

26th annual EURECA

Exhibition of Undergraduate Research and Creative Achievement

April 25, 2022

AWARD WINNERS

College of Architecture & Design			
Award	Presenter(s)	Project Title	Faculty Mentor
<i>First place (Architecture)</i>	Zachary Dulin, Nicholas Van Son, Michael Jenks	Ford Automotive Experience Center	Goeritz, Hansjoerg
<i>Award of Excellence (Interior Architecture)</i>	Erin Ganserer	A Design Guideline for Humanity in Extreme Environments	Zingoni Phielipp, Milagros
<i>Award of Excellence (Architecture)</i>	Zachary Graham	Architectural Reuse and the Welfare Institutions of Late Antique Rome	Kalas, Gregor A
<i>Award of Excellence (Architecture)</i>	Sarina Hermanto, Elijah Hale, Abigail Crawford, Keith Carter	The Biotic Machine: WHO Headquarters	Ambroziak, Brian Michael
<i>Award of Excellence (Interior Architecture)</i>	Lauren Johnson, Hannah Phillips, Mary Catherine MCGovern	Breaking Barriers	Matthews, James
<i>Award of Excellence (Interior Architecture)</i>	Joanna Martin, Emily Schwarzenberg, Jacob Rabideau, Olivia Campbell	Huntington WV River Study	Ambroziak, Katherine Bambrick
<i>First place (Interior Architecture) TIE</i>	Olivia Robbins	What are the inhabitable characteristics of Prehistoric caves, dwellings, and settlements that can be applied to modern-day architectural design?	Saldana, Marie
2nd place (Interior Architecture)	Elizabeth Tondreau, Yessenia White, Kellie Weeks, Katherine Warren, Hillary Tunnell, Summer Tessem, Emily Roach, Hannah Lessem, Madison Leebrick, Andrew Keys, Lauren Johnson, Hannah Hobbs, Autumn Hanks, Ashley Ebbert, Matthew Clayton, Alyssa Bond, Briahna Aderman, Jacob Abdu	Design-Build STEAM Trailer: Partnering with 6th Graders as Co-designers	Matthews, James

<i>Second place (Architecture)</i>	Nicholas Van Son, Jonah Zahn, Stephen Kelley, Carson Fischer, Evan Filson, Matthew Baumgartner, Trey Robbins, Cayden Masters	Thickening the Membrane: Integrating lightweight sheet material and extruded plastics to refine modular additive construction techniques	Prado, Marshall Anson
<i>Third place (Architecture)</i>	Brendan Wallace	Guerrilla Museology: By All Means Necessary	Akerman, Jennifer Alford
<i>Award of Excellence (Architecture); First place (Interior Architecture) TIE</i>	Camryn Weekly, Kari Propes, Christina Cenicerros	MEND: Healing Generational and Environmental Scars through the Concept of Safe Havens	Matthews, James

College of Architecture & Design, School of Design

Award	Presenter(s)	Project Title	Faculty Mentor
<i>Award of Excellence (Division 1)</i>	Kennedy Davis, J'Anah Davis	Bee Aware	Staples, Cary
<i>First Place (Division 1)</i>	Leah Falin	Coping	Staples, Cary
<i>First Place (Division 2)</i>	Jacqueline Juneau, Victoria Wheelock, Jake Hirschmann	Eco-Chess	Staples, Cary
<i>Award of Excellence (Division 2)</i>	Kailey Kear	Savor the Invasion	Staples, Cary
<i>Award of Excellence (Division 3)</i>	Matt Rightsell	NUDNIK	Staples, Cary
<i>First Place (Division 3)</i>	Julie Simpson, Avery Jones, Henry Dunning	Sundry	Staples, Cary

College of Arts & Sciences, Humanities

Award	Presenter(s)	Project Title	Faculty Mentor
<i>Award of Excellence</i>	Inshira Bediako	Reproductive Care as a Nationalist Project in Israel	Sinnreich, Helene
<i>Award of Excellence</i>	Amanda Boeing	Vikings, Anglo-Saxons, and England: The Germanic revival of the 9th, 10th, and 11th centuries	Mackenzie, Scott Hutcheson
<i>Award of Excellence</i>	Daniel Dassow	"Purchasing the Promised Land: Consumer Nationalism and American Holy Land Pilgrimage"	Sinnreich, Helene
<i>Award of Excellence</i>	Isabelle Toth	Prosodic Variation Between Autistic and Allistic Individuals By Gender	Grieser, Jessica Ann
<i>Award of Excellence</i>	Jennifer Ware	Holocaust Survivors in Eretz Israel	Sinnreich, Helene

College of Arts & Sciences, Natural Sciences

Award	Presenter(s)	Project Title	Faculty Mentor
<i>Award of Excellence</i>	Isabelle Dancer	Analysis of the UVA/UVB Degradation of Lotions with Additives Through Raman Spectroscopy	Sharma, Bhavya
<i>Award of Excellence</i>	Yazmin De Anda Acosta	Tracking of genetically modified bacterial symbiont from the pea aphid's gut to post-infection fungal spores	Parker, Benjamin James
<i>Award of Excellence</i>	Susanna Diamond	Investigating Changes in Canopy Cover and Tree Community Composition in High Elevation Ecosystems in the Great Smoky Mountains National Park	Shershen, Eric
<i>Award of Excellence</i>	Lauren Donnelly	Effect of Ethylene in Biofilm Formation in <i>Azospirillum brasilense</i>	Binder, Brad Mark
<i>Award of Excellence</i>	Morgan Freshour, Nicholas Koziol	Effects of herbivory and increased temperatures on photosynthetic rates of <i>Viola rostrata</i>	Kalisz, Susan
<i>Award of Excellence</i>	Kristen Holbrook, Lovell Smith, Jacob Shaffer, Sarina Mitchell	Isolated Microbes from a Briny Antarctic Ocean Worlds Analog	Mikucki, Jill
<i>Award of Excellence</i>	Noah Hooper	Experimental Evidence For Liquid Iron Alloy Flotation On Silicate Melt	Dygert, Nick
<i>Award of Excellence</i>	Victoria Howard	A Mathematical Model of Biomolecular Treadmilling Dynamics	Sgouralis, Ioannis
<i>Award of Excellence</i>	Beyza Kartal	Reducing Perineuronal Nets in Primary Somatosensory Cortex Rescues Pup Retrieval Behavior in Female Mouse Model of Rett Syndrome	Krishnan, Keerthi
<i>Award of Excellence</i>	Alexandra McBryar	Age dependent tactile sensory deficits in a female mouse model of Rett syndrome	Krishnan, Keerthi
<i>Award of Excellence</i>	Amy Okafor, Julian Broughton	Investigating evolutionary relationships between moss species in the genus <i>Fissidens</i> using DNA sequence data using herbarium specimens.	Budke, Jessica
<i>Award of Excellence</i>	Dhruv Patel	Activated CD8 T cells perform persistent random walks and not Levy walks in the brain	Ganusov, Vitaly
<i>Award of Excellence</i>	Katherine Reed	Evaluating the Evolution of Bud Break in <i>Populus angustifolia</i> Due to Climatic Variation	Schweitzer, Jennifer
<i>Award of Excellence</i>	Anthony Rios	Rapid and Improved Surface Passivation Method for Single-Molecule TIRF Experiments	Lamichhane, Rajan
<i>Award of Excellence</i>	Nicholas Robins, Lillian Mooney, John Deckbar, Tarek Atyia	Deep Tissue Detection of N-Heterocyclic Carbene Gold Nanoparticle Probes with SESORS	Sharma, Bhavya

<i>Award of Excellence</i>	Taylor Smith, Jillian Walton	Investigation into the identity and function of <i>Ruegeria pomeroyi</i> DSS-3 pigment production	Buchan, Alison
<i>Award of Excellence</i>	Jawhar Syed	Identifying the most optimal protein affinity tag for purification of Phosphatidylserine Synthase in human fungal pathogen <i>Candida albicans</i>	Reynolds, Todd B

College of Arts & Sciences, Social Sciences			
Award	Presenter(s)	Project Title	Faculty Mentor
<i>Award of Excellence</i>	Colton Adams	Does mixed-species flock size and composition influence foraging and calling under risky contexts?	Freeberg, Todd M
<i>Award of Excellence</i>	Gavin Buehring	Interrupting Dynamics: How the Supreme Court's Switch to Teleconferences During COVID Altered Patterns of Interruptions	Widner, Kirsten L
<i>Award of Excellence</i>	Keri Burge	Exploring Early Colonial Animal Management Practices in Virginia: A View from Coan Hall	Janzen, Anneke
<i>Award of Excellence</i>	Jessica Kearney	Patterns of Behavior and Neural Activity in Female Syrian Hamsters Following a Stressful Event	Cooper, Matthew A
<i>Award of Excellence</i>	Benjamin Kilgore	The Effects of Social Play on Stress-Induced Social Anxiety	Cooper, Matthew A
<i>Award of Excellence</i>	Zachary Medley	Summary statistics for simultaneous tornado and flash flood (TORFF) warnings to analyze their general behavior and dynamics	Ellis, Kelsey
<i>Award of Excellence</i>	Nolan Ragland	Who Sets the Human Rights Agenda?	Ring, Jonathan
<i>Award of Excellence</i>	Jubin Son	Pupillary Response to Speech Recognition	Tas, Caglar Ayse

College of Arts & Sciences, Visual & Performing Arts			
Award	Presenter(s)	Project Title	Faculty Mentor
<i>Award of Excellence</i>	Emily Pope	Callaway: Examining the Present with the Past	Di Salvo, Gina Marie

College of Education, Health & Human Sciences			
Award	Presenter(s)	Project Title	Faculty Mentor
<i>First Place (tie)</i>	Jacob Hahn	Describing Groups During Early COVID-19 Pandemic That Were More Likely to Increase Sedentary Behavior and/or Decrease Physical Activity With Applications to Future Pandemics.	Colby, Sarah Elizabeth

<i>First Place (tie)</i>	Madison Morgan	Merchandising Strategies for the Big Orange Pantry	Childs, Michelle Lynn
<i>Third place</i>	Hannah Morris	Play and the Built Environment	Quinn, Margaret

College of Nursing			
Award	Presenter(s)	Project Title	Faculty Mentor
Award of Excellence - Evidence Based Practice	Bailee Bentley, Shelby Turek, Shelby Stevens, Elizabeth Pereira	Maternal Prenatal Acetaminophen Use and Risk for ADHD in Children	Alspaugh, Amy Elizabeth
Award of Excellence - Research Studies	Krista Cameron	Strategies for the College-aged Population to Reduce Risk Factors of Alzheimer's Disease	Thompson, Kathleen
Award of Excellence - Quality Improvement Projects	Alexis Campbell, Phoebe Grossman	Sexual Assault Education	Borges, Sara
Award of Excellence - Quality Improvement Projects	Carson Clinard, Holly Del Vecchio	The Effects of Daily Exercise on Self-Esteem in Students	Rhoten, Travis Dwayne
Award of Excellence - Quality Improvement Projects	Lillie Cole, Meredith Myers, Holly McComas, Anna Klepzig	The Socio-Economic Relationship to Oral Health: Addressing Oral Health at Thrive	Swift, Shelia Henson
Award of Excellence - Quality Improvement Projects	Emily Considine, Alex Gerkin	Effectiveness of an Educational Video in improving knowledge of American Red Cross services at a Southern University	Thompson, Kathleen
Award of Excellence - Evidence Based Practice	Hannah Goralnick, Jasmine Russell, Lucy Gilbert, Madison Crabtree	The Positive Effects of Delayed First Bath on Glycemic Control, Temperature Regulation, and Breastfeeding among Neonates.	Bulgin, Dominique Camisha
Award of Excellence - Evidence Based Practice	Samuel Greeley, Michael Smith, Joshua Porter, Steven Lebreux	Effect of Aerobic and Physical Exercise on Reducing Symptoms Associated with Cognitive Function in Adults with Mild Cognitive Impairment or Dementia: A Literature Review	Green-Laughlin, DeLyndia
Award of Excellence -	Ann Ragan Grissom, Sarah Johnson,	The Negative Effects of COVID-19 on Anxiety and Depression in Adolescents: A review of the Literature	Barroso, Cristina

Evidence Based Practice	Sophie Hitchens, Neal Anderson		
Award of Excellence - Quality Improvement Projects	Caitlyn Hintz, Nicole Wigent	The Use of Educational Handouts to Increase Parental Knowledge of Infant Nutrition Between Ages 6-12 Months	Hessock, Melissa Marie
Award of Excellence - Evidence Based Practice	Eva Karnowski, Maren Stevens, Elley Stanga, Courtney Miller	Access to Substance Abuse Treatment and Rates of Substance Abuse in Rural Communities Within the United States	Kojima, Freddie Naoto
Award of Excellence - Quality Improvement Projects	Margaret Lavoie	Medication Management: Equipping Those Who Suffer From Homelessness	Kojima, Freddie Naoto
Award of Excellence - Research Studies	Rachel Schutte	Protocols for treatment and training of providers for pregnant patients with opioid used disorder at medication assisted treatment programs in rural East Tennessee	Miller, Jennifer
Award of Excellence - Research Studies	Skylar Sopko	Healthcare worker perceptions of treatment of drug withdrawal among pregnant women in jail in the South-Central Appalachia region: A qualitative pilot study	Hutson, Sadie Pauline
Award of Excellence - Research Studies	Margaret Tasket	Differences Between College Males and Females' Coping Mechanisms in Relation to the COVID-19 Pandemic	Neal, Allyson Matney
Award of Excellence - Evidence Based Practice	Amy Waitman, Rachel Yates, Jackson Lee, Hailey Houston	Metabolic Syndrome in Night Shift Nurse	Barroso, Cristina
Award of Excellence (non honors)	Celine Phan, Kaylee Gray	The Negative Effect Caregiving Can Have on Caregiver Quality of Life	Roberson, Patricia

College of Social Work			
Award	Presenter(s)	Project Title	Faculty Mentor
Third Place	Olivia Dowling	Comparing the likelihood of clients to attend therapy sessions face-to-face or tele-health	Nugent, Bill
Award of Excellence	Paola Gomez	Equity in Student Conduct Sanctions	Nugent, Bill
First Place	Arianna Hill	Relationship Between Agency Resources and Client HIV Viral Load	Nugent, Bill
Second Place	Sophie Richards	Adolescent Bullying and Suicide	Nugent, Bill

Award of Excellence	Emma Richey	Re-hospitalization	Nugent, Bill
---------------------	-------------	--------------------	--------------

Haslam College of Business			
Award	Presenter(s)	Project Title	Faculty Mentor
<i>First Place (tie)</i>	William Gross	The NBA Home Court Advantage: Betting Odds as a Measure	Chyz, James Anthony
<i>Second Place</i>	Harshil Singapuri	The Implications of Forecasting the Supply Chain Too Far in the Future in the Wake of COVID-19	Gilbert, Kenneth C
<i>Third Place</i>	Max Thompson	How To Go Viral: A Descriptive Model of The TikTok Algorithm	Xiao, Yazhen
<i>First Place (tie)</i>	Mark Zimmerman	Finding What Goes Into Mobile App Updates	Zhou, Wenjun

Herbert College of Agriculture			
Award	Presenter(s)	Project Title	Faculty Mentor
Second Place	Bryanna Fayne, Windy Soto-Gonzalez, Rebecca Rahn, Olivia Escher	Pharmacokinetics of Pantoprazole and Pantoprazole Sulfone in Goats After Intravenous Administration: A Preliminary Report	Smith, Joseph Samuel
Third Place	Samantha Roberts	Plasma Metabolome Profiles to Predict Average Daily Gain in Weaned Heifers	Moorey, Sarah E
First Place	Bryce Trull	Agroinfiltration of Soybean	Stewart, Neal

Tickle College of Engineering			
Award	Presenter(s)	Project Title	Faculty Mentor
Second Place - Design	Patricia Abernathy, Keely Sage, Sean Moran	Bioreactor for Cultured Meat Research	Chen, Jiajia
Award of Merit - Research	Nathaniel Blalock	High Throughput Enzyme Screening for Ester Quantification	Trinh, Cong
Award of Merit - Research	Michael Broud	Investigation of Preferential CO2 Binding And Lignin-derived Carbon Quantum Dots Through Molecular Dynamics Simulations	Keffer, David J
First Place - Design	Madeline Ginsberg, Bryce Miller, Ella Knight, Jaimie Armitage	Engineered Media Amendment Selection and Testing Procedure	Ludwig, Andrea Lorene
Award of Merit - Research	Jordan Huff	An Analysis of Applying LSTM Neural Networks to Predict Future Watershed Reservoir Depth	Khojandi, Anahita

Second Place - Research	Madeline Loveday	Phase formation of High-Entropy Rare-Earth Monoclinic Aluminates	Zhuravleva, Mariya
Award of Merit - Research	Nicole Nguyen	Soft poly-ethylene-glycol (PEG) micelles and lipid nanoparticles (LNPs) resolve autophagy and reduce pro-inflammatory cytokine secretion in RAW264.7 mouse macrophages	Dalhaimer, Paul Matthew
Award of Merit - Research	Neel Reeves	Measuring Pre-Service, K-12 Teachers' Self-Efficacy in Teaching Engineering and Their Perceptions of Engineering as a Career.	Faber, Courtney
Third Place - Research	Jonathan Shell	Passive Structural Control Achieved with a Mass Lever Inerter	Wierschem, Nicholas Edward
Award of Merit - Research	McKayla Torbett	Bioprinting osmotically actuated tissue-like materials	Sarles, Stephen Andrew
First Place - Research	Matthew Valderrama, Christopher Webb, Mackenzie Camp, Charlotte Buchanan	Materials Analysis and Reproduction of Rubber Cloth and Other Materials Necessary for Preserving the Musical Organ Manufacturing and Repair Industry	Keffer, David J