

# 2017 GRADUATE STUDENT RESEARCH POSTER SHOWCASE

OCTOBER 26, 2017 - AU ALUMNI CENTER - 5:00 TO 7:00 PM

## LIST OF POSTERS

### Research Focus Area A: Plant Production and Management Systems

#### Ph.D. Competition

POSTER #	TITLE AND NAME OF PRESENTER
A-P-01	<b>ACCASE INHIBITING HERBICIDE RESISTANT DIGITARIA SANGUINALIS CONFIRMATION</b> – Suma Basak, Crop, Soil and Environmental Sciences
A-P-02	<b>POSTHARVEST PHYSICOCHEMICAL AND ANTIOXIDANT PROPERTIES OF SELECTED GENOMICALLY DIVERSE BANANA CULTIVARS IN THE SOUTHEASTERN UNITED STATES</b> – Mahnaz Kargar, Horticulture
A-P-03	<b>COMPARATIVE GENOMIC ANALYSIS OF FUSARIUM OXYSPORUM F. SP. VASINFECTUM ISOLATES AND THEIR SMALL SECRETED PROTEINS</b> – Seungyeon Seo, Entomology and Plant Pathology
A-P-04	<b>STUDY OF IRRIGATION AND NITROGEN RATE IMPACT ON CORN YIELD AND SPECTRAL REFLECTANCE IN ALABAMA</b> – Mariana Del Corso, Crop, Soil and Environmental Sciences
A-P-05	<b>EFFECT OF POULTRY LITTER APPLICATION ON GROWTH AND YIELD OF CANOLA</b> – Yaru Lin, Crop, Soil and Environmental Sciences
A-P-06	<b>PATHOGENICITY OF MELOIDOGYNE INCOGNITA, HETERODERA GLYCINES, AND ROTYLENCHULUS RENIFORMIS ON BIRDSFOOT TREFOIL (LOTUS CORNICULATUS) IN ALABAMA</b> – Hayden Moye, Crop, Soil and Environmental Sciences
A-P-07	<b>EFFICIENT GENOME EDITING IN FUSARIUM OXYSPORUM BASED ON CRISPR/CAS9 RIBONUCLEOPROTEIN (RNP) COMPLEXES</b> – Qiang Wang, Entomology and Plant Pathology
A-P-08	<b>CONSTRUCTING ELEUSINE TRANSCRIPTOME REFERENCES FOR DETERMINATION AFRICAN FINGER MILLET (ELEUSINE CORACANA) PARENTAGE</b> – Hui Zhang, Crop, Soil and Environmental Sciences
A-P-09	<b>EFFECT OF PECTIN AMENDMENTS ON PLANT GROWTH-PROMOTION BY PGPR BACILLUS VELEZENSIS</b> – Mohammad Hassan, Entomology and Plant Pathology
A-P-10	<b>REPELLENT RECEPTION IN THE YELLOW FEVER MOSQUITO AEDES AEGYPTI</b> – Zhou Chen, Entomology and Plant Pathology
A-P-11	<b>COMPARATIVE WATER RELATIONS AND DESICCATION TOLERANCE OF FIVE INVASIVE ANT SPECIES</b> – Olufemi Ajayi, Entomology and Plant Pathology
A-P-12	<b>IS BIGGER ALWAYS BETTER?: THE MOST ABUNDANT CHEMICAL ODORS ARE NOT ALWAYS THE MOST DETECTED BY INSECTS</b> – Tolulope Morawo, Entomology and Plant Pathology
A-P-13	<b>CHARACTERIZATION OF CARBOXYLESTERASES IN PYRETHROID RESISTANT HOUSE FLIES, MUSCA DOMESTICA</b> – Xuechun Feng, Entomology and Plant Pathology
A-P-14	<b>FOLIAR APPLICATION OF CIS-JASMONE AFFECTS EMISSION OF VOLATILES AND EXPRESSION OF DEFENSE RELATED GENES IN TOMATO</b> – Joseph Disi, Entomology and Plant Pathology
A-P-15	<b>PLANT GROWTH-PROMOTING RHIZOBACTERIA-MEDIATED TRANSCRIPTIONAL REARRANGEMENT PRIMES DROUGHT TOLERANCE IN PLANTS</b> – Wenshan Liu, Entomology and Plant Pathology

## M.S. Competition

A-M-01	<b>IDENTIFICATION OF MOLECULAR MECHANISMS RESPONSIBLE FOR GOSSYPOL TOLERANCE IN FUSARIUM OXYSPORUM F.SP. VASINFECTUM</b> – Ambika Pokhrel, Entomology and Plant Pathology
A-M-02	<b>INVESTIGATE POPULATION DYNAMICS AND CHANGE IN PATHOGEN POPULATION OF XANTHOMONAS SP. THAT CAUSE BACTERIAL SPOT OF TOMATO AND PEPPER IN ALABAMA</b> – Rishi Bhandari, Entomology and Plant Pathology
A-M-03	<b>IMPROVING IRRIGATION MANAGEMENT THROUGH SOYBEAN ROOT GROWTH</b> – Luke Carter, Crop, Soil and Environmental Sciences
A-M-04	<b>EFFECTS OF COVER CROP MIXTURES ON BIOLOGICAL INDICATORS OF SOIL HEALTH</b> – Gokhan Ucar, Crop, Soil and Environmental Sciences
A-M-05	<b>ARE EARTHWORMS A CATALYST FOR NEMATODE INFECTION ON GOLF COURSES?</b> – Mary Foshee, Entomology and Plant Pathology
A-M-06	<b>THE EFFECTS OF SOIL SURFACE TEMPERATURE AND RELATIVE HUMIDITY ON 2, 4-D VOLATILIZATION</b> – Pan Wang, Crop, Soil and Environmental Sciences
A-M-07	<b>EFFECTS OF ROOT ZONE TEMPERATURE ON LED-GROWN HYDROPONIC LETTUCE</b> – Ran Shi, Horticulture
A-M-08	<b>RENIFORM WORM ROTYLENCHULUS RENIFORMMIS CAN SENSE COTTON ROOTS; HOST-SPECIFIC RECOGNITION OF PLANT PARASITIC NEMATODES</b> – Heather Gosse, Entomology and Plant Pathology
A-M-09	<b>ROOTSTOCKS UTILIZATION FOR ENHANCED SUSTAINABILITY OF HYBRID BUNCH GRAPE PRODUCTION</b> – Enfeng Xu, Horticulture
A-M-10	<b>AMMONIA VOLATILIZATION AS AFFECTED BY SURFACE RESIDUE AND UREASE INHIBITORS</b> – Noah Hull, Crop, Soil and Environmental Sciences
A-M-11	<b>CYCLOPHILIN 20-3 IS POSITIONED AS REGULATORY HUB BETWEEN LIGHT-DEPENDENT REDOX AND 12-OXO-PHYTODIENOIC ACID SIGNALING</b> – Izailda Barbosa dos Santos, Entomology and Plant Pathology
A-M-12	<b>PLANT GROWTH PROMOTION DUE TO BACILLUS APP.</b> – Kaitlin Gattoni, Entomology and Plant Pathology
A-M-13	<b>ETHANOL EFFECTS ON CARPENTERWORM MOTH ATTRACTION</b> – Dylan Bartlett, Entomology and Plant Pathology

## Research Focus Area B: Efficient Food Animal Systems & Research Focus Area C: Integrated Food and Health Systems

## Ph.D. Competition

B-P-01	<b>EFFECTS OF DESSICATION, FRESHWATER DIPPING AND RESUBMERSION ON TOTAL AND PATHOGENIC VIBRIO SPP. ABUNDANCE IN OYSTERS, CRASSOSTREA VIRGINICA, CULTURED IN PORTERSVILLE BAY (ALABAMA)</b> – Francisca Burgos, Fisheries, Aquaculture and Aquatic Sciences
B-P-02	<b>THE IMPACT OF CONSUMER HANDLING BEHAVIORS IN RETAIL LOCATIONS AND DURING VEHICULAR TRANSPORT ON FRESH RED MEAT TEMPERATURE</b> – Derek Griffin, Animal Sciences
B-P-03	<b>CHROMOSOME-WIDE MAPPING OF DNA METHYLATION IN FEMALE AND MALE CHANNEL CATFISH DURING CRITICAL PERIOD OF SEX DETERMINATION</b> – Yujia Yang, Fisheries, Aquaculture and Aquatic Sciences
B-P-04	<b>XENOGENESIS TO IMPROVE ARTIFICIAL SPAWNING OF REPRODUCTIVELY DIFFICULT CATFISH</b> – Ramjie Odin, Fisheries, Aquaculture and Aquatic Sciences
B-P-05	<b>EFFECTS OF DIETARY ENZYME-TREATED SOY AND SQUID PRODUCTS ON GROWTH PERFORMANCE, BODY COMPOSITION, SERUM BIOCHEMISTRY AND HISTOLOGY OF FLORIDA POMPANO</b> – Romi Novriadi, Fisheries, Aquaculture and Aquatic Sciences

B-P-06	<b>DEVELOPMENT OF A RAINWATER HARVESTING MODEL FOR BROILER FARMS TO ESTIMATE ON-FARM STORAGE NEEDS</b> – Carson Egde, Biosystems Engineering
B-P-07	<b>SEQUENTIAL ADDITION OF LIMITING AMINO ACIDS TO REDUCE CRUDE PROTEIN IN BROILER DIETS FROM 1 TO 21 DAYS OF AGE</b> – Ruben Kriseldi, Poultry Science
B-P-08	<b>EVALUATION OF NITROGEN DELIVERY METHODS FOR STOCKER CATTLE GRAZING ANNUAL RYEGRASS</b> – Phillip Gunter, Animal Sciences
B-P-09	<b>UNDERSTANDING THE MOLECULAR BASIS FOR ATTENUATION IN A LIVE VACCINE AGAINST COLUMNARIS DISEASE IN FISH</b> – Wenlong Cai, Fisheries, Aquaculture and Aquatic Sciences
B-P-10	<b>CLONING, EXPRESSION AND PURIFICATION OF BACTERIOCIN FROM SOIL SAMPLES USING METAGENOMIC TECHNIQUE</b> – Sayma Afroj, Poultry Science
C-P-01	<b>FOOD SAFETY REGULATIONS AND U.S SEAFOOD TRADE</b> – Rui Chen, Agricultural Economics and Rural Sociology
C-P-02	<b>DETERMINATION OF MICROBIOME IN ESCHERICHIA COLI O157:H7 CONTAMINATED COMMERCIAL SALADS USING 16S RDNA GENOMIC SEQUENCING</b> – Chao Liao, Poultry Science
C-P-03	<b>DOES PARENTAL MIGRATION AFFECT CHILDREN'S EDUCATION PERFORMANCE?</b> – Ping Wang, Agricultural Economics and Rural Sociology
C-P-04	<b>HIGH FAT SUGAR DIET IN MICE INDUCES SKELETAL MUSCLE DEGENERATION</b> – Yuxian Zhang, College of Human Sciences

## M.S. Competition

B-M-01	<b>ANALYSIS OF CONNEXIN 43 GAP JUNCTIONAL COUPLING AND ATRA SIGNALING IN BOVINE CUMULUS CELLS AND THE RELATIONSHIP TO EMBRYO DEVELOPMENT FOLLOWING IN VITRO FERTILIZATION</b> – Casey Read, Animal Sciences
B-M-02	<b>TIDAL-FLOW WETLANDS WITH FEEDBACK CONTROL FOR MANAGEMENT OF NITROGEN IN AQUACULTURE WASTEWATER</b> – Mary Rubisch, Biosystems Engineering
B-M-03	<b>EVALUATION OF BROILER CHICKEN MYOGENIC STEM CELL POPULATION HETEROGENEITY AND SKELETAL MUSCLE FIBER MORPHOMETRICS</b> – Oscar Tejada, Poultry Science
B-M-04	<b>EFFECT OF SUBSURFACE APPLICATION OF BROILER LITTER ON PHOSPHORUS LOSSES</b> – Palki Arora, Biosystems Engineering
B-M-05	<b>DISTINCT GENE REGULATORY NETWORKS BETWEEN BOVINE OOCYTES AND SURROUNDING CUMULUS CELLS</b> – Katelyn Kimble, Animal Sciences
B-M-06	<b>METABOLOMIC PROFILES DIFFER IN THE BLOOD PLASMA, BASED ON REPRODUCTIVE OUTCOME, IN HEIFERS UNDERGOING ARTIFICIAL INSEMINATION</b> – Kaitlyn Phillips, Animal Sciences
B-M-07	<b>MICROBIAL QUALITY AND SAFETY OF AQUACULTURE WATER FOR PRODUCE PRODUCTION</b> – Evelyn Willmon, Poultry Science
B-M-08	<b>CHARACTERIZATION OF THE DIGESTIVE GLAND MICROBIOME IN THE FRESHWATER MUSSEL VILLOSA NEBULOSA (BIVALVIA: UNIONIDAE)</b> – Alison Aceves, Fisheries, Aquaculture and Aquatic Sciences
B-M-09	<b>USING ADVANCED TECHNOLOGIES TO DETERMINE MEAT QUALITY IN POULTRY BREAST FILETS</b> – Avery Smith, Poultry Science
B-M-10	<b>PHENOTYPIC PARAMETERS ASSOCIATED WITH INFERTILITY IN BEEF HEIFERS</b> – Brock Griffin, Animal Sciences
B-M-11	<b>EFFECT OF FUNCTIONAL ICE ON THE SURVIVAL OF SALMONELLA TYPHIMURIUM INOCULATED ON RAW CHICKEN THIGHS DURING 48 H REFRIGERATED STORAGE</b> – Jasmine Kataria, Poultry Science

B-M-12	<b>INVESTIGATING THE EFFECT OF POST-SLAUGHTER DEBONING TIMES ON TEXTURE OF BREAST FILLETS FROM FAST-GROWING BIG BROILERS</b> – Meredith Johnson, Poultry Science
C-M-01	<b>INVESTIGATION OF WEST AFRICAN CRUDE PLANT EXTRACTS AS NATURAL ANTIMICROBIALS AGAINST FOODBORNE PATHOGENS AND SPOILAGE MICROORGANISMS</b> – Shelli Laskowitz, Poultry Science
C-M-02	<b>SOCIAL INFLUENCE AND CONSUMER DECISIONS TO PURCHASE BEEF</b> – Dalton Richardson, Agricultural Economics and Rural Sociology

## Research Focus Area D: Sustainable Ecosystems and Renewable Resource Management

### Ph.D. Competition

D-P-01	<b>USING PAPER INDUSTRY WASTE IN A BIOREFINERY</b> – Vivek Patil, Biosystems Engineering
D-P-02	<b>CLIMATE CHANGE, CRIME AND UNEMPLOYMENT: A CROSS-SECTIONAL ANALYSIS OF RURAL AND URBAN COUNTIES IN US</b> – Suzan Odabasi, Agricultural Economics and Rural Sociology
D-P-03	<b>DEVELOPMENT OF PLA-PHB BASED BIODEGRADABLE ACTIVE PACKAGING AND ITS APPLICATION</b> – Yichao Ma, Biosystems Engineering
D-P-04	<b>EVALUATING THE NUTRIENT REDUCTION AND WATER SUPPLY BENEFITS PROVIDED BY AN ON-FARM WATER STORAGE (OFWS) SYSTEM IN EAST-CENTRAL MISSISSIPPI</b> – Ritesh Karki, Biosystems Engineering
D-P-05	<b>ENABLE GLYCEROL UTILIZATION FOR BIOBUTANOL PRODUCTION IN CLOSTRIDIUM SACCHAROPERBUTYLACETONICUM N1-4 THROUGH METABOLIC ENGINEERING</b> – Sheng Dong, Biosystems Engineering
D-P-06	<b>PRODUCTION OF HIGH LEVELS OF CHIRALLY PURE D-2,3-BUTANEDIOL WITH A NEWLY ISOLATED BACILLUS STRAIN</b> – Pengfei Yan, Biosystems Engineering
D-P-07	<b>FAST PYROLYSIS OF OPUNTIA FICUS-INDICA AND GRINDELIA SQUARROSA</b> – Phillip Cross, Biosystems Engineering
D-P-08	<b>STUDY OF BIOPOLYMER-BASED MATERIALS FOR THE RELIEF OF SOLVENT TOXICITY DURING CLOSTRIDIAL BUTANOL FERMENTATION</b> – Pablo Jimenez-Bonilla, Biosystems Engineering
D-P-09	<b>FORECASTING SURFACE TEMPERATURE USING A NUMERICAL WEATHER PREDICTION MODEL AND THE EMOS POST-PROCESSING METHOD</b> – Hanoi Medina, Crop, Soil and Environmental Sciences
D-P-10	<b>BIOBUTANOL PRODUCTION THROUGH FERMENTATION USING CLOSTRIDIUM SACCHAROPERBUTYLACETONICUM N1-4 FROM LIGNOCELLULOSIC BIOMASS PRETREATED WITH ACETIC ACID</b> – Pixiang Wang, Biosystems Engineering
D-P-11	<b>ESTIMATION OF FLOW DURATION CURVES IN UPPER NECKAR CATCHMENT USING REGIONALIZATION</b> – Hemendra Kumar
D-P-12	<b>INVESTIGATING THE IMPACTS OF AZOSPIRILLUM BRASILENSE ON GREEN ALGAE METABOLISM</b> – Haixing Peng, Biosystems Engineering
D-P-13	<b>IMPACT OF CLIMATE CHANGE ON FOOD SECURITY OF SMALL ISLANDS: THE CASE OF MAURITIUS</b> – Roshini Brizmohun, Agricultural Economics and Rural Sociology
D-P-14	<b>SOURCE SPECIFIC DEMAND ELASTICITIES FOR DATES IN INTERNATIONAL TRADE</b> – Ali Dawood, Agricultural Economics and Rural Sociology

## M.S. Competition

D-M-01	<b>A COMPARATIVE STUDY OF RU-DOPED ZSM-5, RU-DOPED ACTIVATED CARBON, AND BIOCHAR FOR HYDROGEN PRODUCTION BY THERMOCATALYTIC DECOMPOSITION OF METHANE</b> – Khalida Harun, Biosystems Engineering
D-M-02	<b>SEDIMENT SOURCE ANALYSIS IN THE MOORE'S MILL CREEK WATERSHED, ALABAMA, USA, USING THE SEDIMENT FINGERPRINTING APPROACH</b> – Kritika Malhotra, Biosystems Engineering
D-M-03	<b>DEVELOPING RESERVOIR SEASONAL INFLOW FORECASTS BASED ON DYNAMIC CLIMATE FORECASTS AND LARGE-SCALE CLIMATE INFORMATION</b> – Yanan Duan, Crop, Soil and Environmental Sciences
D-M-04	<b>CAN TASTE AND ODOR COMPOUNDS PREDICT HARMFUL ALGAL BLOOMS IN SURFACE DRINKING WATER SOURCES?</b> – Edna Fernandez, Fisheries, Aquaculture and Aquatic Sciences
D-M-05	<b>INFLUENCE OF MODES OF CLIMATE VARIABILITY ON SUMMER AND WINTER CROP YIELDS IN THE RAINFED UNITED STATES</b> – Tayler Schillerberg, Crop, Soil and Environmental Sciences
D-M-06	<b>ORGANIC CARBON BURIAL IN SUBTROPICAL, SHALLOW LAKES: INVESTIGATING THE IMPACTS OF WARMING AND HUMANS</b> – Benjamin Webster, Crop, Soil and Environmental Sciences
D-M-07	<b>SPATIOTEMPORAL ANALYSIS OF THE WOLF AND PERDIDO BAY ECOSYSTEMS UTILIZING PALEOLIMNOLOGICAL TECHNIQUES</b> – Alexander Metz, Crop, Soil and Environmental Sciences
D-M-08	<b>MICROEMULSION ROUTE TO UPGRADE ALGAL BIOCRUDE</b> – Nikhil Jahin, Biosystems Engineering
D-M-09	<b>EFFECT OF SUSPENDED SOLIDS ON PHOSPHORUS TRANSPORT IN BIORETENTION CELLS</b> – Hallie Douglas, Crop, Soil and Environmental Sciences

## Undergraduate Posters (No competition)

A-U-01	<b>THE LETHAL EFFECTS OF STORMWATER TOXICITY ON DAPHNIA PULEX POPULATIONS</b> – Rachel Kuntz, Crop, Soil and Environmental Sciences
B-U-01	<b>VALIDATION OF POINT OF CARE GLUCOMETER (POCG) TECHNOLOGY FOR MEASURING CIRCULATING GLUCOSE CONCENTRATIONS IN SWINE USED AS TRANSLATIONAL MODELS FOR OBESITY AND METABOLIC DISEASE</b> – Madison Gohlke, Animal Sciences