THIS IS RESEARCH.

STUDENT SYMPOSIUM 2016
A SHOWCASE OF RESEARCH AND CREATIVE SCHOLARSHIP

SYMPOSIUM: APRIL 13
AUBURN UNIVERSITY STUDENT CENTER
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SAVE THE DATE

THIS IS RESEARCH.

STUDENT SYMPOSIUM

AWARDS CEREMONY

MONDAY, APRIL 18, 2016

5:00 P.M.

STUDENT CENTER BALLROOM

THIS IS RESEARCH.

FACULTY SYMPOSIUM

SEPTEMBER 15-16, 2016

THE HOTEL AT AUBURN UNIVERSITY AND

DIXON CONFERENCE CENTER
8:00 a.m.
Continental Breakfast
Level 2 - beside rooms 2222 and 2223

Registration
All day; Level 2 at entrance near room 2227

8:00 a.m. – 12:00 p.m.
Oral Research Presentations
Level 2 - rooms 2216, 2218, 2222, 2225, 2227, 2310, 2326

11:30 a.m. – 1:00 p.m.
Undergraduate Research Opportunities Fair
Morning Poster Session
Networking Lunch
Level 3 - Ballroom

1:00 p.m. – 4:45 p.m.
Oral Research Presentations
Level 2 - rooms 2216, 2218, 2222, 2225, 2227, 2310, 2326

4:30 p.m. – 6:00 p.m.
Afternoon Poster Session
Level 3 - Ballroom
THIS IS RESEARCH.
STUDENT SYMPOSIUM AWARDS CEREMONY
APRIL 18 at 5:00 P.M.

KEYNOTE SPEAKER:
MALLORY LUCIER-GREER
ASSISTANT PROFESSOR
DEPARTMENT OF FAMILY AND CHILD SCIENCES IN
THE COLLEGE OF HUMAN SCIENCES
FLORIDA STATE UNIVERSITY

Most of What I Really Need to Know about Research
I Learned at Auburn . . . The Rest I Learned in Kindergarten

Mallory Lucier-Greer is an assistant professor in the Department of Family and Child Sciences at Florida State University as well as a licensed marriage and family therapist. Greer received her master’s and doctoral degrees in Human Development and Family Studies at Auburn University with an emphasis in marriage and family therapy and family life education. After graduate school, she joined the Family and Community Resilience Lab at the University of Georgia as a post-doctoral research fellow. Her research examines the intersection of vulnerability and resilience. Greer examines processes that promote resilience and protect individuals and families from adverse outcomes with a focus on high-stress families, including military families, low-resource families, and stepfamilies. Identifying protective factors has direct application for promoting evidence-based practice in educational and clinical settings.
Oral Research Presentations
Morning Session
Student Center Meeting Rooms

8:00 a.m. – 8:45 a.m.
Room 2216 – Forestry and Wildlife Sciences
  Duffie, Duston (UG) – The search for meadow jumping mice in east-central Alabama
  George, Matthew (UG) – Effects of door width on wild pig entrance into traps
  Williamson, Steven (UG) – A statewide assessment of wildlife intake at Alabama’s wildlife rehabilitation centers

Room 2222 – Chemical Engineering
  Hand, William (G) – Soy protein substitution in phenol formaldehyde adhesive used in oriented strand board
  Hanley, Alan (G) – Scalable method for producing Janus nanoparticles to develop “smarter” nanostructures
  Kelly, Alexander (G) – Effect of pegylation on silica nanoparticle uptake and viability with Chinese hamster ovary cells

Room 2225 – Psychology
  Silverstein, Madison (G) – A model of risky sexual behavior on college campuses: The role of sexual victimization history, sexual sensation seeking, alcohol use, and masculinity
  Harrelson, Megan (G) – The effect of psychoeducation on public perceptions of adolescents with illegal sexual behavior
  Walker, Erin (UG) – Comparing coercive sexuality scores with sexual sensation seeking, hostility towards women, sexual compulsivity, and rape myth acceptance scores

Room 2227 – Neurology and Computer Imaging
  Murphy, Jerry (G) – Spatial smoothing and motion correction effects on sub-millimeter resolution fMRI data
  Lanka, Pradyumna (G) – Perils of using cross-validation for performance estimation in neuroimaging-based diagnostic classification

Room 2310 – Biomedical Sciences
  Gillen, Alex (G) – In vitro evaluation of the forwarder knot
  Kitchens, Steven (G) – A two year study of environmental salmonella incidence and proximal contamination in a multi-species animal facility
  Eldemery, Fatma (G) – Characterization of binding of infectious bronchitis virus spike proteins representing vaccine subpopulations to chicken tissues

Room 2326 – Biological Sciences
  Gilpin, Jessica (G) – Abundance and distribution of host sea anemones, associated cleaner shrimps, and fish clients on Caribbean coral reefs at St. Thomas, US Virgin Islands
  Joyce, Kathlene (UG) – Phylogeography of slimy salamanders in the state of Alabama
  Renfro, Bobbie (G) – Can we swim with the fishes? Impacts of diving tourism on macroalgal grazing behavior by coral reef fishes

9:00 a.m. – 9:45 a.m.
Room 2216 – Fisheries and Wildlife Sciences
  John, Rebecca (G) – Tracking nightly movement and fidelity with fluorescent powder for green salamanders in Northern Alabama
  Gosh, Kamal (G) – Studying the growth variability of channel-blue hybrid catfish: an integrated base approach
  Stuart, Mark (G) – Anemone shrimp microhabitat utilization in a marine cleaning mutualistic network: Optimization for different behavioral strategies

Room 2218 – Human Development and Family Sciences
  Kaeppeler, Alex (G) – Linking social anxiety and autonomic responses to social stress in preadolescence
  Sabey, Allen (G) – “Lots of hugs and kisses:” Expressions of parental love as reported by mothers and their children
  Hartwick, Olivia (G) – Social competence as a predictor of preschoolers coping tactics during dyadic peer play

Room 2222 – Chemical Engineering
  Kelly, Jessica (G) – Treatment of GM1 gangliosidosis via pH sensitive polymersomes
  Noor, Matthew (G) – Comparing covalent and non-covalent lysozyme functionalized single-walled carbon nanotube dispersions and composites
  Roe, David (G) – Effects of supercritical fluid media and a nanoscale catalyst in Fischer-Tropsch fuel production

Room 2225 – Psychology
  Cero, Ian (G) – Sine qua non: Modern suicide theory and the availability of lethal means
  Zuromski, Kelly (G) – Do changes in insomnia precede changes in suicide ideation? A latent change model of community adults over a brief interval
  Pitzer, Elizabeth (G) – Examining the relationship between PTSD symptom clusters and the acquired capability for suicide using DSM-5 criteria

Room 2227 – Aerospace, Mechanical, and Electrical Engineering
  Moore, William (UG) – Modeling heat transfer in the presence of linear and nonlinear acoustic waves
  Deokar, Pratik (G) – Effect of nanoparticles aspect ratio on the two phase flow boiling heat transfer coefficient of refrigerant and nanolubricants mixtures in a 9.5 mm micro-fin tube
  Venkatasubramanian, Murali (G) – Quest for a quantum search algorithm for testing stuck-at faults in digital circuits
Room 2310 – Entomology
Ademokoya, Blessing (G) – Attractiveness of the Kudzu bug (Megacopta cribraria) to different legume varieties: in the quest for better management options
Liu, Feng (G) – The molecular basis of odorant reception in the common bed bug

Room 2326 – Biological Sciences and Biology
Staley, Molly (G) – Insights into the role of host exposure in limiting disease emergence in a natural host-pathogen system
Godwin, Rebecca (G) – Systematics of the genus Ummidia: species delimitation using natural history collections
Benesh, Kasey (UG) – The range stability of Etheostoma tallapoosae and Etheostoma stigmatum

10:00 a.m. – 10:45 a.m.
Room 2216 – Forestry and Wildlife Sciences
Bennett, Mary (G) – Above the tunnels: Habitat use of the southeastern pocket gopher
Pruitt, Susan (G) – Population dynamics of the endangered prairie massasauga rattlesnake (Sistrurus catenatus tergeminus tergeminus) at Squaw Creek National Wildlife Refuge
Gould, Brendan (G) – Comparison of hen comb capillary and wing vein blood glucose via compact glucometer

Room 2218 – Consumer Design and Kinesiology
Rashid, Md Sanuwar (G) – venin blood glucose via compact glucometer
Gould, Brendan (G) – at Squaw Creek National Wildlife Refuge
massasauga rattlesnake (Sistrurus catenatus tergeminus tergeminus)
Pruitt, Susan (G) – Comparison of hen comb capillary and wing vein blood glucose via compact glucometer

Room 2218 – Creative Scholarship
Gauthier, Jami (G) – Incorporation of normative feedback into DSM-5 PTSD using the CAPS-5

11:00 a.m. – 12:00 p.m.
Room 2216 – Biological Sciences, Aquaculture, and Agriculture
Jescovitch, Lauren (G) – Expanding aeration to manage water quality in split-pond aquaculture
Folt, Brian (G) – Establishing reference demography for conservation: A case study of the Alligator Snapping Turtle (Macrochelys temminckii) in Spring Creek, Georgia

Room 2218 – Humanities, History, and Justice
Jeffcoat, Jeremy (G) – Forgotten freedom fighters: Gee’s Bend, Alabama and the voting rights movement of 1965
Ransom, Cale (UG) – Comparison of the use of common law in the United States and Sri Lanka

Room 2222 – Mathematics and Computer Science
Harrell, Dexter (UG) – Modeling habitat fragmentation at the landscape level via reaction diffusion equations
Hyder, Jacob (UG) – 3D fluid modelling using consumer based motion tracking camera

Room 2225 – Social Sciences and Psychology
Petri, Jessica (G) – Moving beyond self-report: Construct validation of DSM-5 PTSD using the CAPS-5
Gauthier, Jami (G) – Incorporation of normative feedback into National Alcohol Screening Day: feasibility, acceptability, and short-term impact on alcohol use and related behaviors
Yanes, Julio (G) – Neurobiological impact of chronic cannabis use: a meta-analysis of functional neuroimaging studies

Room 2227 – Chemistry
Narayanan, Natasha (UG) – Functionalization of the central benzene ring in [n]para-terphenylophanes
Sustarich, Jake (UG) – Enhanced expression of p75NTR induced by proNGF leads to neuronal apoptosis
Armstrong, William (UG) – Is a steric effect the controlling factor in rhodopsin photoisomerization?

Room 2310 – Health Sustainability and Nursing
Damron, Adley (UG) – The effects of simulation on unlicensed nurses self-efficacy, clinical skill application, and critical thinking
Tumwebaze, Joel (G) – Community gardening to reduce food insecurity and child malnutrition in Chacraseca-Nicaragua
Rains, Sara (UG) – Identifying effective community development practices in Ecuador

(UG) = undergraduate student presentation
(G) = graduate student presentation
Evidence-based practice (EBP) is based on the best available scientific evidence in conjunction with clinical expertise and patient values to help guide healthcare decisions. Although research and EBP projects have overlapping concepts, there are distinct differences. EBP is used to close the gap between findings in research and actual practice by developing and implementing practice-improvement strategies in real-world settings. EBP is the foundation for excellence in clinical practice and is known to: 1) improve clinical outcomes and quality; 2) increase efficiency and/or decrease cost; and 3) decrease healthcare disparities.

1. Jones, Kimberly (G) – Enhancing education to improve patient self-management of heart failure symptoms and decrease risk for hospitalizations
2. Holston, Doshie (G) – Venous thromboembolism education in medical oncology staff nurses
3. Stagner, Chrisopher (G) – Increasing hand washing in the immunocompromised dialysis patient
4. Cole, Meghan (G) – Improving transition into primary care
5. Henderson, Kendall (G) – Patient care journals in intensive care units
6. Williamson, James (G) – Statin therapy for the secondary prevention of atherosclerotic cardiovascular disease in individuals 65 years of age and older
7. Blair, Brittany (G) – Timely hospice referrals in terminal cancer patients
8. Blankenship, Mary (G) – Effects of health literacy and education on hypertension management
9. Shirley, Pamela (G) – Evidence based practice and cardiac chest pain; Motivating nurses to embrace EBP versus tradition
10. Escobar, Manuel (G) – Obesity intervention in children and adolescents
11. Riley, Nicole (G) – Immunization education for parents
12. Thomas, Larry (G) – Pediatric asthma: Recommendations to reduce readmissions
13. McDowell, Samantha (G) – Improving self-care and pain management at home
14. Alexander, Kimberly (G) – Improved adherence of B12 injections with education on self-administration
15. King, Anetrial (G) – Reducing congestive heart failure 30-day readmission
16. Burns, Kara (G) – Improving outcomes and quality of life in females with chronic pelvic pain
17. Cannon, Ashley (G) – Adjunct therapy for peripheral neuropathy
18. Clark, Kara (G) – Improving cardiac rehabilitation participation to decrease heart failure readmissions
19. Clausell, Sekeita (G) – Hypertension screenings
20. Criswell, Brandi (G) – Preventing nutrition disparities in patients with head and neck cancer
21. Fields, Dana (G) – Menstrual health education for middle school girls
22. Finkel, Angie (G) – Motivational interviewing to incur therapeutic lifestyle change in the overweight and obese
23. Freeman, Laura (G) – Getting active: protect the hearts of our community
24. Garnett, Kaylin (G) – Promoting breastfeeding in adolescent mothers
25. Hall, Ashely (G) – Improving heart failure readmission rates with telephone follow-up
26. Hammaker, Courtney (G) – Improving childhood obesity with educating nursing staff
27. Hobbs, Jennifer (G) – Implementation of diabetes referral distribution in the emergency department at discharge to facilitate education in this population
28. Knight, Amanda (G) – Reducing central venous catheter-related infections in outpatient hemodialysis clinics

Chemical Engineering
1. Brazel, Morgan (G) – Understanding cardiac arrhythmias using 3D models of hiPSCs from control and Timothy Syndrome cell lines
2. Cullum, Richard (G) – Validation and implementation of screens for targeted melanoma drug discovery
3. Finkel, Ferdous (G) – Establishing an engineered tissue model to study the effects of alcohol on human heart development
4. Harris, Chelsea (G) – Targeting of GABA receptors using functionalized nanoparticles as a method of treating cancer-related pain
5. Bittner, Sean (UG) – Controlled release of antibiotic agents from PLGA/halloysite nanocomposites
6. Bronston, Fraser (UG) – Gallium-catalyzed aqueous epoxidation
7. McCormack, Kaylee (UG) – 1-/Thia-3,4-Diazolidine-2,5-Dione (TDADH) Polymers
8. Pickering, Christina (UG) – Development of gold-lipidic nanocomposites for cancer improved chemotherapeutic delivery

Biomedical Sciences
1. Buckley, Rachel (UG) – Genome editing in non-coding regions with CRISPR
2. Spina, Stephanie (UG) – Studying the noncoding genome, specifically microRNAs, to identify novel breast cancer genetic risk factors
3. Gurley, Bain (UG) – Effects of incubation temperature on hatching success and physical development in zebra finches
4. Matthews, Michael (UG) – TrKA activity is impaired in streptozotocin induced diabetes rat brain
5. Shepp, Kasey (UG) – Exploring genetic associations between hydroxy-carboxylic acid receptors and hereditary breast cancers
6. Fang, Han (G) – Effect of niacin on nonalcoholic fatty liver disease in adiponectin knockout mice: A pilot study
7. Barstow, Carla (G) – Diagnosis and treatment of a pregnant bitch with immune-mediated polyarthritis
8. Sahib, Abdul Mohin (G) – Evaluation of tumor specific promoters for use in conditionally replicating adenovirus mediated virotherapy of canine lymphoma
9. Meadows, Caroline (UG) – Motivation and motor-preparatory brain activity independently affect response time
### Environmental Design and Community Planning
1. **Byrne, Brendan (UG)** – Traffic impact analysis of augmented bicycle facilities on Auburn University’s campus
2. **Cowper, Emily (UG)** – What the frack is in our water? What the frack is in my water?
3. **Garcia, Max (UG)** – Noise pollution impact in a local and global context
4. **Rush, Charles (UG)** – Are you gonna eat that? Global and national food waste
5. **Hiware, Sagar (G)** – Radical regenerative planning for the city of Montgomery
6. **Kaaur, Jaspuneet (G)** – One square mile study

### Entomology
1. **Ajayi, Olufemi (G)** – Nutritional ecology and its fitness impacts in Psedacteon species (Diptera: Phoridae), parasitoids of imported fire ants (Hymenoptera: Formicidae)
2. **Chen, Zhou (G)** – The immune gene expression and pyrethroid resistance in house flies Musca domestica
3. **Feng, Xuechun (G)** – Roles of carboxyesterases in pyrethroid resistant house flies, Musca domestica
4. **Yang, Liu (G)** – Foraging orientation, oviposition preference and development of kudzu bug, Megacopta cribraria (Hemiptera: Plataspidae) on six legume crops
5. **Zeng, Yuan (G)** – Novel constitutive and inducible antibacterial activities against multidrug resistant bacterial pathogens in the Eastern Subterranean Termite Reticulitermes flavipes

### Pharmacy
1. **Yooket, Pattanin (G)** – Regulation of Thiamine Transporter SLC19A3 by HIF1α: a possible potential therapeutic in heart failure
2. **Setti, Sharay (G)** – P301L tau expression exacerabtes memory deficits and tau phosphorylation in the aged brain
3. **Aldawsari, Mohammed (G)** – Acyclovir nanogel formulation for human skin cadaver permeation enhancement
4. **Airbyawi, Hamad (G)** – Short-chain ceramides for enhanced cytotoxicity of liposome-encapsulated Doxorubicin toward human breast cancer cells (MDA-MB231)
5. **Eggert, Matthew (G)** – The role of secretory phospholipase A2 isomers and PLA2 receptor expression in modulating responsive liposome nanoparticle uptake and therapeutic efficacy within prostate cancer models
6. **Lee, Yann-Huei (G)** – Mathematical modeling of pharmacokinetic parameters for transdermal beta blockers
7. **Alhowail, Ahmad (G)** – Doxorubicin alters mechanisms of memory formation in ex vivo and in vivo models of Chemobrain
8. **Brannen, Andrew (G)** – Segmental 360° bioluminescent imaging using the Mouse Imaging Spinner (MiSpinner) shows potential for accurate monitoring of tumor development
9. **Pinky, Priyanka (G)** – Prenatal nicotine exposure and mechanism of memory loss in offspring
10. **Zhang, Lingxin (G)** – Identification of a biased agonist for P2Y2 receptor to suppress pro-thrombotic gene expression in human coronary artery endothelial cells
12. **Huynh, Jennifer (G)** – Evaluation of adherence to the American Diabetes Association standards of medical care in HIV-infected patients

### Educational Foundations
1. **Slear, Susan (G)** – A qualitative method to promote equivalency in distance learning
2. **Lin, Xi (G)** – A qualitative study of Chinese students’ choice of the host university in the U.S. and their decisions to stay or leave the U.S. upon graduation

### Audiology
1. **Gehring, Cydney (G)** – Neonatal-intensive care unit parent education on hearing loss

### Health Outcomes
1. **Hohmann, Lindsey (G)** – The moderating power of impulsivity: a thorough literature review examining the theory of planned behavior
2. **Hohmann, Natalie (G)** – Medication dispensing error learning processes in U.S. community pharmacies: a systematic literature review as seen through the four frames model of organizational theory

### Polymer, Industrial, and Mechanical Engineering
1. **Cook, Jonathan (G)** – Synthesis of functionalized polyaniline as a conductive curing agent for epoxy resins
2. **Li, Mei (G)** – Polysaccharide blended films for cationic contaminant removal from water
3. **Nautiyal, Amit (G)** – Conducting polymer coating on carbon steel by electrochemical method
4. **Derhami, Shahab (G)** – A novel optimization approach for data mining: A medical diagnosis case
5. **Granow, Robert (G)** – Full shift physical activity among deforestation hand planters
6. **Liu, Yuzhe (G)** – Rapid and sensitive detection of Salmonella Typhimurium on plastic food processing plate by using wireless biosensors
7. **Zhou, Lang (G)** – Electrochemical proximity assay of platelet-derived growth factor with a multi-parametric/multimodal spectroscopy apparatus and its mechanisms study
8. **Ramezanpour, Bahareh (G)** – Exact simulation of polarized light reflectance by particle deposits
9. **Kim, Sungil (UG)** – A cross correlation-based stock forecasting model

(UG) = undergraduate student presentation (G) = graduate student presentation
Oral Research Presentations
Afternoon Session
Student Center Meeting Rooms

1:00 p.m. – 1:45 p.m.
Room 2216 – Forestry and Wildlife Sciences
Cole, Andrea (G) – Effect of growth rate on Amylostereum spp. fungus by terpenes
Celikbag, Yusuf (G) – The role of ethanol and temperature on hydroxyl and carbonyl groups in bio-oil produced by hydrothermal liquefaction of Loblolly Pine
Devkota, Pratima (G) – Varying tolerance of mature Loblolly Pine (Pinus Taeda L.) families to root infecting fungi

Room 2218 – Tourism and Hospitality Management
Chen, Han (G) – Cultural tourism: An analysis of engagement, cultural contact, memorable tourism experience and destination loyalty
Dillette, Alana (G) – Experiences of wellness through tourism: A content analysis of TripAdvisor reviews
Stephan, John (G) – Examining online consumer’s intention to book hotel rooms

Room 2222 – Chemical Engineering
Saha, Partha (G) – Low temperature fabrication process of Microelectromechanical Systems (MEMS) from a renewable and biodegradable source with unique mechanical and optical properties
Whitener, Ricky (G) – Using nucleic acid aptamers to modulate specificity, binding, and quantity of drug for personalized treatment
Tilton, Skyler (UG) – 3D printing embedded circuits

Room 2225 – Humanities – English
Williford, Carson (UG) – War damn Iron Bowl: Possible legend and legendary possibility in a house divided
Skellung, Hannah (UG) – “His love was in the earth … his love was far away feeding on the rain:” Other Voices, Other Rooms and mutable queer spaces
Shannon, Ian (UG) – Value in space: the importance of literary journals and printed material in a digital age

Room 2227 – Materials and Mechanical Engineering
Chanysevah, Alina (G) – Organophosphorus neurotoxin detection via electrochemical methods
Talebinezhad, Hossein (G) – Energy storage properties of BaTiO3-SiO2 composites
Vahid Mohammadi, Armin (G) – Freestanding electrodes of interlayer expanded 2D Ti3C2 (MXene) for high performance supercapacitors

2:00 p.m. – 2:45 p.m.
Room 2216 – Forestry and Wildlife Sciences
Poudel, Jagdish (G) – Trends in species conservation banking in the United States
Santiago, Rafael (G) – Coppicing evaluation in the southeast of the U.S. to determine harvesting methods
Majidzadeh, Hamed (G) – Soil carbon beneath impervious surfaces in urban environments

Room 2218 – Forestry and Wildlife Sciences
Mitra, Nirmal Kumar (G) – Macroyclic 1,4-Diketones to highly bent para-Phenylenes using a mild dehydrative aromatization protocol
Woodie, Lauren (G) – Characterization of recombination-activating gene 1 function in peripheral physiology and hippocampal synaptic plasticity

Room 2222 – Chemical Engineering and Chemistry
Head, Sara (UG) – Gelatin methacrylate and polyethylene glycol-fibrinogen as novel biomaterials to form functional 3D human cardiac tissues
Sloan, Author (UG) – Single-Walled carbon nanotube dispersion in an complex microbiological medium
Lloyd, Carter (UG) – Incorporation of Nucleic Acid Aptamers in Silicone Hydrogel Contact Lens for Controlled Drug Delivery

Room 2225 – Pathobiology and Animal Sciences
Liao, Chao (G) – Establishment and validation of RNA-based predictive models for understanding survival and susceptibility of low-temperature adapted Vibrio parahaemolyticus in oysters
Farjana, Saiada (G) – Changes in avian infectious bronchitis virus (IBV) spike proteins associated with adaptation to chicken embryonic kidney (CEK) cells do not improve attachment

Room 2227 – Industrial and Systems Engineering and Natural Resources
Huangfu, Rong (G) – Quantifying stairwell evacuation times
Baltaci, Enis (G) – Assessment of Rain Barrels and Permeable Pavements as LID Practices on Urban Flooding
Damianidis, Damianos (G) – Evaluating a generic drought index as a tool to predict aflatoxin contamination in corn

3:00 p.m. – 3:45 p.m.
Room 2216 – Fisheries
Abass, Nermeeen (G) – Genotype-environment interactions for survival and growth rate at varying salinity for channel catfish, albino catfish, and transgenic channel catfish by cDNA growth hormone (GH).
Abdelrahman, Hisham (G) – Water temperature as a possible cause of variations in performance of Pacific white shrimp Litopenaeus vannamei in inland ponds for low-salinity culture
Gratz, Steven (G) – Economic value of recreational fishing on reservoir and tailrace sections of Millers Ferry Reservoir, Alabama

Room 2218 – Nutrition and Dietetics
Hardin, Amie (G) – Diabetes self-management education and medical nutrition therapy for Type 2 diabetes mellitus improves patient outcomes: a retrospective chart review
Reece, Jami (UG) – Role of sugary water consumption in adipose gene expression
Kothari, Vishal (G) – High fat western diet leads to hyperphosphorylated tau and amyloid beta in mouse brain

Room 2225 – Drug Discovery
Nie, Ben (G) – Evaluation of in vitro and in vivo intracellular uptake and degradation of sPLA2 responsive liposome in prostate cancer by LC-MS/MS
Chandler, Madison (G) – Breast cancer susceptibility gene panel screening using next generation sequencing technology in an African-American cohort in Alabama
Hunsberger, Holly (G) – Suppression of glutamate uptake mediates hippocampal hyperexcitability induced by peripheral viral challenge

Room 2227 – Architecture and Urban Planning
Halepaska, Anna (UG) – On void and volume as a reinterpretation of urban infill developments
Page, Sarah (UG) – Pedestrian access and experience
Katsoulis, Abigail (UG) – Archibet

4:00 p.m. – 4:45 p.m.
Room 2225 – Pharmacology and Drug Discovery
Halepaska, Anna (UG) – On void and volume as a reinterpretation of urban infill developments
Page, Sarah (UG) – Pedestrian access and experience
Katsoulis, Abigail (UG) – Archibet

Room 2216 – Biosystems Engineering and Geosciences
Richard, Sarah (G) – Quantification of polycyclic aromatic hydrocarbons in biochar
Cross, Phillip (G) – Chemical properties of lignin that effect tar formation during gasification of biomass
Jahan, Shakura (G) – Origin of petroleum in the Bengal Basin, Bangladesh

Room 2218 – Nutrition and Dietetics
Luo, Yuwen (G) – Metabolic phenotype and adipose and liver features in the high fat Western diet-induced mouse model of obesity-linked NAFLD
Willis, Amy (G) – Mediterranean diet intervention in obese men and women using both nutrition education and supplementation of extra virgin olive oil and mixed nuts.
Zheng, Chen (G) – TRAF6 leads to ubiquitination and activation of Akt

Room 2222 – Education & Communication
Britton, Keely (G) – Examination of mentoring mindsets of faculty (mentors) and graduate students (protégés/mentees): Mentoring framework exploratory study
Seung-Bickley, Rebecca (G) – Establishing credibility through conflict: An examination of anti-vaccination rhetoric
Powell, Stephen (G) – A mixed methods analysis of first graders’ knowledge and misconceptions of agriculture

Room 2225 – Pharmacology and Drug Discovery
Gossett, Heather (G) – Comparison of acetaminophen administration to horses through a paste and nasogastric tube
Porter, Haley (G) – Physicochemical characterization of Nepafenac by Hydroxypropyl-Beta-Cyclodextrin Complex for ocular delivery

Afternoon Poster Session
Student Center Ballroom
4:30 p.m. – 6:00 p.m.

Physics
1. Edmond, James (UG) – Ion-momentum imaging of dissociative-electron-attachment dynamics in N₂O and HCCH.
2. Wang, Martin (UG) – Computational Study of Electrostatically Tunable Band Offsets in MoS₂ Multilayers

Nursing
1. Beverly, Kristen (G) – Interactive fall prevention strategies
2. McManus, McKenzie (G) – Medication adherence for hypertension management
3. Kohl, Catherine (G) – Evidence based strategies for diet and exercise compliance in Type 2 diabetes mellitus
4. Lee, Alyzia (G) – Cardiovascular disease in women
5. McCullough, Ruth (G) – Improved management of hypertension with scheduled follow-up upon discharge from the emergency department
6. McDonald, Tara (G) – Increasing adherence to antihypertensive medications in hypertensive patients
7. McFarland, Trevor (G) – Anticoagulation selection and monitoring in patients with atrial fibrillation
8. McLean, Ashley (G) – Do vitamins work for decreasing blood pressure in women?
9. Mollus, Tara (G) – Compassion fatigue screening in oncology nurses
10. Moore, Alisha (G) – Diabetes education in Hispanic patients
11. Newman, Tina (G) – Improving vaccination for Human Papillomavirus through parental education
12. Popwell, Candy (G) – Interventions to reduce readmissions and mortality in patients with COPD
13. Richardson, Brooke (G) – Urinary tract infections: prevention and management
14. Root, Michelle (G) – Bydureon (exenatide QW) in Type 2 diabetes mellitus
15. Sparks, Minju (G) – Healthy heart lifestyle intervention for women at high risk and/or diagnosed coronary heart disease
16. Spencer, Robin (G) – Improving health literacy in type II diabetic patients
17. Stacey, Melanie (G) – Adolescent restraint and seclusion educational process improvement initiative
18. Stokes, Stacie (G) – Sexually transmitted disease education for college students
19. Williams, Christalyn (G) – Distress screening in adult oncology
20. Williams, Candy (G) – Heart failure readmission prevention
21. Woodfin, Elizabeth (G) – Comprehensive screening for suspected hypothyroidism
22. Young, April (G) – Evidence based practice for an asthma action plan
23. Dean, Terrica (G) – Group-based medical visits in Type 2 diabetes patients
24. Kilcullen, Evangeline (G) – Medication reconciliation: the journey home
25. Hardy, Amanda (G) – Education toward hypertension control
26. Mccollough, Samantha (G) – Increased medication education regarding anticoagulants among elderly patients
27. Plake, Becca (G) – Eating disorder education in the female college-aged population

(UG) = undergraduate student presentation
(G) = graduate student presentation
**Biosystems Engineering**
1. Li, Jing (G) – Detoxification of softwood hydrolysate for butanol production by Clostridium acetobutylicum ATCC 824
2. Loxley, Thomas (G) – Comparing loblolly pine growth allometry with chemical and physical properties
3. Rains, John (G) – Pathogen removal in algal turf scrubber
4. Shakya, Rajdeep (G) – Upgrading of bio-crude obtained from hydrothermal liquefaction of algae
5. Shrestha, Anshu (G) – Bench scale analysis of off-gas emissions from stored loblolly pine grinds
6. Copley, Kirk (UG) – Standardization of agriculture production budget models using python
8. Granger, Craig (UG) – Behavior of bark from short rotation woody crops
9. Haber, Holly (UG) – Superabsorbent polymers from renewable resources
10. Iskandar, Jeffrey (UG) – Production of bio-oil by hydrothermal liquefaction of algae
11. King, Ben (UG) – Flow characteristics of woody biomass grinds and crumbles

**Chemical Engineering**
1. Mondal, Animesh (G) – Spray deposition of Cu2ZnSnS4 (CZTS) for cost-effective and non-toxic photoelectrodes
2. Tian, Yuan (G) – Endothelial progenitor cell encapsulated in poly(ethylene glycol)-fibrinogen hydrogels for injectable delivery of cells and neo-vascularization
3. Zhao, Rong (G) – Solar-driven waste-to-fuels in a hybrid photoelectrochemical reactor
4. Paul, Kyle (UG) – Examining cell viability in relation to PEG length and silica nanoparticle size
5. Windham, Katherine (UG) – Engineering nucleic acid aptamers responsive to physiological conditions creating controlled drug delivery platforms

**Chemistry and Biochemistry**
1. West, Maya (G) – Uranyl sensing using Quinoxalinol Salen-based ligand
2. Njuma, Olive (G) – Radical mechanisms for Catalase-Peroxidase (KatG) activity, inactivation, and restoration
3. Eddy, Madeleine (UG) – Characterization of Salen ligand complexes for application in Uranyl sensing
4. Farmer, Taylor (UG) – Exploring a new cascade reaction, a key step in the synthesis of a polyol
5. Ward, Meghan (UG) – Exploring zinc compounds as potential anti-oxidant pharmaceuticals

**Biomedical Sciences**
1. Young, Taylor (UG) – PPAR-gamma activation helps clear insulin induced amyloid beta
2. Jarrard, Madison (UG) – Characterization of Mycobacterium tuberculosis Shikimate Kinase inhibitor
3. Hubbard, Caroline (UG) – The effects of macronutrients in inducing satiety via Peptide YY
4. Johnson, Nate (UG) – Molecular mechanism of doxorubicin-induced memory dysfunction

**Architecture and Design**
1. Sokienah, Yaman (G) – General hospital for low-income community
2. Li, Jingting (G) – Sunny days & rainy days: strengthen neighborhood culture through nature-based organic design
3. Wu, Hao (G) – Process-based design within the post-industrial model
4. Lima, Livia (G) – Crafting a new urban core for the peninsula of Mobile, AL
5. Bailey, Vaughn (UG) – Women’s and children’s specialized hospital
6. Barrows, Emily (UG) – Children’s of Ochsner Health System
7. Dessert, AJ (UG) – Pediatric trauma and disease control center
8. Lauren, Thomas (UG) – Hospital Saint Paul de Tarsa
9. Owens, Taylor (UG) – Biomimicry within the women and children’s healthcare center
10. Ridgeway, Molly (UG) – Sao Paolo Women and Children’s Healing
11. Slade, Abbie (UG) – Auckland City Women and Children’s Hospital
12. Williams, Haley (UG) – Bayside Hospital: Women and Children’s Healthcare of Auckland
13. Bowen, Ryan (UG) – Generation of new landscape forms through mold making, digital, and mixed media experimentation
14. Collier, Caroline (UG) – Ethereal militia
15. Criminale, George (UG) – Interior artifacts

**Kinesiology**
1. Gascon, Sarah (G) – Effects of fatigue on throwing kinematics among NCAA division I softball athletes
2. Javage, Erika (G) – The effect of an alternative lacing strategy on gait parameters
3. Dyke, Ford (G) – Does a single bout of ‘green exercise’ facilitate engagement in future exercise behavior? A one-year follow-up pilot study
4. Nabity, Chloe (G) – Influence of sock type on gait parameters
5. Grand, Kirk (G) – Why self-controlled feedback enhances motor learning: Answers from electroencephalography and indices of motivation
6. Meadows, Caroline (UG) – Motivation and motor-preparatory brain activity independently affect response time

**Geosciences, Forestry, Environmental, and Natural Resources**
1. Bowen, Trae (G) – An impervious surface analysis of the locust watershed located in Birmingham, AL
2. Torres, Jose (G) – Detecting a subsurface smouldering event using Landsat thermal imaging: Bridgeton landfill case study
3. Da Cunha, Jose (G) – Sensor-based irrigation scheduling can help corn growers to increase profitability and environmental stewardship
4. Bartholomew, Megan (G) – Long term vegetation response to hydrologic recovery in isolated cypress domes of west-central Florida
5. Zhang, Bowen (G) – Net exchange of CH4 fluxes between terrestrial ecosystem and atmosphere in the Arctic-Boreal Region under future climate change scenarios
6. Essien, Charles (G) – Assessing the sensitivity of acoustic tools to the effect of moisture content in estimating acoustic velocity and modulus of elasticity of lobolly pine (Pinus taeda)
7. Lamb, Avery (UG) – Plant growth and physiology of rain garden plants in two soil types

(UG) = undergraduate student presentation
(G) = graduate student presentation
Nutrition, Hospitality Management, and Human Development and Family Science

1. Khaliefat, Aahed (G) – Identifying first-time American hospitality managers motivations in accepting overseas assignments
2. Hlavaty, Kathleen (G) – Differentiating exposure to coercive controlling violence: A mixed methods study
3. Saini, Ekjyot (G) – Neighbourhood social fragmentation associations with objective sleep among women
4. Li, Yueru (G) – The protective effect of steardonic acid (SDA) on amyloidß40-induced neurotoxicity in H19-7 hippocampal cells.
5. Qi, Yijing (G) – Blood glucose concentrations are not increased by chronic IP Glucagon administration in Leptin-Treated Type 1 diabetic rats
6. Rege, Shradha (G) – Resveratrol provides neuroprotection against oxidative damage and memory loss
7. Bottcher, Mary (G) – Nutrition knowledge and Mediterranean diet adherence: Validation of a field based survey instrument
8. Cave, Carlie (UG) – The role of anxious attachment on multiple domains of functioning following couple and relationship education participation
9. Hermes, Carolyn (UG) – Predictors of preschoolers’ prosocial behavior during dyadic peer conflict

Engineering and Building Science

1. Mathews, Justin (UG) – Development of a return on investment framework for building information technology implementation by developers
2. Kim, Sungil (UG) – Ultra-low power subthreshold circuit design and optimization
3. Thornton, John (UG) – The mobile tool for music appreciation students
4. White, James (G) – The impact of change orders on construction projects at Auburn University
5. Wang, Jin (G) – Effects of median widths on wrong-way incidents on multilane divided highways
6. Xie, Zhaoxing (G) – Effect of recycling agent on performance of high RAP and RAS mixtures: field and lab experiments
7. Wolert, Patryk (G) – Permit load model of a flat slab bridge
8. Wang, Shiqiang (G) – Gamma-ray irradiation effects and temperature-dependent density of state analysis of Sol-Gel derived ZnO thin-film transistors I-V characteristics
9. Kilari, Harika (G) – Thermal-aware task scheduling in Linux kernel
10. Holt, Allison (G) – Visual cryptography tool for colorful images
11. Thorn, Caitlin (G) – Optimization of a turboramjet hot section with an interstage turbine burner

Psychology

1. Arnold, Megan (G) – Strain and baseline-dependent effects of scopolamine on operant variations
2. Busler, Jessica (G) – Cultural differences in emotion processing: A BrainMap meta-analysis
3. Harris, Aubriana (UG) – Examining the moderation effect of work overload on role-conflict and burnout
4. Paneerselvam, Bavani (G) – Effects of framing on JOLs and learning choices
5. Williams, Caitlin (G) – An exploratory factor analysis of the stigma of suicide scale-short form
6. Sauer, R. Alexander (G) – Methylmercury exposure in adolescence saturates memory and enhances psychomotor responding in mice
7. Kirby, Lauren (G) – Preliminary materials toward a Library of Affective Films (LAF): Standardization and psychophysiological validation
8. Britton, Erica (UG) – Antecedents and mediators of personal growth initiative: Work-role ambiguity and interpersonal conflict in the workplace
9. Dieujuste, Nathalie (UG) – Support for the utility of a seven-factor hybrid model of PTSD
10. Kirkland, Anna (UG) – Ultra high field, high-resolution functional neuroimaging in adolescents
11. Stevenson, Sarah (UG) – Physiological and psychological effects of music

Social Science and Political Science

1. Good, AJ (G) – Predicting state budget policy: State political factors influencing higher education funding
2. Nelson, Steven (G) – Fuelling the boom or smothering it? Examining fracking policy differences across the States
3. Lingerfelt, Beth (UG) – A lady’s table
4. Pattillo, Tiffany (UG) – Second thoughts about the Second Amendment
5. Robinson, Matthew (UG) – My everyday hero

Biology and Animal Sciences

1. Willhelm, Gabrielle (UG) – Investigating a novel technique for tribological analysis of equine articular cartilage under sustained constant force and a migrating contact area
2. Robinson, Anna (UG) – Irradiance and clownfish sea anemones: Aspects of tentacle morphology and physiology
3. O’Connor, Mallory (UG) – Prodigiosin pigment of Serratia marcescens bacteria controls energy and biomass production
4. Sahinoglu, Hakan (UG) – Screening of soil microbial isolates for antibiotic activity
5. Segars, Jonothan (UG) – The physiological effects of Triadica sebifera on Rhinella marina
6. Yeo, Yoonsoo (UG) – Simultaneous saccharification and fermentation of switchgrass and waste paper to bioethanol
7. Smith, Gayle (UG) – Spes, please: A screen for new spermatogenesis defective mutants in the nematode C. elegans
8. Wellig, Emily (UG) – Evaluating the relationship between energy expenditure and oxidative damage in the house finch, Haemorhous mexicanus
9. Boling, Anna (UG) – Population dynamics of murine spleenocytes as a function of age
10. Muller, Reka (UG) – Identification and characterization of Glanzmann Thrombasthenia in two closely related beagle-mix dogs
11. Dinan, Maude (UG) – Investing environmental literacy: determining the relationship between socio-demographic factors and bird identification ability
12. Holland, Victoria (UG) – Effect of incubational egg turning rate on gut development in the chick, gut morphology, and developmental biomarkers
13. Rankins, Seth (UG) – Effects of seasonal variation between sexes visiting baited camera sites on population estimates of deer

(UG) = undergraduate student presentation  
(G) = graduate student presentation
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