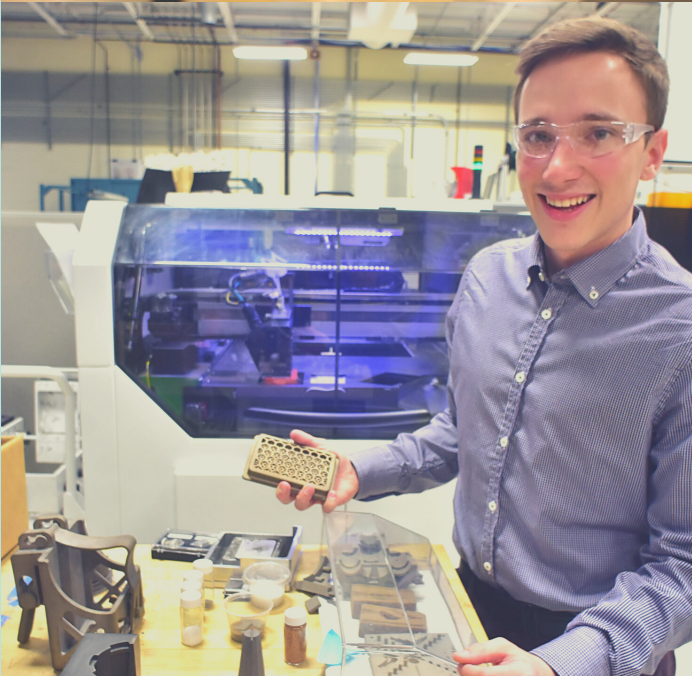


EURECA 2020 VR



**24th Annual
Exhibition of Undergraduate Research
and Creative Achievement**



THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

UNDERGRADUATE RESEARCH

Table of Contents

Welcome Letter	2
Judging Divisions	3
Division Representatives	4
2020 Schedule of Events	5
College of Architecture & Design	6
College of Architecture & Design, School of Design	6
College of Arts & Sciences, Humanities	7
College of Arts & Sciences, Natural Sciences	7
College of Arts & Sciences, School of Music	10
College of Arts & Sciences, Social Sciences	10
College of Communication & Information	12
College of Education, Health & Human Sciences	12
College of Nursing	12
College of Social Work	18
Haslam College of Business	19
Herbert College of Agriculture	20
Tickle College of Engineering	21
Community Partners	24

Welcome to the University of Tennessee's 24th annual Exhibition of Undergraduate Research and Creative Achievement (EURēCA). This event honors original and creative works completed by undergraduate students as the highlight of Research Week events and celebrations. The Office of Undergraduate Research coordinates this unique competition to encourage, support, and reward undergraduate participation in the campus research enterprise. Participating in campus research empowers students to produce original work, develop faculty mentoring relationships, enhance their resumes, and become more competitive when applying to graduate school. EURēCA continues to expand its opportunities to participate. This year's event will be held in a virtual format due to the COVID-19 pandemic. Over 400 students will present their research using the Zoom platform. We are proud of our students' resilience during this time as they adjust to new, virtual formats. The diverse array of exhibits and performances highlights a broad range of endeavors and approaches, including both individual and collaborative efforts, as well as research produced both within and outside the classroom. Student research posters can be viewed in our online symposium at symposium.foragerone.com.

Awards are provided by colleges for college and divisional awards. The Office of Undergraduate Research recognizes student achievement across the colleges. This event would not be possible without the hard work of many individuals. We send a big thank you to our division representatives in organizing the participants from their areas and to our judges for all of their hard work in selecting this year's winners.

We would especially like to thank each of you for taking the time to visit the event, engage with the students, and support the excellent undergraduate research and creative activity at the University of Tennessee, Knoxville. If you would like to become more involved in undergraduate research, I encourage you to take advantage of our enhanced institutional membership of the Council on Undergraduate Research as well as contact our office for information on how to get started.

Sincerely,

Marisa Moazen, Ph.D.
Assistant Vice Chancellor for Research Engagement and
Director, Office of Undergraduate Research

EURēCA

Exhibition of Undergraduate Research & Creative Achievement

This year, we are experiencing a format change due to the global COVID-19 pandemic. However, we are excited to be able to continue with EURēCA in a virtual format. More than 400 undergraduate students from the University of Tennessee will present their research and creative activity at EURēCA 2020 VR. This format will allow students to present their research to judges via Zoom meetings as well as showcase their research poster online at symposium.foragerone.com. This research covers many different disciplines, from music to mechanical engineering to stock market studies, and are categorized into the following judging divisions:

College of Architecture and Design
College of Architecture and Design, School of Design
College of Arts and Sciences, Humanities
College of Arts and Sciences, Natural Sciences
College of Arts and Sciences, Social Sciences
College of Arts and Sciences, School of Music
College of Communication and Information
College of Education, Health, and Human Sciences
College of Nursing
College of Social Work
Haslam College of Business
Herbert College of Agriculture
Tickle College of Engineering

Exhibition of Undergraduate Research and Creative Achievement

2020 Division Representatives

Larry McKay

College of Arts & Sciences

Kristina McCue

College of Arts & Sciences,
Honors English 298

Hollie Raynor

College of Education, Health,
and Human Sciences

Tyler Wall

College of Arts & Sciences,
Social Sciences

Koichi Yamamoto

College of Arts & Sciences,
School of Art

Kevin Kit

Tickle College of Engineering

Jeremiah Johnson

College of Arts & Sciences,
Natural Sciences

T.K. Davis

College of Architecture &
Design

Brent Lamons

Herbert College of Agriculture

Elias Fernandez

College of Arts & Sciences,
Natural Sciences

Cary Staples

College of Architecture &
Design,
School of Design

Kathleen Thompson

College of Nursing

Stefanie Ohnesorg

College of Arts & Sciences,
Humanities

Suzie Allard

College of Communication
and Information

Bill Nugent

College of Social Work

*Thank you to all of our division representatives who put in countless hours to
make this event a success!*

Office of Undergraduate Research

Marisa Moazen

Assistant Vice Chancellor for Research Engagement and
Director, Office of Undergraduate Research

Emily Mitchell

Program Coordinator

Susan Troop

Program Coordinator

Julianna Tullos

Administrative Assistant

Andrew Ten-Eyk

Graduate Teaching Assistant

Exhibition of Undergraduate Research and Creative Achievement 2020 VR

Schedule of Events

Monday, April 13	
4:45 p.m. – 5:00 p.m.	EURēCA Kickoff via Zoom
5:00 p.m. – 8:00 p.m.	Exhibition opens for all Colleges via Zoom Meetings
Friday, April 19	
5:00 p.m.	EURēCA Awards Ceremony via Zoom

We invite you to view the research posters from this year's event at [Symposium.foragerone.com](https://symposium.foragerone.com)

EURēCA 2020 VR

The College of Architecture & Design

#2 Chloe Dyer

Major: Architecture

Faculty Mentor: Ambroziak, Brian Michael

Project Title: La Luna _ The Marbled Rose

#3 Jenna Ely

Major: Architecture

Faculty Mentor: Ambroziak, Brian Michael

Project Title: The Duel

#4 Emma Hines

Major: Architecture

Faculty Mentor: Ambroziak, Brian Michael

Project Title: Proliferated Remedy

#5 Alice Irizarry, Elizabeth Ford, Emily Lavoll

Major: Architecture

Faculty Mentor: Ambroziak, A Katherine Bambrick

Project Title: Designing for Intentional Communal Residence in Rural Haiti

#6 Joanna Martin, Grace Shoffner, Annabel Greenberg

Major: Architecture

Faculty Mentor: Ambroziak, A Katherine Bambrick

Project Title: BEACON Eco-Village

#7 Greta Mehlberg

Major: Architecture

Faculty Mentor: Davis, Marleen Kay

Project Title: Tombras Building Wall Section Research

#9 Zachary Orig

Major: Architecture

Faculty Mentor: Kalas, Gregor A

Project Title: Mapping Food and Infrastructure in Early Medieval Rome: A Critical Analysis of the Fourth Century Forum Boarium

#10 Delaney Powell

Major: Architecture

Faculty Mentor: Ambroziak, Brian Michael

Project Title: The Vesicle City: A Prognosis of the Urbanized Infection

#11 Alexandra Rees

Major: Architecture

Faculty Mentor: Akerman, Jennifer Alford

Project Title: Airspace: Infrastructure of the Unseen

#12 Brendan Wallace

Major: Architecture

Faculty Mentor: Ambroziak, Brian Michael

Project Title: Velocity of Grief

#13 Jonathan Winfile

Major: Architecture

Faculty Mentor: Akerman, Jennifer Alford

Project Title: Architecture's Narratives

#14 Olivia McWright, Brooke Clime, Brianna Patterson

Major: Interior Architecture

Faculty Mentor: Ambroziak, A Katherine Bambrick

Project Title: Haitian Eco-Village

The College of Architecture & Design, School of Design

#15 Geghie Davis, Cole Field, Henry Burgin, Marieli Valencia

Major: Graphic Design

Faculty Mentor: Lowe, Sarah

Project Title: Tinnitus Animated Video Project for UTK Audiology & Speech Pathology

#16 michelle Brown

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Tarot Garden: Exploring plant nativity through cards

#17 John Sanders

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Metamorphosis: A Butterfly Garden Experience

#19 Madeline Walker

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Borderland Butterfly Garden

#20 Joshua Maine

Major: College Scholars Program

Faculty Mentor: Staples, Cary

Project Title: Data Visualization and Wayfinding Signage

#22 Chasity Anderson

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Butterfly Garden: Nostalgic Wonderland

#24 Geghie Davis

Major: Graphic Design/Illustration

Faculty Mentor: Cote, Christopher Bryce

Project Title: Sipsy

#25 Katherine Davis

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Butterfly Garden Community Based Project

#29 Sarah Goldstein

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Butterfly Garden Flags

#30 Sierra Jones

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: South Knoxville Butterfly Garden Signage System

#31 Justin Lenton

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Human Connections through Borderland Tees Garden

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#32 Braxton Palmer

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Bringing the Game to the Garden: How Augmented Reality can bring a community together.

#33 Braxton Palmer, Taylor Bogle, John Sanders

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Teaching Language through Game Design

#34 Jared Robson

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Borderlands Garden

#35 Zoe Sharp

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Butterfly Garden Entrance

#37 Christina SokTaylor Bogle, Peter Kramar, Jonathan Woods

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: The Social Butterfly Project

#38 Travis Wealand

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Borderland Butterfly Garden and Creative Land Recycling

#39 Jared Robson

Major: Graphic Design

Faculty Mentor: Staples, Cary

Project Title: Making a Pizza

The College of Arts & Sciences, Humanities

#40 Alisa Lim

Major: Linguistics

Faculty Mentor: Grieser, Jessica Ann

Project Title: Universality of Road Signs

#41 Hannah Nelson

Major: Linguistics

Faculty Mentor: Gallmeier, Maria B

Project Title: Trends in Pejoration of Female-Related Terms of Abuse in English

#42 Carl Weinstein

Major: Interdisciplinary Programs

Faculty Mentor: Darby, Erin Danielle

Project Title: חרם as a Contaminant in Joshua 6 and 7: Is Achan "Sinner Zero?"

#44 Audrey Jean Culpepper

Major: Russian

Faculty Mentor: Blackwell, Stephen H

Project Title: Accessing the Third Translation: Nabokov's Zashchita Luzhina and Nabokov's The Defense

#46 Cora Lay

Major: Modern Foreign Lang/Liter

Faculty Mentor: Ohnesorg, Stefanie

Project Title: Capacity for Destruction: Twentieth Century German Literature and the Bomb

#47 Konrad Szymanowski

Major: Linguistics

Faculty Mentor: Ohnesorg, Stefanie

Project Title: The WITAJ Program: Saving the Sorbian Languages from Extinction

#48 Ashley Cornell

Major: Religious Studies

Faculty Mentor: Shepardson, Christine

Project Title: As Below, So Above: Early Christian Women as Veiled Expressions of Power and Difference

#49 Travis Cornell

Major: Religious Studies

Faculty Mentor: Darby, Erin Danielle

Project Title: The Emergence of Bench Tombs in the Levant during the Eighth to Sixth Centuries BCE

#50 Shannon Dugger

Major: Religious Studies

Faculty Mentor: Darby, Erin Danielle

Project Title: Deification or Demonization: Jesus' Post-Resurrection Body in Luke 24:36-40

#55 Kathryn Copeland

Major: English

Faculty Mentor: Grieser, Jessica Ann

Project Title: Gender Differences in "Uptalk" in the College Classroom

The College of Arts & Sciences, Natural Sciences

#51 Justin Kemp, James Simmons

Major: Biological Sciences

Faculty Mentor: Labrador-San Jose, Mariano

Project Title: Insulators Interact with Early DNA Damage Response Components to Aid Chromosomal Stability

#52 Ashtyn Hill

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: McCord, Rachel Patton

Project Title: Ionizing Radiation Effects on CTCF and Cohesin Recruitment to Sites of DNA Damage

#53 Peyton Hickman

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: McKee, Bruce D

Project Title: Investigating the regulation and function of 6-methyl adenine in the Drosophila genome: genetic analysis of the Drosophila homologs of DAMT1/METTL4 and NMAD1/ALKBH4.

#54 Brandon Lu

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Roberts, Daniel M

Project Title: Calmodulin Like 38 is the hypoxia specific functional homolog of Regulator of gene silencing Calmodulin.

#56 Jacob Wood, Cory Anderson

Major: Biological Sciences

Faculty Mentor: Park, Jae H

Project Title: Analysis of Unknown Circadian Rhythm Mutations in Drosophila Melanogaster

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#57 Levi Gifford

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Burch-Smith, Tessa
Maureen

Project Title: Chloroplast-to-Nucleus
Retrograde Signaling Altering
Plasmodesmata Structure and Function

#58 Ronnie Tran

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Shpak, Elena D

Project Title: The Role of Plant Hormone
Auxin in Leaf Elongation

#59 William Bowman

Major: Biological Sciences

Faculty Mentor: Roberts, Daniel M

Project Title: The calcium sensor protein
Calmodulin Like 38 is degraded via
autophagy during flooding

#60 Rachael Deboe

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Shpak, Elena

Project Title: EPFL Genes and their Role in
Flower Development in Arabidopsis
thaliana

#61 Hayden Roberts

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Das, Maitreyi Emmanuel

Project Title: Role of Pak1 Kinase in
Cytokinesis

#62 Creighton Kellum

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Alexandre, Gladys

Project Title: 19F-NMR as a Tool for
Identifying Potential Inhibitors of the
Antibiotic-Resistant Enzyme, R67
Dihydrofolate Reductase.

#63 Madison Ricketts, Julianne Om

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Lamichhane, Rajan

Project Title: Single-Molecule Studies on
DNA Bending by Transcription Factor
Protein Sox2

#64 Kaylie Richard

Major: Chemical Engineering

Faculty Mentor: Johnson, Jeremiah Gene

Project Title: Purification of the Receptor
Region of an Outer Membrane Protein
from Campylobacter jejuni

#65 Natalie Hamel

Major: Biological Sciences

Faculty Mentor: Jain, Nitin

Project Title: Investigating the Basis of
Thermostability in Cytochrome P450
Enzymes

#66 Shinduri Vijayakumar

Major: Chemical Engineering

Faculty Mentor: Bruce, Barry

Project Title: Encapsulation and
Stabilization of Photosystem I
into Aqueous Mesoporous Microspheres

#67 Dinesh Velu

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Bailey, Constance

Project Title: Enhancing Polyketide
Synthase Pathways through Cofactor
Modifications

#68 Katarina Micin

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Bruce, Barry D

Project Title: Optimizing Cryopreservation
Methodology for Diverse Cyanobacteria

#69 Ethan Long

Major: Aerospace Engineering

Faculty Mentor: Coder, James George

Project Title: Experiential Learning for
Engineering Students through Educational
Outreach and Leadership

#70 Hunter Presley

Major: Physics

Faculty Mentor: Fomin, Nadia

Project Title: Survey of Vibrations in a
Magnetic Spectrometer

#71 Tanner Mengel, Benjamin Smith

Major: Physics

Faculty Mentor: Nattrass, Christine
Elizabeth

Project Title: Transverse energy from
heavy ion collisions

#72 Adam Bryant

Major: Physics

Faculty Mentor: Lavrentovich, Maxim

Project Title: Survival Probabilities on
Branching Tissues

#73 Kenley Prescher

Major: Geology

Faculty Mentor: Dygert, Nick

Project Title: Europium partition
coefficient between pyroxenes and melt

#74 Maggie Hinkston

Major: Physics

Faculty Mentor: Kah, Linda C

Project Title: Reproducibility of Witherite
Biomorphs

#75 Christian Calleja

Major: Microbiology

Faculty Mentor: Su, Chunlei

Project Title: Molecular Identification of
Toxoplasma gondii in an Outbreak of
Toxoplasmosis in Zoo Kangaroos

#76 Rhea Hester

Major: Biological Sciences

Faculty Mentor: Horn, Sally P

Project Title: Fungal Spores in the
Sediments of Laguna Zoncho

#77 Joshua Miller

Major: Mathematics

Faculty Mentor: Ganusov, Vitaly

Project Title: Mathematical Modeling of
Viral Spread in N. Benthamiana Plants

#78 Patricia Burt

Major: Geology and Environmental Stdy

Faculty Mentor: Szykiewicz, Anna

Project Title: Microbial activity in acidic
hydrothermal sediments - Looking for
Evidence of Life on Mars

#79 Thomas Hyde

Major: Microbiology

Faculty Mentor: Lebeis, Sarah

Project Title: Plant-associated bacteria
interact differently on diverse media
sources

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#80 Cameron Fang

Major: Environmental & Soil Sciences

Faculty Mentor: Steen, Andrew

Project Title: Analysis of Positive Selection on Extracellular Enzymes

#81 Andrea Ramirez

Major: Microbiology

Faculty Mentor: Sparer, Timothy E

Project Title:

Human Cytomegalovirus UL146/vCXCL1's act as virulence factors, enhancing spread and viral burden in a mouse model

#82 Bruce Boles

Major: Environmental Engineering

Faculty Mentor: Mikucki, Jill

Project Title: Genome Sequence of an Antarctic Microbe Constructed Using a Rapid, Portable Sequencer and a Hybrid Assembly

#83 Minh Tram Nguyen

Major: Microbiology

Faculty Mentor: Zinser, Erik Ross

Project Title: Prochlorococcus Interaction with Competing Rhodospirillaceae spp. and Alteromonas macleodii in co-cultured

#84 Ramsey Regen

Major: Microbiology

Faculty Mentor: Mikucki, Jill

Project Title: Stress-Driven Microbial Survival: Salt, Drugs, and Heavy Metals at the Bottom of the World

#85 Jared Clance

Major: Biological Sciences

Faculty Mentor: Zinser, Erik Ross

Project Title: Nitrogen Limitation Affects Community Dynamics of Synechococcus and Alteromonas Symbionts

#86 Sophie Stanley

Major: Geography

Faculty Mentor: Horn, Sally P

Project Title: Getting a Glimpse Into the Past with Soil Charcoal Samples

#87 Kali Flynn Burke

Major: Plant Sciences

Faculty Mentor: Horn, Sally P

Project Title: Pine Species in the SE USA during the Late Glacial Period versus the Holocene: Evidence from Pollen Grains

#88 Jordan Reed

Major: Ecology/Evolutionary Biology

Faculty Mentor: Schweitzer, Jennifer

Project Title: Fire May Reduce Rates of Herbivory and Increase Plant Performance

#89 Anna LaFollette, Jared Chance

Major: Geography

Faculty Mentor: Horn, Sally P

Project Title: How Sample Pretreatments Affect Stable Isotope Values in Lake Sediments

#90 Jackson Turner

Major: Ecology/Evolutionary Biology

Faculty Mentor: Kivlin, Stephanie

Project Title: Insect herbivore community diversity differs among wildflower species and changes over time

#91 Anna Kaz

Major: Ecology/Evolutionary Biology

Faculty Mentor: Giam, Xingli

Project Title: Within-reach temperature heterogeneity is limited in a southern Appalachian stream network: implications for climate change refugia and reach-scale temperature mapping

#92 Eric Smith

Major: Environmental/Soil Sciences

Faculty Mentor: Szynekiewicz, Anna

Project Title: Assessing Environmental Processes Contributing to Sulfate Formation on Mars Using Antarctic Analogs

#94 Bryce Wade

Major: Ecology/Evolutionary Biology

Faculty Mentor: Fitzpatrick, Benjamin M

Project Title: Predicting Southern Zigzag Salamander (*Plethodon ventralis*) Occupancy in a Fragmented Landscape

#95 Peibo Li, Katie Sipes

Major: Biology

Faculty Mentor: Lloyd, Karen

Project Title: DNA Extraction and Elemental Analysis of Svalbard Permafrost Active Layer

#96 Andrew Lonergan

Major: Geology and Environmental Stdy

Faculty Mentor: Steen, Andrew

Project Title: Analyzing Extracellular Enzyme Activity across Hot Springs in Panama

#97 Alexandra Searce

Major: Ecology/Evolutionary Biology

Faculty Mentor: Schweitzer, Jennifer

Project Title: Oak regeneration after Chimney Tops II fire is influenced by pine seedling neighbors but not fire-altered soil microbes

#98 Jordan Reed

Major: Ecology/Evolutionary Biology

Faculty Mentor: Schilling, Edward

Project Title: Potential for DNA Barcoding to Enhance Conservation Efforts of Tennessee Flora

#100 Jordan Romero, Jake Alexander

Major: Geology and Environmental Stdy

Faculty Mentor: Kah, Linda C

Project Title: Interpreting variation in weathering color in Archaean carbonate rocks using petrography, cathodoluminescence, and geochemistry: An integrated approach

#101 David Skinner

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Krishnan, Keerthi

Project Title: Touch perception in an adult female mouse model for Rett Syndrome

#102 Mahircan Yagan, Hannah Lee,

Josephine Waller, Daniel Kim

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Krishnan, Keerthi

Project Title: Investigation of cortical perineuronal net expression in rat dams

EURēCA 2020 VR

#103 Brett Emery, Matthew Everett, Bailey Bohannon, Sarah-Anne Bowyer

Major: Neuroscience

Faculty Mentor: Krishnan, Keerthi

Project Title: Investigating the cortical expression of perineuronal nets in male mouse model of CDKL5 disorder in hemisphere and sub region specific manner

#104 Morgan Lane

Major: Neuroscience

Faculty Mentor: Allen, Ben

Project Title: Influence of Red and Blue Wavelengths on the Pupil Light Reflex

#105 Sydnie Toler, Derek Wenger, Elijah Henley

Major: Neuroscience

Faculty Mentor: Allen, Ben

Project Title: A Neuroimaging Meta-Analysis of the Autonomic Brain

#106 Corinne Maldonado, Meagan Smith

Major: Psychology

Faculty Mentor: Buss, Aaron Thomas

Project Title: Exploring Developmental Changes in Functional Connectivity Associated With Cognitive Flexibility

#107 Matthew Jenkins, Sydney Wyatt

Major: Neuroscience

Faculty Mentor: Cooper, Matthew A

Project Title: Understanding the Role of Perineuronal Nets Experience-Dependent Neural Plasticity

#108 Thomas Clarity, Roland Rodriguez, Matthew Jenkins

Major: Neuroscience

Faculty Mentor: Cooper, Matthew A

Project Title: Minocycline reduces acute social defeat-induced neuroinflammation and neurodegeneration in the hamster vmPFC

#110 Neha Sagarad

Major: Neuroscience

Faculty Mentor: Cooper, Matthew A

Project Title: Investigating Cellular Mechanisms of Coping Responses and Dominance Status

#112 Carinne Cheney

Major: Microbiology

Faculty Mentor: Schulz, Kalyann Marie

Project Title: The Role of Estrogen on Perineuronal Nets in the Prefrontal Cortex

#113 Gulsah Onar

Major: Psychology

Faculty Mentor: Schulz, Kalyann Marie

Project Title: Examining the Impact of Gonadal Steroid Hormones on Perineuronal Net Development in the Medial Amygdala

The College of Arts & Sciences, School of Music

#114 Elise Campbell

Major: Music, Stringed Instruments

Faculty Mentor: Baldwin, Wesley

Project Title: Red Rocks Music Festival: Winter Chamber Institute

#115 Caleb Cannon

Major: Music Education

Faculty Mentor: McConville, Brendan Paul

Project Title: The Summoning (An original work for four bass trombones)

The College of Arts & Sciences, Social Sciences

#117 Maya Bian

Major: College Scholars Program

Faculty Mentor: Shefner, Jon D

Project Title: The Commodification of Care: A Case Study in a Private Long-Term Care Facility in Northeastern China

#118 Summer Shore, Rachel Hickman

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Macfie, Jenny

Project Title: Preterm Birth Among Opioid-Using Women and High-Risk Controls: The Potential Moderating Role of Borderline Features

#119 Courtney Wombles

Major: College Scholars Program

Faculty Mentor: Lyons, Beauvais

Project Title: Medical Illustrations as a Tool for Increasing Health Literacy

#122 Vincent Jodoin

Major: Mathematics

Faculty Mentor: Lenhart, Suzanne M

Project Title: Modeling the Effect of Social Networks on the Spread of Opioid Use

#123 Kaitlyn Bocik

Major: Sustainability

Faculty Mentor: Li, Yingkui

Project Title: Forestry and Ecological Applications Using Terrestrial LiDAR

#124 Adriana Ford

Major: Geography

Faculty Mentor: Li, Yingkui

Project Title: Pavement vs. Greenspace: Assessing Areas of Knoxville That Affect Urban Heat Island

#125 Morgan Steckler

Major: Geography

Faculty Mentor: Horn, Sally P

Project Title: Stable Carbon and Nitrogen Isotope Ratios in the Sediments of Laguna Arancibia, Costa Rica

#126 Wesleigh Wright

Major: Geography

Faculty Mentor: Horn, Sally P

Project Title: Point-counts of Microscopic Charcoal in Lake Sediments from Belize and Costa Rica: Comparisons with other Charcoal Proxies of Past Fire

EURēCA 2020 VR

#127 Lauren Adams

Major: Modern Foreign Lang/Liter

Faculty Mentor: Issa, Bernard Ibrahim

Project Title: Working memory and study abroad: a study of memory and language gains

#129 Anna Franklin

Major: Communication Studies

Faculty Mentor: Kerr, Matthew Timothy

Project Title: Studying Levels and Perceptions of Severe Weather Preparedness in University of Tennessee-Knoxville Students

#130 Shannon Perrone

Major: Spanish

Faculty Mentor: Parker, Lisa Ybonne Figueroa

Project Title: On the Outside Looking In: How our Immigrant and Differently Abled Communities Face the Trials and Tribulations of American Society

#131 Klara Houck, Kyle Neubert, Hannah Grigorian

Major: Biochemistry

Faculty Mentor: Stuart, Gregory Lyal

Project Title: The Role of Problematic Pornography and Victim Blaming on Lower Support for Victims of Sexual Assault

#132 Brooke Frohlich

Major: Psychology

Faculty Mentor: Larsen, Jeff T

Project Title: Effect of Demand Characteristics on Facial Feedback Effects

#133 Cody Levi, Katherine Peterson

Major: Neuroscience

Faculty Mentor: Buss, Aaron Thomas

Project Title: Tracking Flanker Task Dynamics: Evidence for Continuous Attentional Selectivity

#134 Ashley Miller, Hollis Ratliff

Major: Psychology

Faculty Mentor: Buss, Aaron Thomas

Project Title: Neural Dynamics of Dimensional Label Learning Predicts Dimensional Attention

#135 Megan Montana, Rebecca Herrarte

Major: Psychology

Faculty Mentor: Buss, Aaron Thomas

Project Title: Probing the Effects of Response Type in a Visual Working Memory Task

#136 Kyle Neubert, Hannah Grigorian, Klara Houck

Major: Psychology

Faculty Mentor: Stuart, Gregory Lyal

Project Title: The Relationship Between Adverse Childhood Experiences and Risky Sexual Behavior Among College Students

#137 Austin Shell, Hannah Hunter

Major: Neuroscience

Faculty Mentor: Allen, Kristy Elizabe

Project Title: Clinical vs. subclinical anxiety levels in adults: Are there meaningful differences?

#138 Timothy Smith

Major: Psychology

Faculty Mentor: Larsen, Jeff T

Project Title: Sulk 'Til You Hulk: An Examination of the Effects of Angry Facial Expression Poses On Emotional Experience

#139 Christian Staton, Timothy Smith, Nicholas Coles

Major: Psychology

Faculty Mentor: Larsen, Jeff T

Project Title: Credit where credit is due? An examination of the reliability of crediting behavior in science.

#140 Kellie Veltri, Jasdeep Batth

Major: Psychology

Faculty Mentor: Hay, Jessica Sari

Project Title: Do Toddlers Learn Words from Other Toddlers?

#141 Emily Alfaras, Jessica Brock, Kodie Palmer, Phoebe Clardy, Taylor Murmann, Alexa Nouvel, Erin Crittenden, Jackson Ratcliff, Darren Garcia

Major: Psychology

Faculty Mentor: Gordon, Kristina Coop

Project Title: Nonverbal synchrony and commitment in romantic dyads

#143 Jessica Brock, Raley Smith, James Dance

Major: Neuroscience

Faculty Mentor: Reynolds, Greg

Project Title: Initial Learning Conditions Affect Other-Species Face Processing in Infancy

#145 Savannah Ledbetter

Major: Neuroscience

Faculty Mentor: Buss, Aaron Thomas

Project Title: Early Dimensional Label Learning Predicts Dimensional Attention

#146 Anastasia Fancher, Alexis Mccraw

Major: Interdisciplinary Programs

Faculty Mentor: Buss, Aaron Thomas

Project Title: Using a Memory Game to Enhance Frontal Activation In 3.5-Year-Olds During and Executive Function Task

#147 Sydney Brawner

Major: Neuroscience

Faculty Mentor: Allen, Ben

Project Title: Effects of varying light intensity on absolute constriction amplitude

#149 Neeley Hodge

Major: Pre-Professional Programs

Faculty Mentor: Sinnreich, Helene

Project Title: Genocidal interruptions of reproduction: Forced Abortions and Forced impregnation during two genocides

#150 Kayde Stroud

Major: Psychology

Faculty Mentor: Sinnreich, Helene

Project Title: A comparison of the Vilna Ghetto hospital and the Syrian underground hospital during war time conditions through a public health lens

#151 Alexander Tripp

Major: Political Science

Faculty Mentor: Morgan, Jana

Project Title: No Strings Attached? FDI, Ideology, and Levels of Democracy in Latin America

EURēCA 2020 VR

#152 Sarah Troyer, Jandi Palmer

Major: College Scholars Program

Faculty Mentor: Kovac, Jeffrey D

Project Title: An International Inquiry into the Field of Forensic Science Abroad

#154 Symantha Gregorash

Major: Religious Studies

Faculty Mentor: Darby, Erin Danielle

Project Title: Examining Impacts of Cultural Competency Curriculum Among Study Abroad Students

The College of Communication & Information

#155 Kerri Adkins

Major: Communication Studies

Faculty Mentor: Miller, Laura Elizabeth

Project Title: The way siblings communicate about a parent's cancer

#156 Max Ray Davenport

Major: Communication Studies

Faculty Mentor: Crowley, Jenny Linnea

Project Title: Hurt Will Follow: Young-Adult Children's Communicative and Behavioral Responses to Hurtful Messages From Parents.

The College of Education, Health, and Human Sciences

#157 Amber Gentry, Jared Smith, Bradi Baker, Jacob Beaird, Anna Darty, Danielle Lee, Olivia Riffey

Major: Animal Science

Faculty Mentor: Bettaieb, Ahmed

Project Title: Novel Insights into the Role of Soluble Epoxide Hydrolase in Adipogenesis

#158 Jared Smith, Amber Gentry, Anna Darty, Olivia Riffey, Jacob Beaird, Bradi Baker, Danielle Lee

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Bettaieb, Ahmed

Project Title: Genetic Ablation and Pharmacological Inhibition of Soluble Epoxide Hydrolase in the β -Cells Enhance Glucose-Stimulated Insulin Secretion

#159 Caroline Begley, Tanner Kilpatrick

Major: Child and Family Studies

Faculty Mentor: Johnson, Elizabeth Inez

Project Title: Household Member Arrest and Adolescent Hopelessness: The Mediating Role of Future Expectations

#160 Ashlyn Anderson

Major: Nutrition

Faculty Mentor: Barroso, Cristina

Project Title: Suggested and Practiced Interventions Addressing College Student Food Insecurity across the Socioecological Model: A Literature Review

#161 Margaret Pepper

Major: College Scholars Program

Faculty Mentor: Ehrlich, Samantha

Project Title: Too Busy To Exercise: Examining Pregnant Women's Exercise Preferences

#162 Rachel Clifft

Major: Recreation /Sport Management

Faculty Mentor: Scott, Jason Lovejoy

Project Title: Volunteerism and its Effect on Emotional Well-Being in College Students

#163 Brooks Leftwich, Gregory Croisdale, Khoa Dang

Major: Mechanical Engineering

Faculty Mentor: Boyd, Karen

Project Title: Montgomery 1960: Using Technology to Teach Empathy and Perspective Taking

#165 Kayla Layton, Lucia Reyes

Major: Psychology

Faculty Mentor: Jaekel, Julia

Project Title: 165. Caregivers' depression risk and NAS infants' abilities to use self-regulation to recover from negative arousal

#166 Ashlyn Hodges

Major: College Scholars Program

Faculty Mentor: Ehrlich, Samantha Frances

Project Title: Validation of the Fitbit Charge 3 in Women with Gestational Diabetes Mellitus: Preparing for a Behavioral Physical Activity Intervention

The College of Nursing

#168 Madeline Kinsella

Major: Nursing

Faculty Mentor: Hebert, Susan Lynn

Project Title: Improving Emergency Room Length of Stay through Transportation

#169 Grace Terhune

Major: Nursing

Faculty Mentor: Hebert, Susan Lynn

Project Title: Free Events Flyer as an Intervention for Social Isolation

#170 Maggie Tracey, Makenna Black, Nicole Archuletta

Major: Nursing

Faculty Mentor: Kiernan, Jason Micheal

Project Title: The Effect of First Aid Lessons on 3rd and 4th Grade Students

#171 Anna Stoddard

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Evaluating Wound Care Knowledge in Underserved Populations in Knoxville

EURēCA 2020 VR

#172 Abigail Winterstein

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Physicians' and Nurses' Perceptions of Family Initiated Rapid Response Systems in Pediatric Medicine

#173 Chloe Allen

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Health risks related to electronic nicotine device use in college students

#174 Delaney Allison

Major: Nursing

Faculty Mentor: Mixon, Melanie C

Project Title: Effects of Appearance and Dress on a Hospitalized Child's Participation

#175 Lindsay Apedaile

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Effectiveness of educating parents about sleep hygiene on the sleep quality of their school-aged child

#176 Karoline Barnett

Major: Nursing

Faculty Mentor: Lakin, Brooke Nicole

Project Title: Implementation of Girls on the Run

#177 Thomas Barringer, Morgan Murray, London Hendon, Maria Glower

Major: Nursing

Faculty Mentor: Koszalinski, Rebecca Susan

Project Title: Virtual Reality Effects on Adolescents with Cerebral Palsy

#178 Angelica Ian Bautista, Chevela Lightfoot, Megan Hoffman

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: The Effects of Meditation on Burnout Rates Among Hospital Nurses

#179 Lauren Bradley, Sydney Smith, Katherine Proctor, Taylor Sieverson

Major: Nursing

Faculty Mentor: Tourville, Jennifer Gale

Project Title: Kangaroo Care's Effects on Breastfeeding

#180 Samantha Callari, Whitney Leon, Taylor Anderton

Major: Nursing

Faculty Mentor: Bailey, Carrie

Project Title: Hospital Nurse Burnout and the Effects of Mindfulness-Based Practice

#181 Emily Carlton, Jessica Rack, Kailyn Phann, Lauren Warwick

Major: Nursing

Faculty Mentor: McLennon, Susan Margaret

Project Title: Water Birth and Neonatal Infection Incidence

#182 Bailee Cavin

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Hand-washing; Your Protection Against Infection

#183 Madeline Chelko, Shelby Lawless

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Childhood Obesity: A Shared Decision Making Tool

#184 Christopher Clark

Major: Nursing

Faculty Mentor: Sagherian, Knar

Project Title: Non-pharmacological Nursing Interventions for Better Outcomes in Infants with Neonatal Abstinence Syndrome

#185 Paige Clark

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Effect of Aromatherapy in Reducing Chemotherapy Induced Nausea and Vomiting (CINV) in Pediatric Patients

#186 Courtney Cremerius

Major: Nursing

Faculty Mentor: Beebe, Lora L Humphrey

Project Title: Effects of Exercise and Physical Activity on Postpartum Depression

#187 Micheletta Crump

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Implementing Fire Safety to Decrease Fire-Related Injuries in Children

#188 Katherine Cunningham

Major: Nursing

Faculty Mentor: Miller, Lynne Hill

Project Title: The Effect of Partner Teaching on Utilization of The Precious Prints Project

#189 Olivia Decuir, Bridget Barrett, Taylor Coleman, Mackenzie Owens

Major: Nursing

Faculty Mentor: Abdoli, Samereh

Project Title: The Effect of Audio Therapy on Anxiety in Preoperative Pediatric Patients

#190 Katherine DePillo

Major: Nursing

Faculty Mentor: Brown, Kimberly McCaskill

Project Title: The Effects of Hand Hygiene in the Adult Staff at SHADES of Development

#191 Kaila Dilling, Kristine Tuttle, Vivian Smit, Claudia Dobronski

Major: Nursing

Faculty Mentor: Bailey, Carrie

Project Title: Effects of Animal-Assisted Therapy on Distress

#192 Olivia Dominick

Major: Nursing

Faculty Mentor: Griffith, Gail Ann

Project Title: Improving Physical Activity in Women's Transitional Housing

EURēCA 2020 VR

#193 Andie Dorris

Major: Nursing

Faculty Mentor: Morgan, Erin

Project Title: Teaching Proper Handwashing Technique for 4- and 5-Year Old Children

#194 Jordan Douglas

Major: Nursing

Faculty Mentor: Morgan, Erin

Project Title: Educating Parents of Two to Three Year Olds on How to Communicate with Teachers Regarding Children

#195 Jessica Eakes, Isabella Yardley,

Jennifer Gotschall, Jeffrey Cole

Major: Nursing

Faculty Mentor: Sagherian, Knar

Project Title: Decreasing Delirium in Intensive Care Unit Patients through the Implementation of ABCDE(F) Bundles

#196 Michael Earhart

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Exploring Prescription Stimulant Use Among Nursing Students on a Large Southeastern Campus

#197 Ashley Ervin

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Improving Hand Hygiene in Elementary Students

#198 Lexie Ferguson

Major: Nursing

Faculty Mentor: Bishop, Edelyn Yvette

Project Title: Ketamine Clinics and Policy Implementation

#199 Peyton Fleming, Mikayla Murphy,

Emily Nelmark, Taylor Turner

Major: Nursing

Faculty Mentor: Koszalinski, Rebecca Susan

Project Title: Complementary and Alternative Medicine for Chronic Pain Management

#200 Izabella Garcia, Anna Harwood,

Cierra Widener, Emily Pooler

Major: Nursing

Faculty Mentor: Sagherian, Knar

Project Title: The Relationship Between Music Therapy and Agitation Levels Among Alzheimer's Disease Patients

#201 Kayla Gentry

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Nutritional Snack Choices in Toddlers

#202 Elizabeth Gibbs

Major: Nursing

Faculty Mentor: Hurt, Maria

Project Title: Oral Hygiene Education for Families of the Knoxville Dream Center Food Trucks

#203 Emily Glenn

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: The Effects of Advertisements on Reducing Food Insecurity in the Working-Uninsured Population

#204 Morgan Graham

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Effect of Provider Training on HPV Vaccination Rates in Rural East Tennessee

#205 William Hanson, Kristiana, Cozort,

Gemma Pierce, Charly Medley

Major: Nursing

Faculty Mentor: Kiernan, Jason Micheal

Project Title: The Effects of Animal-Assisted Therapy on the Mental Status of Pediatric Inpatients: A Literature Review

#206 Stephanie Harwell

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: The Effectiveness of Basic First Aid Education for Elementary Aged Students

#207 Carson Haymon, Savanna Atkinson,

Peyton Smith, Dayton Wagner

Major: Nursing

Faculty Mentor: Tourville, Jennifer Gale

Project Title: Effects of Corporal Punishment on Behavior in Pre-school and Elementary Age Children

#208 Michael Henry, Collin Ashmore,

Charles Williams, Brad Yowell

Major: Nursing

Faculty Mentor: Sagherian, Knar

Project Title: Nurse Staffing and Patient Falls in Inpatient Hospital Units: A Review of Literature

#209 Kayla Hindle

Major: Nursing

Faculty Mentor: Anderson, Joel Gwyn

Project Title: Attitudes and beliefs of nursing students towards patients with eating disorders before and after participating in a psychiatric mental health nursing course

#210 Elizabeth Hodges, Timothy Metcalf,

Lilian Hopson, Tierney Sink

Major: Nursing

Faculty Mentor: Sagherian, Knar

Project Title: Impact of Turning Frequency on Pressure Ulcer Prevention in Hospitalized Adults

#211 Olivia Hoyt, Katharine Bossong,

Madison Bixler, Melissa Haskins

Major: Nursing

Faculty Mentor: Beebe, Lora L Humphrey

Project Title: Effect of Yoga as an Adjunct Therapy for Depressive Disorders

#212 Eva Huff

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Evaluating Nurses' Opinion of Doula Contribution to the Labor and Delivery Team

EURēCA 2020 VR

#213 Breana Hunt, Piper Carveth, Amanda Cummings, Amanda Ellis

Major: Nursing

Faculty Mentor: Bailey, Carrie

Project Title: Effect of Multimodal Sensory Stimulation on Enhanced Recovery for Hospitalized Patients with Brain Injury

#214 Sarah Ingell

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Effects of Maternal Self-Efficacy on Neonatal Intensive Care Unit Visitation Rates

#215 Brian Jones, Sydney Mourges, Keegan Walker, Emily Gaines

Major: Nursing

Faculty Mentor: Kiernan, Jason Micheal

Project Title: The Effects of Art Therapy on Anxiety and Quality of Life in Cancer Patients

#216 Meredith Kaufman, Connor Archer, Abby Strakhov

Major: Nursing

Faculty Mentor: Bailey, Carrie

Project Title: Social support and low birth weight among at risk mothers.

#217 Racheal Kirk

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Decreasing Stress Among Shades of Development Staff to Minimize Turn Over and Improve Care

#218 Jessica Laird

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Physical Activity and Perceptions of Disease and Disability Prevention in Older Adults

#219 Kelsie Lamb

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Effects of a Nutrition Program on School Aged Girls

#220 Taylor Lay

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: The Effects of HPV Vaccine on Cervical Cancer in Females Between the Ages of Nine to 35

#221 Ariana Lee

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: School Asthma Needs: Comparison of Supplemental Sources and Ambassador Visits

#222 Sandy Lee, Ainsley Ellington, Aryana Yavari

Major: Nursing

Faculty Mentor: McLennon, Susan Margaret

Project Title: Does the Teach-Back Method Reduce Hospital Readmission Rates for Patients with Heart Failure?

#223 Ariel Lowe

Major: Nursing

Faculty Mentor: Bishop, Edelyn Yvette

Project Title: Health Literacy: The Impact of Health and Safety Education on Assisted Living Residents

#224 Alyssa Madden

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Preschool Hand Hygiene

#225 Samantha Marlow, Payton Lanier, Sarah Moses, Abigail Williams

Major: Nursing

Faculty Mentor: Koszalinski, Rebecca Susan

Project Title: Probable Outcomes of Caregiver Strain in Children diagnosed with ADHD: A Literature Review

#226 Bailey Martin, Abigail Jagers, Walaa Bahour, Anna Weeks, Erin Donlon

Major: Nursing

Faculty Mentor: Beebe, Lora L Humphrey

Project Title: The Role of Exercise in Improving Symptoms of PTSD in Veterans

#227 Hannah Mathis, Allyson Haupt

Major: Nursing

Faculty Mentor: Griffith, Gail Ann

Project Title: Influenza Prevention Seminar

#228 Skyler Mease, Addison White, Katherine Turner, Anna Mechley

Major: Nursing

Faculty Mentor: Tourville, Jennifer Gale

Project Title: Effect of physical activity on gestational diabetes mellitus in pregnant women

#229 Kayla Miller

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Effects of Music on Mood and Focus for Underserved, School-Aged Children

#230 Faith Mysliwiec

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Evaluating the Nurse's Perception of the Precious Prints Project® as a Support Mechanism to Facilitate the Grieving Process of Nurses Experiencing the Death of Neonatal and Pediatric Patients

#231 Abigail Naifeh, Alexa Rebmann, Kelly Sassee, Ansley Johnson

Major: Nursing

Faculty Mentor: McLennon, Susan Margaret

Project Title: The Effectiveness of Reiki Therapy on Chronic Pain

#232 Stephen Nowell

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Effects of Social Media Use and Multi-use on Sleep Quality in Undergraduate Nursing Students at a Southeastern University

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#233 Paige Osterfeld, Dylan Skiscim,

Christopher Moriconi, Camryn Ford

Major: Nursing

Faculty Mentor: McLennon, Susan Margaret

Project Title: The effect of cognitive behavioral therapy on improving disease management in young women with typical and atypical anorexia nervosa

#234 Emily Patton

Major: Nursing

Faculty Mentor: Meloy, Vikki

Project Title: Interactive Healthy Lifestyle Classes and their Effect on Low Income Children Living in a Homeless Shelter

#235 Magen Payne, Leah Sell-Goodhand,

Nicole Lytle, Curyona Best

Major: Nursing

Faculty Mentor: McLennon, Susan Margaret

Project Title: Meditation and its Impact on Managing Chronic Pain: A Review of Literature

#236 Ashley Riedy, Gabriela Black,

Cassidy Schaad, Meredith Burgin

Major: Nursing

Faculty Mentor: Beebe, Lora L Humphrey

Project Title: MDMA: an option for treatment-resistant PTSD symptoms

#237 Joseph Robertson

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: The Effectiveness of Inhaled Isopropyl Alcohol as a Treatment to Control Post-Operative Nausea and Vomiting

#238 Kelsey Roth, Mikenna Orzech,

Blake Smith

Major: Nursing

Faculty Mentor: Lakin, Brooke Nicole

Project Title: Combating Social Isolation in Low-Income Geriatric Populations

#239 Savanna Scarbrough, Abigail

Jagers, Camryn Morais, Charlotte Wade

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Using Smartphone Applications to Improve Medication Adherence in Adults with Type I Diabetes

#240 Taylor Shott, Nicholas Osteen,

Lainee Anderson, Caroline Billions,

Lindsey Moore

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Effectiveness of Newsletters on Communication

#241 Emily Slater, Delaney Leduc, Abigail

Olson, Katie Andrzejewski

Major: Nursing

Faculty Mentor: Koszalinski, Rebecca Susan

Project Title: The Effects of Medical Recycling Programs in United States Public Hospitals

#242 Abbey Smithers, Emilee Burton,

Helen Conley, Cassidy Darnell

Major: Nursing

Faculty Mentor: Kiernan, Jason Micheal

Project Title: Comparison of Preoperative Stress in Children 16 and Under with Parental Presence Versus Parental Absence at Anesthesia Induction Site

#243 Ali Sullivan

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Adolescent Depression Rate Compared Between Those with a Grandparent with Dementia and the General Public

#244 Catherine Swords

Major: Nursing

Faculty Mentor: Taylor, Sheila Lynn

Project Title: Handwashing Education and Effects in Children

#245 Zarina Tan

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Reducing Lost Sheep Ministry's Waste By 50%

#246 Alexandria Tasket

Major: Nursing

Faculty Mentor: Tourville, Jennifer Gale

Project Title: The Effects of Cuddling and Music Therapy on Symptoms of Neonatal Abstinence Syndrome

#247 Gabrielle Thress

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Impact of Education on Health Care Providers' Knowledge and Attitude Towards Prenatal Probiotics

#248 Vanessa Trefethen, Rebecca

Gunter, Devin Wilmarth, Moriah Sims

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: The Effects of Aromatherapy on Sleep Quality in Cancer Patients Undergoing Chemotherapy

#249 Helen Whitaker, Yonna Worley

Major: Nursing

Faculty Mentor: Elliott, Lizanne Munson

Project Title: Education on Mental Illness in Underserved Communities

#250 Shelby Wilson, Claire Moniz

Major: Nursing

Faculty Mentor: Elliott, Lizanne Munson

Project Title: Initiation of a Referral System for CHANT

#251 Emily Wise

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Assessing the Impact of Guided Imagery and Meditation on Stress Levels of Those Diagnosed with Dementia

EURēCA 2020 VR

#252 Margaret Zerfoss, Ashley Mcmeen, Emily Boone, Maeve Mulligan

Major: Nursing

Faculty Mentor: Thompson, Kathleen

Project Title: Same day ambulation and deep vein thrombosis in postoperative orthopedic patients.

#253 Xiao Mie Zhu

Major: Nursing

Faculty Mentor: Bishop, Edelyn Yvette

Project Title: The Effect of Guided Imagery in Reducing Blood Pressure in Aging Adults with Chronic Hypertension

#254 Riley Barrentine

Major: Nursing

Faculty Mentor: Thomasson Jr, Frank

Project Title:

Therapeutic Journaling: Effects on the Mental and Emotional State of a Child Who Has Been Exposed to Parental Incarceration

#255 Erin Britton

Major: Nursing

Faculty Mentor: Helton, Sally M

Project Title: The Importance of Education on the Topic of Sexual Assault

#256 Kelly Carney

Major: Nursing

Faculty Mentor: Taylor, Sheila Lynn

Project Title: Preventing Hypertension and Cardiovascular Diseases in African American Youth in East Knoxville, TN

#257 Chelsea Chapman, Morgan Phillips, Emily Nicholson

Major: Nursing

Faculty Mentor: Burns, Libby

Project Title: Increasing Reading Comprehension in the At-Risk Youth Population through the Big Brothers Big Sisters of East Tennessee Mentorship Program

#258 Amber Cook

Major: Nursing

Faculty Mentor: Helton, Sally M

Project Title: Early Recognition of Child Abuse and Mental Health Changes

#259 Kieraney Coston

Major: Nursing

Faculty Mentor: Swift, Shelia Henson

Project Title: Promotion of Effective Hand Hygiene Practices in School-Aged Children

#260 Katelyn Dalton, Kelsey Fields, Lilian Jackson, melissa Briant

Major: Nursing

Faculty Mentor: Koszalinski, Rebecca Susan

Project Title: Factors Influencing Compliance Rates of Colorectal Cancer Screening Tests

#261 Ally Deason

Major: Nursing

Faculty Mentor: Bullard, Tammy Borden

Project Title: Effects of Implementation of Emotional Regulation Education in School-Aged Children

#262 Brianna Desjardins, Rachel

Lamphere, Meghan Wolfanger, Kaitlyn Mckinney

Major: Nursing

Faculty Mentor: Abdoli, Samereh

Project Title: The Effect of Scrub Removal on Illness Prevalence in Pediatric Nurses

#263 Elizabeth Durfee

Major: Nursing

Faculty Mentor: Harper, Amanda Blayne

Project Title: Increasing Awareness of The Dream Connection Using Social Media and Education

#264 Hannah Emery, Delaney Bayer

Major: Nursing

Faculty Mentor: Spurgeon, Marcia McAllister

Project Title: The Effects of Physical Activity in Decreasing Hyperactivity in Middle School Children

#265 Kerri Gentry, Kristen Herold, Marissa Sliwa, Erin Gilbert

Major: Nursing

Faculty Mentor: Abdoli, Samereh

Project Title: Blue Light Blocking Glasses and Increased Ability to Fall Asleep in Adults with Insomnia.

#266 Colby Gladson

Major: Nursing

Faculty Mentor: Elliott, Lizanne Munson

Project Title: Diabetic Condensed Action Plan (DCAP)

#267 Emily Harston

Major: Nursing

Faculty Mentor: Myers, Carole R

Project Title: Disease Prevention in the Homeless Population

#268 Kennedie Kirkham, Lindsay Apedails

Major: Nursing

Faculty Mentor: Kojima, Freddie Naoto

Project Title: Effects of Educating People Who are Experiencing Homelessness in the Knoxville Area about Diabetes and Asthma

#269 Kimberly Knorr, Zaria Hall, Logan Krussow, Elise Kendrick

Major: Nursing

Faculty Mentor: McLennon, Susan Margaret

Project Title: The Effect of Central Line Maintenance Bundles on Central line-Associate Bloodstream Infections

#270 Caroline Lukens

Major: Nursing

Faculty Mentor: Taylor, Sheila Lynn

Project Title: Thrive Lonsdale Nutrition Education

#271 Courtney McCarty

Major: Nursing

Faculty Mentor: Kojima, Freddie Naoto

Project Title: Health Care for the Homeless

#272 Mallory McNeal, Hannah Ratterman, Kayla Hindle

Major: Nursing

Faculty Mentor: Mixer, Sandy

Project Title: Substance Abuse Education in the Homeless Population

EURēCA 2020 VR

#273 Madelyn Meitin, Megan Brinkley, Gracie Clayton, Jessica Owen
Major: Nursing
Faculty Mentor: Kojima, Freddie Naoto
Project Title: The Relationship of Race and Ethnicity on the Prevalence of Complication During Pregnancy

#274 Garland Montgomery
Major: Nursing
Faculty Mentor: Mixon, Melanie C
Project Title: Effects of Education on Child Eating Habits in Low Socioeconomic Families

#275 Abigail Moore
Major: Nursing
Faculty Mentor: Hurt, Maria
Project Title: English and Spanish-Speaking Adults of Knoxville Food Deserts Utilizing Fresh Produce

#276 Madison Newberry, Katelyn Swaim, Leigh Mann
Major: Nursing
Faculty Mentor: Tourville, Jennifer Gale
Project Title: Providing Wound Care Education and Supplies at a Syringe Exchange Program

#277 Catherine Nicholson, Madison Miller
Major: Nursing
Faculty Mentor: Brown, Mary Lynn
Project Title: Examining the Effects of a Hand Washing Education Program on Students' Ability to Comprehend the Importance of Hand Washing and Their Ability to Wash Their Hands in Accordance with CDC Guidelines

#278 Kylee Norris
Major: Nursing
Faculty Mentor: Burns, Libby
Project Title: Improving Moods of Adults with Alzheimer's Disease with In-Person Exercise Routine

#279 Courtney Osborne
Major: Nursing
Faculty Mentor: Mixon, Melanie C
Project Title: Does Interactive Play Benefit Hospitalized Children?

#280 Laura Phelps
Major: Nursing
Faculty Mentor: Miller, Lynne Hill
Project Title: Effects of Corporate Intervention on Precious Prints Project

#281 Theone Rizane, Jessica Nguyen
Major: Nursing
Faculty Mentor: Spurgeon, Marcia McAllister
Project Title: Nutrition Education in High-Risk School Age Children

#282 Olivia Rolick, Juliet Lavie
Major: Nursing
Faculty Mentor: Bullard, Tammy Borden
Project Title: The Effects of Learning Basic Swim Techniques on the Amount of Fear Felt by Participants in Emerald Youth Swim Program

#283 Margaret Showalter, Annelise Carroll
Major: Nursing
Faculty Mentor: Lakin, Brooke Nicole
Project Title: Utilizing 5S Lean Technique to Reimagine Organization at Hope Resource Center

#284 Jamie Smith
Major: Nursing
Faculty Mentor: Kojima, Freddie Naoto
Project Title: KARM Guests and Cardiac Related Chest Pain

#285 Samantha Smith, Natalie Nelson, Jude Campbell
Major: Nursing
Faculty Mentor: Rhoten, Travis Dwayne
Project Title: Effects of Interactive Companion Pets on Those with Alzheimer's Dementia

#286 Allison Taylor
Major: Nursing
Faculty Mentor: Adams, Cindi
Project Title: The Effects of Non-nutritive Sucking

#287 Kimberlyn Thomson
Major: Nursing
Faculty Mentor: Hurt, Maria
Project Title: Provider Perceptions of a Homeless Veteran's Barriers to Health Care

#288 Lauren Trent
Major: Nursing
Faculty Mentor: Spurgeon, Marcia McAllister
Project Title: Hand Washing in Children to Decrease Infection

#289 Mallory Wylie
Major: Nursing
Faculty Mentor: Bullard, Tammy Borden
Project Title: The Effects of Yoga Techniques on the Attention of Children

#290 Lauren King, Betelham Berhe, Brittany Cleland, Bernadeta Joksaite, Ellei Burmeister
Major: Psychology
Faculty Mentor: Roberson, Patricia
Project Title: An Analysis of Family Dynamics in relation to Breast Cancer Patient Outcomes in Rural Appalachia

The College of Social Work

#292 Karolynn Beasley
Major: Social Work
Faculty Mentor: Nugent, Bill
Project Title: A Study on the TN Together Act: Is it helping our levels of NAS?

#293 Bailey Cochran
Major: Social Work
Faculty Mentor: Nugent, Bill
Project Title: Applying for Health Insurance and Insurance Assistance

#294 Anna Crutcher
Major: Social Work
Faculty Mentor: Nugent, Bill
Project Title: Ready, Set, Action as an Effective Intervention

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#295 Shelby DeLille

Major: Social Work

Faculty Mentor: Nugent, Bill

Project Title: The Relationship Between Health Insurance, Clinic Visits, and Clinic Income

#296 Meghan Donahue

Major: Social Work

Faculty Mentor: Nugent, Bill

Project Title: Is truancy higher with kids who are homeless versus kids who live in stable housing.

#297 Elizabeth Gonda

Major: Social Work

Faculty Mentor: Nugent, Bill

Project Title: Depression and The Latino Community

#298 Kathryn Harris

Major: Social Work

Faculty Mentor: Nugent, Bill

Project Title: The relationship between familial support and success in a long-term treatment facility for severe and persistent mental illness.

#299 Danielle Orsino

Major: Social Work

Faculty Mentor: Nugent, Bill

Project Title: Does Requiring Assistance With Transportation Make The Elderly More Vulnerable To A Financial Crime?

#300 Corinne Schnadelbach

Major: Social Work

Faculty Mentor: Nugent, Bill

Project Title: Waiving Barriers for the Homeless to Facilitate Independent Housing

#301 Rachel Sitton

Major: Social Work

Faculty Mentor: Nugent, Bill

Project Title: Relationship between number of F codes (mental health diagnoses) and number of crises

The Haslam College of Business

#302 Racquel Gomez

Major: Accounting

Faculty Mentor: Luna, Leann

Project Title: The Sharing Effect: The Impact of the Sharing Economy on Consumers/Producers/Policy makers

#303 Katherine Brown

Major: Anthropology

Faculty Mentor: Malone, Katy

Project Title: Marketing the McClung: Being an intern in the PR and Marketing Department of the McClung Museum

#304 Rachel Davis

Major: Business Analytics

Faculty Mentor: Cole, Laura Seery

Project Title: Data Breaches and Their Effect on Shareholder Return

#305 Tanner Beasley

Major: Business Analytics

Faculty Mentor: Ballings, Michel

Project Title: Setting Prices Using Deep Reinforcement Learning

#306 Sabrina Churchley

Major: Business Analytics

Faculty Mentor: Bichescu, Bogdan Cristian

Project Title: Traveling Patients: Determinants of Patient Travel for Healthcare Services.

#307 Brenna Logan

Major: Business Analytics

Faculty Mentor: Cole, Laura Seery

Project Title: Celebrities on Social Media and Their Effect on Shareholder Wealth

#308 David Miller

Major: Business Analytics

Faculty Mentor: Zheng, Wei

Project Title: Understanding Collegiate Football Ticket Prices and Demand

#309 Kara White

Major: Business Analytics

Faculty Mentor: Fauver, Larry Anthony

Project Title: The Cost of Big Data: Evaluating the Effects of the European Union's General Data Protection Regulation

#310 Luke Coscia

Major: Finance

Faculty Mentor: Kelley, Eric Kyle

Project Title: Strategies and Motives in M&A Transactions that Lead to Deal Success or Failure

#311 Christian Gates

Major: Finance

Faculty Mentor: Harris, Matt

Project Title: The Association Between Merit Aid and Migration and Education

#312 Hazen Page

Major: Finance

Faculty Mentor: Sims, Charles Boyd

Project Title: What Factors Contribute to Energy Leapfrogging?

#314 Sarah Bowman

Major: Marketing

Faculty Mentor: Bharadwaj, Neeraj

Project Title: INFLUENCER VERSUS BODY POSITIVE MARKETING: Perceived Brand Personalities in the Eye of the Target Consumer

#315 Annie Liu, Victoria Culpepper

Major: Global Studies

Faculty Mentor: Xiao, Yazhen

Project Title: "Customers Being Reviewed in the P2P Market: An Analysis of Content Generated by Service Providers"

#316 Harry Channing

Major: Mathematics

Faculty Mentor: Bozdogan, Hamparsum

Project Title: Autism's Genetic Indicators: The Prediction of Autism through Modeling

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#317 Eric Boden

Major: Supply Chain Management

Faculty Mentor: Saunders, Lance Walter

Project Title: The Implementation of Lean Principles in College Athletics

#318 Connor Clarke

Major: Supply Chain Management

Faculty Mentor: Barksdale, Cheryl

Project Title: Building Better Teams: A Manager's Guide to Team Personality

#319 Caroline Jones

Major: Supply Chain Management

Faculty Mentor: Tate, Wendy

Project Title: Scope 3 Greenhouse Gas Emissions: Whose Problem is it?

#320 Virginia Thomassy

Major: Supply Chain Management

Faculty Mentor: Bell, John Edward

Project Title: Robotics in Last Mile Delivery

#321 Emily Toye

Major: Supply Chain Management

Faculty Mentor: Bell, John Edward

Project Title: Education's Role in Socially Sustainable Supply Chains

The Herbert College of Agriculture

#322 Darlene Filomena

Major: Biosystems Engineering

Faculty Mentor: Abdoulmoumine, Nour

Project Title: The natural physical and chemical variability of hardwood woody biomass across the south east region.

#323 Sara Madgett

Major: Civil Engineering

Faculty Mentor: Abdoulmoumine, Nour

Project Title: Preliminary conceptual design of an on-site thermochemical conversion system of hazardous forest fuel into biochar at wildland-urban interface

#324 Kellie May

Major: Public Relations

Faculty Mentor: Zhuang, Jie

Project Title: How do you market FEWS research to the public?

#325 Justin Cross

Major: Food And Agricultural Business

Faculty Mentor: Velandia, Margarita M

Project Title: Labor Use and Labor Challenges Faced by Small Fruit and Vegetable Farms: The Case of Tennessee

#326 Niamh Schumacher

Major: Food Science

Faculty Mentor: Gill, Tom

Project Title: Barriers to Incorporating Animal Sourced Foods (ASF) into the Diets of Rwandan Broiler Chicken Farmers

#327 Emma Hessoock, Emma Horn,

Samantha Roberts, Casey Read

Major: Animal Science

Faculty Mentor: Moorey, Sarah E

Project Title: New Method to Determine Mitochondrial DNA Copy Number and ATP Quantity from a Single Oocyte

#328 Emma Horn, Emma Hessoock,

Samantha Roberts

Major: Animal Science

Faculty Mentor: Moorey, Sarah E

Project Title: Relating ATP Quantity and Mitochondria Number in Single Oocytes

#329 Samantha Roberts, Emma Horn,

Emma Hessoock

Major: Animal Science

Faculty Mentor: Moorey, Sarah E

Project Title: Cow age, BCS, and days postpartum impact resumption of estrus in beef cattle

#330 Molly Vancuren

Major: Animal Science

Faculty Mentor: Kerro Dego, Oudessa

Project Title: Antimicrobial Resistant Zoonotic Bacteria in Dairy Farms in East Tennessee

#331 Abigail Sallee

Major: Biochem/Cellular/Molecular Bio

Faculty Mentor: Lin, Jun

Project Title: Raccoon is a natural animal host for *Escherichia albertii*, the emerging human enteric pathogen

#332 Alana Messier

Major: Medical Laboratory Science

Faculty Mentor: Kwit, Charles

Project Title: Effects of ant chemical anabasine on plant fungal pathogen *Botrytis Cinerea*

#333 Melissa Demmitt

Major: Environmental/Soil Sciences

Faculty Mentor: Zhuang, Jie

Project Title: Understanding How Climate Change Will Impact Agriculture in the Midwest

#334 Karalee Corbeil

Major: Environmental/Soil Sciences

Faculty Mentor: Schaeffer, Sean Michael

Project Title: Seasonal and cover cropping effects on soil microbial respiration and inorganic N availability

#335 Karsten Parker, Jeffrey Rice

Major: Chemical Engineering

Faculty Mentor: Eda, Shigetoshi

Project Title: Electrochemical detection of serum antibodies for on-site diagnosis of John's disease

#336 Alexander Funk, Caleb Keoho

Major: Ecology/Evolutionary Biology

Faculty Mentor: Gray, Matt

Project Title: Effects of Watershed Degradation on Survival and Behavior of *Cryptobranchus alleganiensis* Larvae

#337 Dominique Reuter

Major: Food Science

Faculty Mentor: Lenaghan, Scott Christopher

Project Title: Lighting the Way: Bioluminescent Reporters in Plants

EURēCA 2020 VR

#339 Victoria Beard

Major: Microbiology

Faculty Mentor: DeBruyn, Jennifer Mary

Project Title: Changes in Antibiotic Resistance in Soil Microbes During Human Decomposition

#340 Jackson Craig

Major: Microbiology

Faculty Mentor: D'Souza, Doris

Project Title: Ozonation for the Reduction of Aichi Virus

#341 nicholas Ballew, John Williams

Major: Plant Sciences

Faculty Mentor: Butler, David M

Project Title: Effects of Biochar on Morphological Characteristics in Organic Kale Leaf Tissues

#342 Lana Howe, Jessica Stockdale

Major: Plant Sciences

Faculty Mentor: Stewart, Neal

Project Title: Tissue Culture and Agrobacterium-mediated transformation efficiency of industrial hemp, Cannabis sativa L.

#343 Brandon Kristy

Major: Plant Sciences

Faculty Mentor: Olukolu, Bode

Adebowale

Project Title: Into the Endosphere: Applying Qmatey to the Sweetpotato Leaf Microbiome

#344 Jacob Metcalf

Major: Plant Sciences

Faculty Mentor: Butler, David M

Project Title: Effect of carbon substrates on the production of volatile fatty acids under anaerobic soil conditions at two different temperatures

#345 Bryce Trull

Major: Plant Sciences

Faculty Mentor: Piasecki, Cristiano

Project Title: Agrobacterium-Mediated Transformation & the Development of a High-Throughput Screening Protocol for Glyphosate Resistance in *Conyza canadensis*

#346 Ryan Vichich

Major: Plant Sciences

Faculty Mentor: Butler, David M

Project Title: Effectiveness of beneficial organisms and other non-synthetic treatments on the the soilborne fungal pathogen *Rhizoctonia solani*

The Tickle College of Engineering

#348 Cody Hunter, Andrew Atchley,

Blake Balogh

Major: Agricultural Engineering

Faculty Mentor: Tyner, John S

Project Title: Optimized Soil Infiltration Enhancement System

#349 Logan Ashworth

Major: Biosystems Engineering

Faculty Mentor: Gan, Hao

Project Title: Rapid Autonomous Corn Phenotyping - Data Acquisition System (RACP-DAS)

#350 Kaitlyn Nelms, Mary Morris

Major: Biosystems Engineering

Faculty Mentor: Hawkins, Shawn

Project Title: Poultry Farm Security Gate: Autonomous Vehicle Recognition System

#351 Jenna Williams, Emma Beach,

Madison Oehler, Olivia Yates

Major: Biosystems Engineering

Faculty Mentor: Ludwig, Andrea Lorene

Project Title: Floating Treatment Wetland Testing and Optimization

#352 John Hill

Major: Chemical Engineering

Faculty Mentor: Trinh, Cong

Project Title: Design of Low Cost, Modular, High Throughput Bioreactors for Bacterial Fermentations

#353 Nathaniel Blalock

Major: Chemical Engineering

Faculty Mentor: Boder, Eric Thomas

Project Title: Protein Engineering Potential Inhibitor of Detrimental Immune Responses

#354 Noah Dunlap, Hyeongmin Seo

Major: Chemical Engineering

Faculty Mentor: Trinh, Cong

Project Title: Clostridium thermocellum Media Optimization for Cell Growth and Isobutanol Production

#355 Makayla Hyde, Jaclyn Choate

Major: Chemical Engineering

Faculty Mentor: Counce, Robert M

Project Title: Study Level Processes that Recover Thorium and Several Rare Earth Elements from Monazite Ore

#356 michael player

Major: Chemical Engineering

Faculty Mentor: Counce, Robert M

Project Title: Relationship of resistance and separation factor in the process of extracting lithium and potassium from brine

#357 Jacob Reynolds

Major: Chemical Engineering

Faculty Mentor: Abel, Steven Matthew

Project Title: Mechanical Feedback in the Active Search for Antigens by T Cells

#358 Lacey Roberts

Major: Chemical Engineering

Faculty Mentor: Zawodzinski, Thomas Anthony

Project Title: Microemulsions in acidic and alkaline environments as electrolytes for energy storage

#359 Cora Smith

Major: Chemical Engineering

Faculty Mentor: Counce, Robert M

Project Title: The Effect of Acid Addition on Cation Exchange Membrane Transport and Separation

EURēCA 2020 VR

#360 Abdullah Salim, Priscilla Pineda, Isabella Alimilla, Andrew Putt

Major: Biological Sciences

Faculty Mentor: Hazen, Terry C

Project Title: A Novel Approach for Characterizing the Ultra-Micro Size-Fraction Community

#361 Tyler Galyon

Major: Civil Engineering

Faculty Mentor: Alshibli, Khalid

Project Title: Experimental Study of Crack Propagation in Single Crystal Halite (Rock Salt) Using Digital Image Correlation Techniques

#362 Colby Gilbert, Luke Edwards

Major: Civil Engineering

Faculty Mentor: Penumadu, Dayakar

Project Title: Analysis of Fiber Addition Affects to Cement Based Composites for Use in Additive Manufacturing Applications

#363 Ruichen Guo

Major: Civil Engineering

Faculty Mentor: Wierschem, Nicholas Edward

Project Title: The Application of Tuned Mass Damper

#364 Andrew Patchen

Major: Civil Engineering

Faculty Mentor: Penumadu, Dayakar

Project Title: The Effects of Defects in Elium Based Thermoplastics Fiber Reinforced Composites

#365 Jonathan Bryan

Major: Computer Science

Faculty Mentor: Zhao, Xiaopeng

Project Title: The Applications of EEG Waves Using Brain-Computer Interface Software

#366 Teesha Brown

Major: Industrial Engineering

Faculty Mentor: Khojandi, Anahita

Project Title: Early Prediction of Alzheimer's Disease Using Optic Flow Event Related Potentials: Combining Trials and Tasks to Improve Performance

#367 Kalina Scarbrough

Major: Industrial Engineering

Faculty Mentor: Khojandi, Anahita

Project Title: Identifying a Minimal Set of Sensors to Predict Soil Moisture in Real-Time in Green Infrastructure

#368 Mollie Turner

Major: Industrial Engineering

Faculty Mentor: Khojandi, Anahita

Project Title: Early Prediction of Alzheimer's Disease Using Optic Flow Event Related Potentials: Extracting Better Features to Improve Performance

#369 Kate Eikel

Major: Materials Science & Engineer

Faculty Mentor: Hu, Bin

Project Title: Fine-Tuning Mechanisms of Crystal Growth for Large Scale Application

#370 Reece Emery

Major: Materials Science & Engineer

Faculty Mentor: Rack, Philip D

Project Title: Surface, Interface, and Temperature Effects on the Phase Separation and Nanoparticle Self Assembly of Bi-Metallic Ni_{0.5}Ag_{0.5}: A Molecular Dynamics Study

#371 Ian Greeley

Major: Materials Science & Engineer

Faculty Mentor: Melcher, Chuck

Project Title: Effect of growth stability on optical and scintillation homogeneity in LSO:Ce, Ca crystals

#372 Alexander Greenhalgh

Major: Materials Science & Engineer

Faculty Mentor: Keffer, David J

Project Title: Visualization and Metrics of Atomic Ordering

#373 Caitlin Harpell

Major: Materials Science & Engineer

Faculty Mentor: Rawn, Claudia J

Project Title: Synthesis and Characterization of the KCl:MgCl₂ System

#374 Ryan Heldt, Rakesh Kamath, Logan White

Major: Materials Science & Engineer

Faculty Mentor: Choo, Hahn

Project Title: Effects of Processing Parameters on Successive Melt-Pool Development in Laser-Fusion Processing of Ti-6Al-4V Alloys: An In-Situ Dynamic Synchrotron Radiography Study

#375 Madeline Loveday

Major: Materials Science & Engineer

Faculty Mentor: Zhuravleva, Mariya

Project Title: A Comparative Analysis of High-Entropy Ceramics Prepared Via Steric Entrapment and Solid-State Synthesis Methods: Structure, Homogeneity, and Grain Size

#377 Cullen Pearson

Major: Materials Science & Engineer

Faculty Mentor: Sickafus, Kurt Edward

Project Title: Investigating Chemical and Mechanical Inhomogeneity in Pattern Welded Steel

#378 Jace Pittman, Clifton Sluss

Major: Materials Science & Engineer

Faculty Mentor: Keffer, David J

Project Title: Entropy Calculation from Molecular Dynamics Simulation

#379 Alexander Richter

Major: Materials Science & Engineer

Faculty Mentor: Keffer, David J

Project Title: Lithium and Sodium Ion Binding in Nanostructured Carbon Composites

#380 Robert Spurling

Major: Materials Science & Engineer

Faculty Mentor: Compton, Brett Gibson

Project Title: Characterization of B₆Si as an Active Filler for 3D Printing

EURēCA 2020 VR

#381 Logan White, Ryan Heldt, Rakesh

Kamath

Major: Materials Science & Engineer

Faculty Mentor: Choo, Hahn

Project Title: An in-situ x-ray synchrotron radiography study of the effect of melt-strategy parameters on solidification dynamics in laser fusion processing of Ti-6Al-4V alloy

#382 Natalie Wieber, Natalie Wieber

Major: Materials Science & Engineer

Faculty Mentor: Rawn, Claudia J

Project Title: Identifying Correlations between Powder Feed stock Properties to Assist Binder Jet Print Setting Development

#383 Sara Wonner

Major: Materials Science & Engineer

Faculty Mentor: Wetteland, Chris

Project Title: Mechanical Testing of Tungsten-Steel Laminated Composites for use in Fusion Applications

#384 Quinton Wright

Major: Materials Science & Engineer

Faculty Mentor: Keppens, Veerle

Project Title: Microfluidic Synthesis and Characterization of Lead Iodide Perovskite Nanoplatelets

#385 Caleb Weatherly, Shailesh Alwekar

Major: Aerospace Engineering

Faculty Mentor: Vaidya, Uday Kumar

Project Title: Continuous Fiber Reinforced Thermoplastic Tape Over-molding of Long Fiber Thermoplastic

#386 Lauren Jennings, Kayla Arnsdorff

Major: Biomedical Engineering

Faculty Mentor: Faber, Courtney June

Project Title: 'This Seems Reasonable': Using Metacognition and Epistemic Cognition to Justify the Reasonableness of Solutions in Senior Design

#388 Michael Buckley

Major: Mechanical Engineering

Faculty Mentor: Rucker, Daniel Caleb

Project Title: Finite Element Analysis of Laser-Cut, Tubular Robots for Surgical Applications

#389 Jessie Ringley

Major: Mechanical Engineering

Faculty Mentor: Sarles, Stephen Andrew

Project Title: Kinetic Characterization of Monazomycin for Neuromorphic Computing

#390 Jackson Wilt

Major: Mechanical Engineering

Faculty Mentor: Compton, Brett Gibson

Project Title: A Machine Learning Approach to Accelerate Auxetic Metamaterial Design

#391 Thomas Davis

Major: Nuclear Engineering

Faculty Mentor: Lukosi, Eric Daniel

Project Title: Potassium-40 Background Suppression in K₂Sr₂Si₂O₇:Eu²⁺

#393 Ketaki Joshi

Major: Nuclear Engineering

Faculty Mentor: Melcher, Chuck

Project Title: The Effect of Annealing and Stoichiometry on the Scintillation Properties of Cesium Hafnium Chloride

#394 Cale Overstreet

Major: Nuclear Engineering

Faculty Mentor: Lang, Maik Kurt

Project Title: Layer-Stacking Model in A₂BO₅ Oxides

#395 Luke Seifert, Alexander Wheeler

Major: Nuclear Engineering

Faculty Mentor: Chvala, Ondrej

Project Title: Material Flows and On-line Reprocessing in Serpent

Research presented at the 24th Annual Exhibition of Research and Creative Achievement benefitted, or was conducted in conjunction with the following organizations:

Tuskegee Multicultural Center	Amachi Knoxville	The Precious Prints Project
Oak Ridge National Laboratory	Emerald Youth Foundation	Cherokee Health Systems
U.S. Department of Homeland Security	Boys and Girls Club South Knox Elementary	Borderland Tees Butterfly Garden
United States Agency for International Development (USAID) American Red Cross	Emerald Youth Foundation	Thrive Parkridge
Knox County Health Department	Knox Area Rescue Ministry	Cedar Springs Weekday School
Hope Resource Center	Thrive Lonsdale	Kid's First CAC of 9th Judicial District
Children's Center of Knoxville	The Dream Connection	Knoxville Area Rescue Ministries (KARM)
National Aeronautical and Space Administration (NASA)	Boys & Girls Club	Great Smokey Mountains National Park
Big Brothers Big Sisters of East Tennessee	Knoxville Dream Center	Haiti Christian Development Fund
Pat Summitt Clinic	InterFaith Health Clinic	Knox County Rescue Ministry
East Tennessee Children's Hospital	Kid's Heights	Children's Center of Knoxville
Cherokee Health Systems	Little Oaks Academy	Tennessee Wildlife Resources Agency
The Boys & Girls Club of the Tennessee Valley	The University of Tennessee Medical Center, High-Risk Obstetric Clinic John T. O'Connor Senior Center	SHADES of Development
Vine School Health Center	Tennessee Space Grant Consortium	Salvation Army
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Health Connect America	YWCA	Morning View Assisted Living Facility- The Memory Care Unit
Centro Hispano	Girls Inc. of the Tennessee Valley	Bob and Jenny's Garden
East Tennessee Human Resource Agency	Fort Sanders Regional Medical Center	
McClung Museum of Natural History and Culture	Wesley House Community Center	
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	Helen Ross McNabb, Sexual Assault Center of East Tennessee	



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