

2020 Auburn Research Student Symposium Undergraduate and Graduate Student Winners

University-Wide Undergraduate Student Winners

University-Wide Undergraduate Student Winners in Science, Technology, Engineering, and Mathematics

- 1st Place: Natalie Williams, Microbiology, “Biocidal properties of Europa Lander solid rocket motor adhesive, Loctite® EA9394, against *Hypsibius dujardini*”
- 2nd Place: Allison Dees, Biological Sciences, “Communal egg-laying behavior and the consequences of egg-aggregation in the brown anole (*Anolis sagrei*)”
- 3rd Place: Davis Arthur, Physics, “Development of a multi-particle spectrometer”

University-Wide Undergraduate Student Winners in Human Sciences, Social Sciences, Creative Arts, and Humanities

- 1st Place: Regan Shaw, Kinesiology, “Comparison of knee valgus during the single leg squat and softball pitch”
- 2nd Place: Ryleigh Randall, Kinesiology, “Mitochondrial network dynamics: benefits of a high metabolic demand (lactation) condition in rats”
- 3rd Place: Beatriz Carmona, Nutrition, “Circadian disruption of core clock genes Bmal-1, Reverb-a, Per2, and Cry-1 in adipose tissue due to western diet-induced obesity”

University-Wide Graduate Student Winners

University-Wide Graduate Student Winners in Science, Technology, Engineering, and Mathematics

- 1st Place: Samuel Leiva, Poultry Science, “Effect of dietary protein source on broiler chicken growth performance, myogenic stem cell activity and heterogeneity, and muscle fiber morphometrics”
- 2nd Place: Ayokunle Fadamiro, Electrical Engineering, “A novel quaternary FPGA architecture using floating gate memories”
- 3rd Place: Naman Bansal, Computer Science and Software Engineering, “The sensitivity of attribution methods to hyperparameters”

University-Wide Graduate Student Winners in Human Sciences, Social Sciences, Creative Arts, and Humanities

- 1st Place: Swagata Chakraborty, Consumer and Design Sciences, “The influence of perceived human values on attitudes toward corporate social responsibility PR messages and company”
- 2nd Place: Priscilla Ayine, Nutrition, “Parental feeding practices and perceptions of child weight in relation to childhood obesity”
- 3rd Place: Elizabeth Keller, Industrial Design, “Consuming technology – Purchasing electronic devices”

College and School Awards

1. College of Agriculture

- **Undergraduate Student Winner:** Jorge Sandoval, Poultry Science, “Effect of particle size and oil addition on near infrared spectroscopy (NIRS) nutrient analysis of ground corn”
- **Graduate Student Winner:** Shreya Sadhukhan, Entomology and Plant Pathology, “Altered disease severity and population dynamics of *Xanthomonas perforans* on tomato & pepper upon co-infection with *Pseudomonas cichorii* and *Xanthomonas arboricola*”

2. College of Architecture, Design, & Construction

- Undergraduate Student Winner: N/A
- **Graduate Student Winner:** Laura Lopez, Landscape Architecture, “Day-lighting Parkerson Mill Creek to reveal aquatic ecosystems”

3. Raymond J. Harbert College of Business

- Undergraduate Student Winner: N/A
- **Graduate Student Winner:** Nguyen Nguyen, Finance, “Financial literacy and the choice of alternative financial services by underbanked and unbanked households”

4. College of Education

- **Undergraduate Student Winner:** Abigail Cramer, Exercise Science, “Trunk lateral flexion differences between the fastball and curveball pitch in collegiate softball pitchers”
- **Graduate Student Winner:** Nicole Guilford, Educational Foundations, Leadership and Technology, “Tiered collaboration: addressing the impact of high poverty school culture on novice teachers”

5. Samuel Ginn College of Engineering

- **Undergraduate Student Winner:** Justin Box, Biosystems Engineering, “Development of algal-bacterial wastewater treatment systems that are effective in the presence of antimicrobial processing aids used in the poultry processing industry”
- **Graduate Student Winner:** Archana Bansode, Polymer and Fiber Engineering, “Preparation of phenol-formaldehyde resins using the lignocellulosic biomass (lignin, lignin and lignocellulosic pyrolysis biooilbio-oil) for use as a wood adhesive”

College and School Awards

6. School of Forestry and Wildlife Sciences

- **Undergraduate Student Winner:** Alexandria Hancock, Forestry and Wildlife Sciences, “The impacts of wild pig (*Sus scrofa*) rooting on soil macroinvertebrate abundance in southeast Alabama”
- **Graduate Student Winner:** John Mensah, Forestry and Wildlife Sciences, “Does bark beetle associated fungi contribute to loblolly pine decline and mortality?”

7. College of Human Sciences

- **Undergraduate Student Winner:** Mallory Harvey, Interior Design, “Evaluating acoustic design in adult education spaces for autism”
- **Graduate Student Winner:** Haley Sherman, Human Development and Family Studies, “Assessing dimensions of combat exposure among soldiers and implications for mental health”

8. College of Liberal Arts

- **Undergraduate Student Winner:** Jhayla Isom, Psychology, “Off-campus students' participation gap linked to difficulties with transportation and parking”
- **Graduate Student Winner:** Sarah Krichbaum, Psychology, “Comparing dog and human olfactory working memory using an odor span task”

9. School of Nursing

- Undergraduate Student Winner: N/A
- Graduate Student Winner: N/A

10. Harrison School of Pharmacy

- **Undergraduate Student Winner:** Brett Cocke, Drug Discovery and Development, “Reduced SIRT3 potentiates injury in the diabetic heart”
- **Graduate Student Winner:** Rachel Rice, VCOM/Pharmacy, “Investigating the neuroprotective effects of extra-virgin olive oil on the blood-brain barrier in Alzheimer’s patients”

College and School Awards

11. College of Sciences and Mathematics

- **Undergraduate Student Winner:** Laura Minton, Chemistry and Biochemistry, “The effect of a pH-dependent arginine switch on protein-based cofactor formation in Catalase-peroxidase (KatG)”
- **Graduate Student Winner:** Zexi Xing, Physics, “Water production rates and activity of interstellar comet 2I/Borisov”

12. College of Veterinary Medicine

- **Graduate Student Winner:** Ferrin Antony, Pathobiology, “IFN- λ regulates early events in HSV-I induced corneal immunopathology”

13. Auburn University at Montgomery

- Undergraduate Student Winner: N/A
- **Graduate Student Winner:** Denise Burgos, Clinical Psychology, “Does a defendant’s ascribed socio-economic status impact mock jurors’ verdict and sentencing decisions?”