, 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
- GR-P 72      **IDENTIFICATION OF PARASPORAL PROTEINS IN BACILLUS  
THURINGIENSIS STRAINS ISOLATED FROM MIDDLE TENNESSEE**  
Alaa Bahannan\*. *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 Jane 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 TRIBUTYL TIN-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**  
Alekszander Garcia\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): William Boadi and Koen Vercruysse
- 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 Sciences and Environmental*, 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 Sciences and Environmental*, College of Agriculture.  
Advisor(s): John Hall
- UG-P 20      **THE ROLE OF NOTCH SIGNALING IN T LYMPHOCYTES**

Kalynn Parks\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Anil Shanker

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'Etra Young