

College of Agriculture and Human Ecology

School of Agriculture

Undergraduate (1st)

Primary author: Chelsea Sanders

Title: Greenhouse bioassay of squash bug preference within Cucurbita pepo

Research Advisor: Brian Leckie

Undergraduate (2nd) - TIE

Primary author: Marissa Phelps

Title: Important Employability Skills of University Graduates as Perceived by Industry Leaders

Research Advisor: Dennis Duncan

Undergraduate (2nd) - TIE

Primary author: Sarah Harris

Title: The Impact of a University Connections Course on Freshman Students in the School of Agriculture and Human Ecology

Faculty Collaborator: Melinda Anderson

Research Advisor: Dennis Duncan

School of Human Ecology

Undergraduate (1st)

Primary author: Karly Higgins

Title: How does maltreatment in childhood affect relationships in adulthood?

Research Advisor: Rufaro Chitiyo

Undergraduate (2nd)

Primary author: Jordyn Blackwood

Title: Effectiveness Psychosocial Care for Adolescents with Mental Illness

Research Advisor: Rufaro Chitiyo

Graduate (Masters)

Primary author: Robin Neese

Title: AAFCS Body of Knowledge Assessment and Implication Review

Research Advisor: Melinda Anderson

College of Arts and Sciences

Biology Department

Undergraduate

Primary author: Tyler Hendrick

Co-authors: Adam Nakamoto, Sophia Ikomi, Jessica Smith, Collin Simmons

Title: Determination of the Species of Staphylococcus from Human Isolates

Research Advisor: David Beck

Graduate (Masters)

Primary author: Spencer Womble

Title: Distribution of Didymosphenia Geminata in Southern Appalachian Watersheds

Research Advisor: Justin Murdock

Chemistry Department

Undergraduate (1st)

Primary author: Mariah Tedder

Co-author: Zachary Gulledge

Title: Frustrated Complexant Scaffolds of 2-(6-[1,2,4]triazin-3-yl-pyridin-2-yl)-1H-indoles Toward Minor-Actinide Separations

Research Advisor: Jesse Carrick

Undergraduate (2nd)

Primary author: Morgan Brown

Title: Investigation of N-Donor Organic Ligands for Selective Minor Actinide Separations

Faculty Collaborator: Jesse Carrick

Research Advisor: Cory Hawkins

Undergraduate (3rd)

Primary author: Gabrielle Waters

Title: Ullman-Type Coupling of Functionalized 1,2,4-Bistriazinyl-Bipyridines toward Strategic Complexants for Minor Actinide Separations

Research Advisor: Jesse Carrick

Graduate (Masters)

Primary author: Emily Rush

Title: Heavy metal remediation from aqueous solutions by new silica-immobilized thiosemicarbazone materials

Faculty Collaborator: Cory Hawkins

Research Advisor: Ed Lisic

Chemistry Department con't

Graduate (PhD/Post Doc)

Primary author: Giri Babu Veerakanellore

Title: DBU-Assisted Intermolecular [3 + 2] Dipolar Cycloaddition of Terminal Alkynes with Tosylhydrazones Towards the Synthesis of Frustrated Pyrazolyl-Pyridine-1,2,4-Triazine Complexant Scaffolds for Minor Actinide Separations

Research Advisor: Jesse Carrick

Earth Sciences

Undergraduate

Primary author: Stone McCoy

Title: Comparison of the Chattanooga Shale Formation Inside and Outside the Flynn Creek Crater, Jackson County, Tennessee

Research Advisor: Jeannette Wolak

English

Undergraduate

Primary author: Kinsey Potter

Title: Toxic Attitudes: Martineau's "Criticism on Women" and the Rhetoric of Shame

Research Advisor: Kristin Pickering

Graduate

Primary author: Lyndsey DeBoard

Title: Championing the Female Body: An Investigation into the Rhetoric of Design in League of Legends

Research Advisor: Mari Ramler

Foreign Languages

Undergraduate (TIE)

Primary author: Jordan Wright

Title: Children's Literature and Its Use to Control Girls

Co-author: Katrina Mauk,

Research Advisor: Julia Gruber

Primary Author: Ian Ilgner

Title: The effect of Der Struwwelpeter's Illustrations on Children's Literature through Time

Co-author: Joseph Hunt

Research Advisor: Julia Gruber

History

Undergraduate

Primary author: Kaitlynn Marshall

Title: K-Pop Evolution

Research Advisor: Edward Driggers

Mathematics

Undergraduate

Primary author: Seth Agee

Title: On the Location-Scale Gaussian Mixture of the Laplace Distribution with Applications

Research Advisor: David Smith

Physics

Undergraduate

Primary author: Benjamin Luna

Title: The Structure of ^{34}Mg

Research Advisor: Mustafa Rajabali

Sociology and Political Science

Undergraduate

Primary author: Presley Alford

Title: Homans' Exchange Theory and Gang Violence

Research Advisor: Shelley Brown

College of Business

Accounting

Undergraduate

Primary author: Brandon Cravens

Co-author: Sundar Krishnamoorthy

Title: Cloud Services – Silver Lining

Research Advisor: Sid Bundy

Graduate (Masters 2nd)

Primary author: Jacob Phillips

Co-authors: Jacob Donegan

Title: Survival of the Fittest: Financial Analysis of Barnes & Noble's Survival Strategy

Research Advisor: Sid Bundy

Graduate (Masters 1st)

Primary author: Christian Webster

Title: An Apple a day may not be so healthy for its competitors – How did Apple's entrance into the wearables market affect the previous industry leader, Fitbit?

Research Advisor: Sid Bundy

College of Education

Counseling and Psychology

Graduate (Masters)

Primary author: Mason Doss

Title: College students' contingent self-esteem: The effects of mental stress and substance abuse on undergraduates in Tennessee.

Research Advisor: Anthony Michael

Curriculum and Instruction

Undergraduate

Primary author: Haley Vandergriff

Title: Social Justice in Contemporary Young Adult Literature

Research Advisor: Julie Stepp

Graduate (PhD)

Primary author: Allen Mathende

Title: Analyzing observational strategies using the Kirkpatrick model: Insight from a curricular redesign earmarked to promote student-centered learning in postsecondary education.

Faculty Collaborators: Stephanie Jorgensen, Robby Sanders, Pedro Arce

Research Advisor: Andrea Arce-Trigatti

Graduate (Masters)

Primary author: Erin Stratton

Co-author: Allen Mathende

Title: Flipped Versus Face-to-face Classrooms and Science Achievement in Middle School

Research Advisor: George Chitiyo

Exercise Science, Physical Education and Wellness

Undergraduate

Primary author: Carly Payne

Co-authors: Kayla Langford, Kylee Parrott

Title: The Effect of Static vs. Dynamic Warm-Up on Flexibility

Research Advisor: Michael Phillips

College of Engineering

Chemical Engineering

Undergraduate (1st)

Primary author: Katherine Finks

Title: Where did the notes go? A Literature Review of Relevant Topics for Notetaking Strategies in Active-Based Learning.

Faculty Collaborators: Andrea Arce-Trigatti and Pedro Arce

Research Advisor: Stephanie Jorgansen

Graduate (Masters)

Primary author: Jackson Penfield

Title: Molecular dynamics simulation on human beta defensin type 3 binding with CXCR4 receptor

Research Advisor: Liqun Zhang

Graduate (PhD-2nd-TIE)

Primary author: Abdul Salam Mohammad

Title: Computational printing of cement-based pastes in 2D and 3D geometry – a fluid dynamics study

Research Advisor: Joseph Biernacki

Undergraduate (2nd)

Primary author: Rylee Smith

Title: Partition Factor for a Drug in PNIPAm Hydrogel and Water

Research Advisor: Holly Stretz

Graduate (PhD-1st)

Primary author: Haley White

Co-authors: Shelby Jones and Leif Templeton

Title: Use of desalination brine for low-energy concentration of orange juice via forward osmosis

Research Advisor: Laura Arias Chavez

Primary author: Babajide Onanuga

Title: Advancing 3D printing construction through the development of new cement-based materials

Research Advisor: Joseph Biernacki

Civil and Environmental Engineering

Undergraduate (1st)

Primary author: Alec Brenner
Co-author: Jacob Thompson

Title: Development of a soil compaction method for non-standardized energy levels

Research Advisor: Daniel VandenBerge

Graduate (Masters) TIE

Primary author: Joseph Brockwell

Title: Performance Evaluation of Vegetated Swales for Highway Runoff Reduction Based on Site Characteristics and Meteorological Influences
Research Advisor: Tania Datta

Graduate (Masters) TIE

Primary author: Godson Ebenezer Adjovu
Co-author: Rex Gamble

Title: Development of HEC-HMS Model for the Cane Creek Watershed

Research Advisor: Alfred Kalyanapu

Graduate (PhD)

Primary author: Prince Turkson

Title: Effect of levee foundation conditions on the saturated zone during flooding for rapid drawdown analysis

Research advisor: Daniel VandenBerge

Computer Science

Graduate (Masters)

Primary author: Joe Bivens

Co-author: Moumita Kamal

Title: NELMA: Never-Ending Learner for Malware Analysis

Research Advisor: Douglas Talbert

Graduate (PhD) TIE

Primary author: Katherine Brown

Title: Estimating Uncertainty in Deep Image Classification

Research Advisor: Douglas Talbert

Primary author: Ramesh Paudel

Title: An Approach For Concept Drift Detection in a Graph Stream Using Discriminative Subgraphs

Research Advisor: William Eberle

Electrical and Computer Engineering

Undergraduate

Primary author: Samuel Hollifield
Collaborator: Miki Verma, ORNL

Title: Cybersecurity Implications of Modern Automobiles

Research Advisor: Stacy Prowell (ORNL)

Graduate (PhD)

Primary author: Devendrasinh Darbar

Title: High energy density Cobalt free cathode for Na-Ion battery.

Research Advisor: Indranil Bhattacharya

Manufacturing and Engineering Technology

Undergraduate

Primary author: Kevin Goodwin
Co-authors: Thomas Houston, Gary Harris, Connor Welcome, Daulton Russell

Title: NASA Human Exploration Rover Challenge Senior Design Team

Research Advisor: Ahmed Elsayy

Graduate (Masters) TIE

Primary author: Shane Terry

Title: Innovating the FDM Process - Metal Powder PLA Printing

Research Advisor: Ismail Fidan

Graduate (Masters)

Primary author: Wesam Al Amiri

Title: Blockchain-based privacy-preserving and secure smart parking system

Research Advisor: Mohamed Mahmoud

Graduate (Masters) TIE

Primary author: Aslan Nasirov

Title: Prediction of Mechanical Properties of Fused Deposition Modeling made Parts using Computational Tools

Research Advisor: Ismail Fidan

Graduate (PhD)

Primary author: Mahdi Mohammadzadeh

Title: Thermomechanical investigation of continuous fiber reinforced additively manufactured components

Research Advisor: Ismail Fidan

Mechanical Engineering

Undergraduate

Primary author: Nathan Ghattas

Co-author: Robert Ponder

Title: Investigation of mechanical boundary conditions on impedance based structural health monitoring in a biomedical environment

Research Advisor: Steven Anton

Graduate (Masters)

Primary author: Farzin Mashali

Title: A particular nanodiamond suspension for thermal management

Research Advisor: Ethan Languri

Graduate (PhD)

Primary author: Mohsen Safaei

Co-authors/Collaborators: Eric Nolan

Title: Finite element simulation of high frequency electromechanical impedance measurements for structural health monitoring

Research Advisor: Steven Anton

College of Interdisciplinary Studies

Environmental Studies

Undergraduate

Primary author: Melody Culver

Co-author: Jordan Durham, Savannah Shanklin, Mike Bolan, Phillip Fox

Title: GIS Analysis of Illegal Dumping in the Upper Cumberland and Recommendations for Abatement

Research Advisor: Steve Sharp

Whitson-Hester School of Nursing

Undergraduate

Primary author: Taylor Summers

Title: The Lost Male Partner in the Post Abortion Experience

Research Advisor: Susan Piras