



UCUR Annual Conference

Agenda

Hosted by Utah Valley University

**800 W University Parkway
Orem, UT 84058**

**February 15, 2024, 6:00 – 10:00 PM
February 16, 2024, 7:00 AM – 5:00 PM**

<https://www.uvu.edu/undergrad-research/ucur/>

Welcome

Modeled after the National Conference on Undergraduate Research, UCUR is a celebration of academic, professional, and personal achievements from undergraduate research projects and creative endeavors.

Each year, the Utah Conference on Undergraduate Research allows student researchers from all over the state to come together and present their research.

Presentations are given to an interdisciplinary audience. Abstract topics can be anything from art to molecular biology. Presentation opportunities include poster displays, oral presentations, and creative performances. Students from all disciplines are encouraged to apply.

UCUR 2024 promises to be like no UCUR before. With the first ever kickoff party Thursday night with live entertainment, food trucks, swag and a variety of games and activities. You won't want to miss it!

Conference day will have new presentation options, keynote speakers in both the Arts and Sciences and a distinguished guest to get the day started.

UCUR State Steering Committee

Lynn Patten, Brigham Young University
Lane Law, Salt Lake Community College
Lindsay Chaney, Snow College
Camille Thomas, Southern Utah University
Annie Fukushima, University of Utah
Cindy Greaves, University of Utah
Julie Hartley, Utah System of Higher Education
Alexa Sand, Utah State University
Athena Dupont, Utah State University
Vinodh Chellamuthu, Utah Tech University
Shelly Andrus, Utah Valley University
Matt North, Utah Valley University
Therese Cavlovic, Weber State University
Shawn Coon, Westminster University

Program in Brief

Thursday, February 15, 2024

Thursday Evening Check-in	Sorensen Center Ballroom Foyer	6:00 – 8:00 PM
Food Trucks	Student Life & Wellness Center Plaza	6:00 – 8:30 PM
Kickoff Party	Student Life/Sorensen Center Ballroom	6:00 – 10:00 PM

Friday, February 16, 2024

Friday Morning Check-in	Fugal Gateway Welcome Center	7:00 AM – 1:00 PM
Conference Breakfast/Keynotes	Keller Building Vallejo Auditorium	8:00 – 9:00 AM
Grad/Career Fair	Hall of Flags	9:00 AM – 2:00 PM
Huntsman Cancer Session 1	Sorensen Center – Center Stage	9:00 AM – 12:00 Noon
Session A	Sorensen Center & Keller Building	9:00 – 10:30 AM
Session B	Sorensen Center & Keller Building	10:45 AM – 12:15 Noon
Conference Lunch	Sorensen Center Ballroom	12:00 Noon – 1:30 PM
Lunch Keynote	Sorensen Center Ballroom	12:15 PM – 1:00 PM
UCUR Steering Committee Lunch	Sorensen Center 213C	1:00 – 2:00 PM
Huntsman Cancer Session 2	Sorensen Center – Center Stage	2:00 – 5:00 PM
Session C	Sorensen Center & Keller Building	1:45 – 3:15 PM
Session D	Sorensen Center & Keller Building	3:30 PM – 5:00 PM

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Survey

The Intermountain Digital Educational Research Consortium (IDERC) is conducting an assessment of the availability of resources supporting RECR at different institutions across the Intermountain West, and of how researchers from different types of institutions implement specific practices in their research and mentoring. This survey is open to faculty members, staff members who either conduct or administer research, and undergraduate and graduate students. Participation in this survey is entirely voluntary and we will not collect personally identifying information. The survey should take less than 15 minutes, and your answers will help us understand the current strengths and needs for research training in our region. You can access the survey at: https://usu.co1.qualtrics.com/jfe/form/SV_5pYWPZBaNd8Ig5w

Sponsors



Welcome Message: Gary R. Herbert

8:00 AM – Keller Building (KB), Vallejo Auditorium



Gary R. Herbert was Utah's 17th governor from 2009 to 2021. During his tenure, his relentless focus on economic development resulted in Utah being recognized as the number one economy in America. Herbert currently dedicates his time establishing the Gary R. Herbert Institute for Public Policy at Utah Valley University. The Institute works to develop future policy leaders. Herbert and his wife, Jeanette, are the proud parents of six children and seventeen grandchildren.

Morning Keynote: Brent Baum

8:15 – 8:45 AM – Keller Building (KB), Vallejo Auditorium



Mr. Baum is a veteran entertainment executive and film producer whose creative, financial and film production career spans thirty years and encompasses the development, production, financing, distribution and sale of dozens of movies, some of which include: *The Wedding Planner* (Jennifer Lopez and Matthew McConaughey); *Eye of the Beholder* (Ashley Judd and Ewan McGregor); *Drowning Mona* (Danny DeVito, Bette Midler, Neve Campbell); *Thomas and the Magic Railroad* (Alec Baldwin); *Beautiful* (Sally Field, Minnie Driver); and *Buying the Cow* (Jerry O'Connell, Alyssa Milano). He also directed and produced the award-winning feature documentary film *Finding Noah*. Mr. Baum has helped to raise over \$2 billion dollars of financing for entertainment production and distribution over his career.

Mr. Baum is currently the CEO of FanX Studios, a Utah-based film production and distribution entity. He started his entertainment career at DreamWorks as Vice President, corporate strategic planning. He was a member of the five-person initial start-up team responsible for creating and implementing DreamWorks' ten-year strategic plan to build a competitive movie studio. In addition, Mr. Baum was President and co-founder of indie distributor Destination Films and a co-founder and COO of Resurgent Film Group, a leading film finance company. In 2008, he established Brent Baum Productions as a consulting and production vehicle through which he continues to produce films as well as advise companies on their investment and creative activities in the entertainment sector. He was a Senior Advisor to Torridon Films in their slate financing with Warner Bros. which included the films *Blade Runner 2049* and *12 Strong*. He is actively producing a number of high-profile film and television properties some of which include: the action thriller *Valet* written by Academy Award nominee Jason Hall; the action-comedy *Hard Drive* written and directed by Walt Becker; *November Man 2* starring Pierce Brosnan and the sci-fi TV show *Holoscape* in conjunction with Roddenberry Entertainment. Mr. Baum earned his MBA from the Wharton School at the University of Pennsylvania; a Master of Arts, International Studies, from the University of Pennsylvania; and a Bachelor of Arts, Cum Laude, from Brigham Young University with dual majors in Political Science and Asian Studies.

Lunch Keynote: Tammy Clark

12:15 – 1:00 PM – Sorensen Center (SC), Student Center Ballroom



Tammy's path to serve as the Associate Provost of Academic Innovation at Utah Valley University was driven by her love of creating things of value and desire to impact the lives of students. Upon earning her Ph.D, Tammy started her career as a medicinal chemist at GlaxoSmithKline Pharmaceuticals where she contributed to the development of Promacta, a drug that increases platelet levels in chemotherapy patients. She also designed a molecule that was originally slated for clinical trials but was ultimately commercialized as a tool compound for cancer biologists instead. As a professor she enjoyed the opportunity to collaborate with a rich variety of disciplines to create new courses, programming and experiences that helped students realize their potential and pursue their dreams.

Huntsman Cancer Institute Welcome Message:

Brad Cairns

9:00 AM and again at 2:00 PM – Sorensen Center (SC), Center Stage

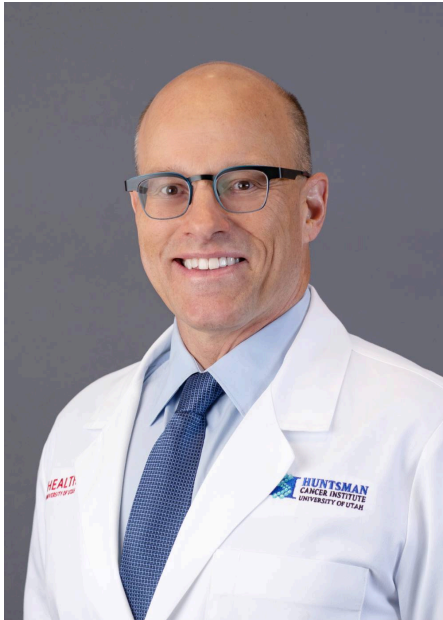


Brad Cairns received his B.S. (Honors) in Chemistry from Lewis and Clark College, his PhD in Cell Biology from Stanford University, and conducted his postdoctoral training at Harvard Medical School (Genetics). He is now Professor and Chair of the Department of Oncological Sciences, an Investigator with HHMI, Chief Academic Officer at Huntsman Cancer Institute and is the Jon M. Huntsman Presidential Endowed Chair in Cancer Research (given by the 2018 Utah Legislature). He was elected to the American Academy of Arts and Sciences in 2017 and the Royal Society (London/UK) in 2023.

Dr. Cairns' lab strives to understand how chromosome and chromatin structure/remodeling regulates gene expression, development and cancer. Dr. Cairns was the first to purify a chromatin remodeling complex (SWI/SNF complex), which unpacks and opens genes within chromosomes to enable their expression – revealing their detailed mechanisms and their dysregulation in cancer. His studies of germline/sperm chromatin revealed the poising of developmental genes for future expression in the embryo, and his single-cell analysis of human spermatogonial stem cells revealed how chromatin and gene expression mechanisms promote spermatogenesis and proper embryo development. He is committed to training and education, having trained over 28 graduate students and 10 undergraduates, and is the former Director of the University of Utah Molecular Biology graduate program.

Huntsman Cancer Institute Welcome Message: Donald Ayer

9:00 AM and again at 2:00 PM – Sorensen Center (SC), Center Stage



Dr. Donald Ayer, PhD is a Professor in the Department of Oncological Sciences and an Investigator at Huntsman Cancer Institute (HCI). His lab is interested in cancer metabolism and how cells sense and respond transcriptionally to the abundant nutrient glucose. He is actively engaged in training the next generation of cancer researchers, having served as the Director of the University of Utah's PhD program in Molecular Biology and as the Senior Director of Cancer Training and Career Enhancement. In this latter role, he has oversight of HCI's training programs that serve learners from high school students all the way up to junior faculty. He is particularly proud of the various summer internship programs that provide hands on research experiences for young learners.

Huntsman Cancer Institute Special UCUR Sessions

Sorensen Center (SC) - Center Stage

Morning Session Schedule

9:00 – 9:10 AM – Introduction.....	Brad Cairns and Donald Ayer
Oral Presentations	
9:15 – 9:30 AM	Chad Hyer
“Optimization of Cell-free Protein Synthesis of RNase Inhibitors for Inexpensive, At-home Glutamine Biosensor Tests for Cancer Treatment Monitoring”	
9:30 – 9:45 AM	Eliza Ballantyne
“Raman spectroscopic analysis of fixed lung cancer sections”	
9:45 – 10:00 AM	Caroline Torgersen
“Detecting microbeads in a dynamic fluid system”	
10:00 – 10:05 AM	Break
10:05 – 10:20 AM	Richard Ji
“Comparative effectiveness of ChatGPT 4.0 and medical oncologists in telemedicine-based management of metastatic prostate carcinoma (mPC).”	
10:20 – 10:35 AM	Diya Garg
“Trends in NGS Testing”	
10:35 – 10:50 AM	Poster Lightning Presentations
Sophie Daines: “Removing CD6 to enhance CAR T cell therapies.”	
Sofia Flowers: “The Caregiving Experience for Children Diagnosed with Cancer: A Secondary Analysis”	
Drew Allred: “Using Transfection as a Annotation-free Ground Truth for Training Noninvasive Metastatic Cancer Mapping Methods”	
Tayler Fearn: “Generative AI and Image Manipulation”	
Ishmael Elliot Molina-Zepeda: “Transcriptome-Based Risk Score Predicts Time to First Treatment for Multiple Myeloma Patients”	
Thomas Caldwell: “GPU-Accelerated Monte Carlo Raman Spectroscopy Simulation: Unlocking Computational Speed for Cancer Detection”	
10:50 – 11:4 AM	Poster Session
Lunch and Fairs	
12:00 -1:00 PM	Keynote Lunch - Ballroom
1:00 – 2:00 pm.....	Grad/Career Fair – Hall of Flags

Afternoon Schedule

2:00 – 2:10 pm – Introduction	Brad Cairns and Donald Ayer
Oral Presentations	
2:15 – 2:30 PM	Ana Paulina Medellin-Alvarez
“Combined Inhibition of RAF, MEK, and FAK Attenuates Melanoma Brain Metastases and Prolongs Survival in Preclinical Models”	

2:30 – 2:45 PM	Jared Barrot
“Cryopreservation: The Chilly Future of Biobanking”	
2:45 – 3:00 PM	Ayana Srivastava
“The utility of ChatGPT in subspecialty consultation for patients (pts) with metastatic genitourinary (GU) cancer.”	
3:00 – 3:05 PM	Break
3:05 – 3:20 PM	Jude Werth
“Modeling Glioblastoma's Effect on Neural Networks using Brain Organoids”	
3:20 – 3:35 PM	Ellie Evans
“Using Gut Microbiota Derived Metabolites As a Proxy for Gut Permeability and Subsequent Risk of Cachexia”	
3:35 – 3:50 PM	Brock Sheehan
“Association of Cyclooxygenase 1 (COX-1) rs4648298 and Cyclooxygenase 2 (COX-2) rs20417 Polymorphisms and Prostatic diseases Among Lebanese Males”	
3:50 – 4:00 PM	Poster Lightning Presentations
Trenton Gibson: Transcriptomics Meta-Analysis Identifies Upregulation of Clotting and Fibrinolysis Cascades in Colorectal Cancer Tumors Containing Hereditary PMS2 Mismatch Repair Deficiency	
Bryce Tolman: An Efficient Microwave Assisted Ullmann-Type Amination of 3- Bromopyrazolo[1,5-a]pyrimidine: Key Intermediate for Preparing 3,6-Di-Amino-Substituted Anticancer Heterocycles	
Matthew (Eli) Stecher: Synthesis and Optimization of Novel Macrocylic TRK Inhibitors For Treating Drug-Resistant Cancers	
Isabella Scalise: Inhibiting CDK9 and Autophagy in Pancreatic Cancer	
Danielle Alvarado: Investigating the Role of FBXO21 in Hematopoietic Malignancy	
Allison Stevens: Elucidating the Role of TOX on Melanoma Cell Migration and Invasion	
4:00 – 5:00 PM	Poster Session

Session A: Art Display, 9:00 AM in Science Building (SB) Atrium

Sculpting Dichotomies to Evoke Reflective Emotions, by Brittany Cowley

Mentor: Meaghan Gates

Utah Tech University

Installation Number: 1

DID, by McKayla Ridenour

Mentor: Alex Giannell

Utah Valley University

Installation Number: 2

Oneness in diversity, by Nawres Al Saud

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 3

Nuestra Virgen Tonantzin, by Kessley Durrant

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 4

Understanding Panic, by Rebekah Victoria Still

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 5

Unlocking Your Creativity: The Power of Painting for Fun and Purpose, by Rayne Beau Vanderpool

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 6

Playing Games, by Silvia Medina

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 7

The Process of Trying and Failing, by Jessica DeWeese

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 8

Spatiotemporal Continuity Capture through Cyanotyping, by Brittney Weiland

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 9

Revealing the Unknown, by Emily Barber

Mentor: ALEXANDRA GIANNELL

Utah Valley University

Installation Number: 10

Contrasting elements in visual art, by Ripjaw lemus

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 11

The Human-Nature Connection: Exploring Metaphorical and Physical Landscapes, by Jessica Downs

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 12

Female Allegory, by Olivia Mard Oquist

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 13

Desert Water, by Maddalena Willis

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 14

Visual Linguistics, by Brianna Bastian

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 15

Breaking Boundaries, by Arawyn Walter

Mentor: Alexandra Giannell

Utah Valley University

Installation Number: 16

Session A: Artist Performance, 9:00 AM in Science Building (SB) doTERRA Auditorium (Room 134)

Music and Emotion: Using Music as an Apparatus for Connection, by Kimberly Lewin

Mentor: Anne Francis Bayless

Utah State University

Presentation Time: 9:00 AM

Sonata in G Minor for Piano, by George Wells

Mentor: Timothy Francis

Utah Tech University

Presentation Time: Following Kimberly Lewin

Carnegie Hall Performance, by Annalicia Loveridge, Maren Daynes, Noah Guzman

Mentor: Donna Fairbanks

Utah Valley University

Presentation Time: Following George Wells

Session A: Poster Presentations, 9:00 AM in Keller Building (KB) Rooms 401/403/405

Venetian Elegance: Harmonizing Heritage and Innovation on the Grand Canal, by Samuel Weisler,
Colton Korpi, Josh Lythgoe

Mentor: Aliko Milioti
Utah Valley University
Poster Number: 1

A Natural Advantage: An Eye-Tracking Analysis of Indoor and Outdoor Spaces, by Samuel Weisler

Mentor: Brandon Ro
Utah Valley University
Poster Number: 2

Sacred Space Design and Spiritual Experience: A Study of Latter-Day Saint Temples, by Colton Korpi

Mentor: Brandon Ro
Utah Valley University
Poster Number: 3

Investigating Homeowner Contentment: Exploring areas for improvement in home design and construction, by Josh Lythgoe

Mentor: Brandon Ro
Utah Valley University
Poster Number: 4

The Pagoda at Memory Grove Park Analytique, by Sadie Stutz

Mentor: Ben Felix
Utah Valley University
Poster Number: 5

AI Impact on Form and Shape of Architectural Design, by Yan ho Ng

Mentor: Brandon Ro
Utah Valley University
Poster Number: 6

Mosques Through Different Lenses: Perceptions Across Cultures and Religions, by Barrett Blake

Mentor: Brandon Ro
Utah Valley University
Poster Number: 7

Traditional Urban Resurgence: A Blueprint for Mental Wellness in Modern Cities, by Jacob M Wendt

Mentor: Brandon Ro
Utah Valley University
Poster Number: 8

Understanding the Value of Function Following Form, by Eric Burton

Mentor: Brandon Ro
Utah Valley University
Poster Number: 9

What's That Building? Exploring Public Perceptions of Architectural Functionality Based on Form, by Sean Donner

Mentor: Brandon Ro
Utah Valley University
Poster Number: 10

Beyond Blueprints: A Comprehensive Exploration of the Impact of Rendering Methods on Architectural Communication and Presentation Strategies, by Hailey Packard

Mentor: Brandon Ro
Utah Valley University
Poster Number: 11

Architectural Contextualism: How Context Shapes Building Perception, by Kevin Hart

Mentor: Brandon Ro
Utah Valley University
Poster Number: 12

Neurological Links to Home Design Preferences: A Comparative Study using Eye-Emulation Software, by Thomas Cryer, Brandon Ro

Mentor: Brandon Ro
Utah Valley University
Poster Number: 13

Finding Harmony in Design: Exploring the Connection of Music and Architecture Through Proportion, by Desiree Ritchie

Mentor: Brandon Ro
Utah Valley University
Poster Number: 14

Re-Examining Architectural Design: The Balance Between Simplicity and Complexity, by Joseph Laudie

Mentor: Brandon Ro
Utah Valley University
Poster Number: 15

Visual Perception of the Classical Orders: Eye-tracking Simulations on the Orders, by Alexia Trapier

Mentor: Brandon Ro
Utah Valley University
Poster Number: 16

Thomas S. Monson Center Building Analytique, by Bronwyn Brown

Mentor: Ben Felix

Utah Valley University

Poster Number: 17

Pixels to Pillars: AI's Role in Architectural Design, by Nathaniel Stucki

Mentor: Brandon Ro

Utah Valley University

Poster Number: 18

Interior Design Senior Capstone: The Grove, by Abby Hoyal

Mentor: Kristen Arnold

Weber State University

Poster Number: 19

ARTshare Project, by Andrea Tyler

Mentor: Kristen Arnold

Weber State University

Poster Number: 20

Senior capstone, by Roya Adham

Mentor: Kristen Arnold

Weber State University

Poster Number: 21

Capstone Project, by Roya Adham

Mentor: Kristen Arnold

Weber State University

Poster Number: 22

The McCune Mansion Hope Center, by Morgan Watson

Mentor: Kristen Arnold

Weber State University

Poster Number: 23

Senior Capstone - Haven Adaptive Reuse Project, by Mikayla Buckway

Mentor: Kristen Arnold

Weber State University

Poster Number: 24

Design of an Inexpensive Combined Loading Spinal Disc Replacement Wear Testing Machine, by Tyler Peterson, Anna Jensen, Daniel Orr, Anton E Bowden

Mentor: Anton E Bowden

Brigham Young University

Poster Number: 25

3D Printable Thickness Accommodated Origami Flasher Patterns, by Davis Wing

Mentor: Larry Howell
Brigham Young University
Poster Number: 26

Deployment Technique Optimization for Satellites, by Lais Oliveira, Corinne Jackson

Mentor: Spencer Magleby
Brigham Young University
Poster Number: 27

Tracking UAS Flight Paths with Multiple Radar Ground Stations, by Gabe Snow, Joseph Ward

Mentor: Cammy Peterson
Brigham Young University
Poster Number: 28

Investigation of the impact of heat treatment on Nitinol wires, by Joseph Moore

Mentor: Jeff Hill
Brigham Young University
Poster Number: 29

An Apparatus for Fetal Descent Simulation, by Benjamin Merrell

Mentor: Preston Manwaring
Brigham Young University
Poster Number: 30

Novel Method of Tensegrity Construction via Acoustic String Tuning, by Harrison Denning, Ammon Bullinger

Mentor: Jeff Hill
Brigham Young University
Poster Number: 31

Exploration of Bi-Stable Tensegrity Models with Differing Stiffness Modes, by Harrison Denning, Spencer Thompson

Mentor: Jeff Hill
Brigham Young University
Poster Number: 32

Facilitating Public Engagement with Academic Research Through Deliberate Outreach Methods, by Lydia Beazer, Trevor Carter, Audrey Christiansen

Mentor: Larry Howell
Brigham Young University
Poster Number: 33

Investigating Porosity Defects in Printed Zones of Binder Jet 3D Printing, by Madi Hancock

Mentor: Nathan Crane
Brigham Young University
Poster Number: 34

Acoustic calipers to measure human tissue properties, by Jakob G Bates, Matthew B Snyder, Porter Adelman

Mentor: Christopher R Dillon
Brigham Young University
Poster Number: 35

Exploring MSR Salt Thermal Conductivities for Advanced Clean Energy, by Tyler Hamm, Jake Numbers, Ryan Ruth, Hunter Pitchford, David Allred, Troy Munro

Mentor: David Allred
Brigham Young University
Poster Number: 36

GAMERS: General Arm Mechatronic Exoskeleton Robot System, by Michael Olson

Mentor: Nathan Usevitch
Brigham Young University
Poster Number: 37

Rapid Data Collection Device for Neural Network in Agriculture, by Nathan Jones, Carter Noh, Douglas Cook

Mentor: Douglas Cook
Brigham Young University
Poster Number: 38

Quantitative and Qualitative Analysis of the Structural Failure Process of Maize Stalk Lodging, by Addison McClure, Marshall Christensen, Braxton Fjeldsted, Luke Howell, Cole Dunn, Kirsten Steele, Andrew Tagg, Douglas Cook

Mentor: Douglas Cook
Brigham Young University
Poster Number: 39

Surrogate Folds in Gossamer Satellites, by Carolina Wright

Mentor: Spencer Magleby
Brigham Young University
Poster Number: 40

Inertial Energy Storage for Jumping Robots, by Caleb McDougal

Mentor: Nathan Usevitch
Brigham Young University
Poster Number: 41

Peltier Element creation using microfluidics, by Caleb Fears

Mentor: Troy Munro

Brigham Young University

Poster Number: 42

The Effect of the Position of Manually Extruded Nanocomposite Strain Gauges on their Physical Properties, by Jordan Penfold, Cera Gowans, David T Fullwood, Anton E Bowden

Mentor: David T Fullwood

Brigham Young University

Poster Number: 43

Manufacturing compliant carbon fiber origami using powdered resin, by Jacob Winters

Mentor: Nathan Crane

Brigham Young University

Poster Number: 44

Application of Statistical Approaches in Non-Linear Normal Mode Calculations, by Davis Wing

Mentor: Matt Allen

Brigham Young University

Poster Number: 45

Use of data processing and statistical models to understand large sets of experimental chemistry data, by Isaac Sudweeks, Bradley Adams

Mentor: Bradley Adams

Brigham Young University

Poster Number: 46

A portable device for measuring Achilles tendon stresses in dancers, by Joey McConkie, Jackson Wilcox, Eli Smith, David Phair

Mentor: Christopher Dillon, Matthew S Allen

Brigham Young University

Poster Number: 47

Improving convective cooling during focused ultrasound thalamotomy, by Chris Paul, Alex Edwards

Mentor: Christopher Dillon

Brigham Young University

Poster Number: 48

Image segmentation for breast cancer focused ultrasound therapies, by Taylor Forbes, Rachel Harris, Benjamin Jackson, Nicole Peterson, Sydney Tanner, Chloe Nelson

Mentor: Christopher Dillon

Brigham Young University

Poster Number: 49

Tissue-Mimicking Phantoms with Tunable Acoustic and Mechanical Properties for Visualizing MRgFUS Cavitation Lesions, by Elizabeth M J Allen, Steven P Allen, Henrik C A Odeen

Mentor: Steven P Allen
Brigham Young University
Poster Number: 50

Multi-Material Metallurgical Additive Manufacturing, by Joshua Lim

Mentor: Nathan Crane
Brigham Young University
Poster Number: 51

Magnetic Field Spatial Gradient Delivery Optimization For Visualization of Ultrasound Waves During Neuromodulation, by Davi Cavinatto

Mentor: Steven Allen
Brigham Young University
Poster Number: 52

Investigating the feasibility of focused ultrasound actuation of shape memory alloy, by Aldo Chipana, Sarah G Sanderson, Joseph Moore, Jeffery R Hill, Christopher R Dillon

Mentor: Chris Dillon
Brigham Young University
Poster Number: 53

Pressure Sensor Resistance Changes in Varying Biocompatible Metals, by Kasielynn Bussard, Dakota Stringham

Mentor: Matthias Pleil
Salt Lake Community College
Poster Number: 54

Five-Dimensional Assessment Model for Operation and Maintenance of Stormwater Control Measures - Cedar City Case Study, by Mohamed Askar, Matthew Roberts, Jeremy Matney, Andrew Larsen, Edwin Cansaya Sanchez

Mentor: Mohamed Askar, Matthew Roberts
Southern Utah University
Poster Number: 55

Tailoring the Electrical Conductivity of Carbon Nanotube-based Polymer Composite through Computational Approach, by Brandon Clark, Hayden Allen, Zixuan Wang, Rajagopalan Thiruvengadathan

Mentor: Rajagopalan Thiruvengadathan
Southern Utah University
Poster Number: 56

Microscale Robots, by Alberto Miranda, Samannoy Ghosh, Yong Lin Kong

Mentor: Yong Lin Kong

University of Utah

Poster Number: 57

Down Sampling Electromyography for Low-Power Wearables, by Josh D Gubler, Connor D Olsen, Fredi R Mino, Mingchuan Cheng, Jacob A George

Mentor: Connor Olsen

University of Utah

Poster Number: 58

Analyzing Fine EMG Control of Hemiparetic Stroke Patients Using a Virtual-Reality Variant of the Box and Blocks Task, by Cassandra L Burdick, Caleb J Thomson, Troy N Tully, Jacob A George

Mentor: Caleb Thomson

University of Utah

Poster Number: 59

Signal Processor for Electrogram and Electroanatomic Data (SPEED), by Rui Jin, Lindsay C Rupp, Anna Busatto, Rob S MacLeod

Mentor: Rob S. MacLeod

University of Utah

Poster Number: 60

Investigation of the Representative Volume Element in Fibrous Porous Systems, by James Walker

Mentor: Pania Newell

University of Utah

Poster Number: 61

Targeted Treatment of Cytomegalovirus, by Alisa Dabb, David Britt, Elizabeth Vargis

Mentor: David Britt

Utah State University

Poster Number: 62

Using Machine Learning to Control Soft Robotics, by Jacob Adams, Larry Catalasan

Mentor: Tianyi He

Utah State University

Poster Number: 63

Exploring the Quasi-Static Compression Characteristics of Origami-inspired Foldcore Sandwich Composite, by Chase Mortensen, Juhyeong Lee

Mentor: Juhyeong Lee

Utah State University

Poster Number: 64

Computational Modeling of Curcumin Production in E. coli with Metabolic Engineering, by Lukas Keller, Jixun Zhan, Zhen Zhang

Mentor: Jixun Zhan
Utah State University
Poster Number: 65

An Integrated Microfluidic Model of Subretinal Tissue to Study Age-Related Macular Degeneration, by Sophia Hessami

Mentor: Elizabeth Vargis
Utah State University
Poster Number: 66

Implementing Quality Control for the Fluorescent Coating of Intravenous Catheters, by Melissa Wiggins, Aaron Bigelow, Porter Ellis

Mentor: Ronald Sims
Utah State University
Poster Number: 67

Random-walk model of retina neovessel growth, by Cassandra DuBose Corry

Mentor: Elizabeth Vargis
Utah State University
Poster Number: 68

Impact Resistance of 3D-Printed Architected Sandwich Composite Panels for Future Mobility Solutions, by Ethan Layne, Tareq Hassan

Mentor: Juhyeong Lee
Utah State University
Poster Number: 69

Innovating Disaster Response: Solar-Powered Water Purification, by Evelyn Fuentes, Thomas Keate, Christian Riordan

Mentor: Aaron Davis
Utah Tech University
Poster Number: 70

Arm Modeling in Preparation for Wearable Mobility-Enhancing Elbow Brace, by Samuel Stearman, Benjamin Crapo, Antonio Trujillo

Mentor: Jeff Hill
Brigham Young University
Poster Number: 71

The effects of invasive competition on the phytochemistry of cottonwoods, by Jessica Crook, Brooke Parker, Michael C Rotter

Mentor: Michael C Rotter
Utah Valley University
Poster Number: 72

Prescribing Passion: How Medical Experiences Shape STEM Enthusiasm, by Porter Bischoff, Kody Garrett, Clayton Rawson

Mentor: Britt Wyatt, Josh Premo
Utah Valley University
Poster Number: 73

Analytical method development and quantification of chlorinated pesticides in Utah Lake, by Rob Patterson, Nate Graham

Mentor: Sally Rocks
Utah Valley University
Poster Number: 74

Preliminary Studies Towards the Development of a Rapid, Point-of-Care Diagnostic Assay for the Detection of Mycobacterium tuberculosis, by Aubrey Russell, Ben Paepke, Nathan Goldfarb

Mentor: Nathan Goldfarb
Utah Valley University
Poster Number: 75

Estrous cycle-dependent modulation of psychostimulant effects on striatal neurotransmitter release, by Lauren Ford, Joel Woolley, Ryan Powers, Paulina Medellin, Hillary Wadsworth, Jordan Yorgason

Mentor: Jordan Yorgason
Brigham Young University
Poster Number: 76

Phylogeny of Hetaerina (Odonata: Calopterygidae): Settling taxonomic issues, by Reganne Leigh Hales, Laura Sutherland, Melissa Sanchez Herrera, Samantha Standing

Mentor: Seth Bybee
Brigham Young University
Poster Number: 77

Advancing Mycotoxin Detection: Multivariate Rapid Analysis on Corn Using Surface Enhanced Raman Spectroscopy (SERS), by Allison Gabbitas, Kaitlyn Allen, Gene Ahlborn, Shintaro Pang

Mentor: Shintaro Pang
Brigham Young University
Poster Number: 78

The effect of grass species and soil types on early successional forb species, by Raechel Hunsaker, Matthew Madsen, Mallory Hinton, Derek Tilley, April Hulet

Mentor: April Hulet
Brigham Young University
Poster Number: 79

Exploring soil-plant relationships to inform seed selection for rangeland restoration, by Mallory Hinton, Matthew Madsen, Raechel Hunsaker, April Hulet

Mentor: April Hulet
Brigham Young University
Poster Number: 80

Cattle Resource Selection on Late Fall Sagebrush Steppe Habitat in Idaho, United States, by Cole Kempton, Jim Sprinkle, Randy Larsen, Jameson Brennan, Dan Lauritzen, Sawyer Fannesbeck, Justin Hatch, April Hulet

Mentor: April Hulet
Brigham Young University
Poster Number: 81

Salt-Water Acclimation in Atlantic Salmon sheds light on claudin shifting and tight junction membrane proteins composition, by Joshua Hutchins, Kevin Wong

Mentor: Dario Mizrahi
Brigham Young University
Poster Number: 82

Meta-Analysis Of 58 Human RNA-seq Datasets To Predict Mechanisms and Markers for Resistance in ER+ Breast Cancer Treated with Letrozole (an aromatase inhibitor), by Brett Pickett, Lincoln Sutherland, Jacob Lang

Mentor: Brett Pickett
Brigham Young University
Poster Number: 83

Neural Networks associated with Gait Apraxia, by Zach Fiore

Mentor: Jared Nielsen
Brigham Young University
Poster Number: 84

Exploring the bioactivity of flavonoid metabolites on beta cell function under GLT conditions, by Eden Beazer, Aubree Bench, Ethan Jones, Jared Carter

Mentor: Jeffrey Tessem
Brigham Young University
Poster Number: 85

The overexpression of Stx1A and its effects on glucose stimulated insulin secretion in pancreatic beta cells, by Jakob Lenker, Trevor Kendrick

Mentor: Jeff Tessem

Brigham Young University

Poster Number: 86

Effects of Methamphetamine on Microglia through Reactive Oxygen Species, by James Blood, Nathan Sheets, Chase Seiter, Lydia Hawley, Erin Taylor, Eliza White, Hillary Wadsworth, Jason Hansen, Jordan Yorgason

Mentor: Jordan Yorgason

Brigham Young University

Poster Number: 87

Determining the binding partners of orphan nuclear receptor Nr4a3 and their effect on proliferation and insulin secretion in the beta cells, by Owen Damitz

Mentor: Jeffrey Tessem

Brigham Young University

Poster Number: 88

The Relationship Between Thiamine and Drosophila Melanogaster Preference for Dietary Yeast, by Dean Peterson

Mentor: John Chaston

Brigham Young University

Poster Number: 89

Glutamine as an Acetyl-lysine Mimic in Nucleosome Positioning Studies, by Michael Mann, David Bates, Steven Johnson

Mentor: Steven Johnson

Brigham Young University

Poster Number: 90

The Role of Sirt7 in Beta Cell Function and Insulin Secretion, by Trevor Kendrick, Jakob Lenker

Mentor: Jeff Tessem

Brigham Young University

Poster Number: 91

Does Sonographically Measured Articular Cartilage Thickness Correlate With Knee Pain in Senior Athletes?, by Noah Bezzant, Mikayla Kimball, Ashley Allan

Mentor: Brent Feland

Brigham Young University

Poster Number: 92

Panic Disorder Lesion Network Mapping Abstract, by Zach Moore, Owen Benzley, Austin Flitton, Frederic Schaper, Jared Nielsen

Mentor: Jared Nielsen
Brigham Young University
Poster Number: 93

Ultrasonic analysis of patellar tendon thickness in active older athletes, by Mikayla Kimball, Noah Bezzant, Ashley Allan, Josh Sponbeck

Mentor: Brent Feland
Brigham Young University
Poster Number: 94

Demonstration of Chloride Induced Spreading Depolarizations Using Halorhodopsin, by Hunter Morrill, Ryley Parrish

Mentor: Ryley Parrish
Brigham Young University
Poster Number: 95

Role Models v. Knowledge: Should we Use Different Evolution Teaching Strategies for Students with Varying Levels of Scientific Reasoning Skills?, by Grant Rousseau, Kenneth Harrington, Jamie Jensen

Mentor: Jamie Jensen
Brigham Young University
Poster Number: 96

Hyperglycemic Conditions Impair Essential Nkx6.1 Expression in Beta Cells, by Jared Wieland, Jacob Herring

Mentor: Jeffery Tessem
Brigham Young University
Poster Number: 97

Understanding Refractory Status Epilepticus with Novel HD-MEA Technology, by Isaac Stubbs, Skyler Russell, Melissa Blotter, Maxwell Holmes

Mentor: Ryley Parrish
Brigham Young University
Poster Number: 98

Thioredoxin-1 is essential for osteogenesis in vitro and in utero, by Caroline Cowley, Megan Jewell, Brenda Mendoza, Aubrey Cluff, Ryan Summerhays, Jason Hansen

Mentor: Jason Hansen
Brigham Young University
Poster Number: 99

Identifying the Interactomes of Disease-Causing CryAB Variants, by Joshua Evans, Allison Voyles, McKenzie Bellon, Julianne Grose

Mentor: Julianne Grose
Brigham Young University
Poster Number: 100

Building Books: The Evolution of Early English Block Prints, by Lucy Peterson

Mentor: Alexa Sand
Utah State University
Poster Number: 101

‘I Want to Destroy Public Education’: A Critical Case Study of School Choice in Utah, by Ann Day, Shawn Coon

Mentor: Shawn Coon
Westminster College
Poster Number: 102

Session A1: Huntsman Cancer Institute Special Research Session 1, 9:00 AM in Sorenson Center (SC) Center Stage

Introduction, by Brad Cairns and Don Ayer

Presentation Time: 9:00 AM

Optimization of Cell-free Protein Synthesis of RNase Inhibitors for Inexpensive, At-home Glutamine Biosensor Tests for Cancer Treatment Monitoring, by Chad Hyer, Bradley Bundy, Tyler Free

Mentor: Bradley Bundy

Brigham Young University

Presentation Time: 9:15 AM

Raman spectroscopic analysis of fixed lung cancer sections, by Eliza Ballantyne, Maria Lizio, Anshuman Chaturvedi

Mentor: Dustin Shipp

Utah Valley University

Presentation Time: 9:30 AM

Detecting microbeads in a dynamic fluid system, by Caroline Torgersen, Tyler O'Loughlin, Ellie Evans, Vern Hart, Clint Flinders

Mentor: Vern Hart

Utah Valley University

Presentation Time: 9:45 AM

Comparative effectiveness of ChatGPT 4.0 and medical oncologists in telemedicine-based management of metastatic prostate carcinoma (mPC), by Richard Ji, Emre Dal, Ayana Srivastava, Beverly Chigarira, Chadi Hage Chehade, Arshit Narang, Georges Gebrael, Neeraj Agarwal, Umang Swami, Haoran Li

Mentor: Neeraj Agarwal

University of Utah

Presentation Time: 10:05 AM

Trends in NGS Testing, by Diya Garg, Chadi Hage Chehade, Yeonjung Jo, Georges Gebrael, Nishita Tripathi, Beverly Chigarira, Arshit Narang, Vinay Matthew Thomas, Gliceida Galarza Fortuna, Patrick Campbell, Clara Tandar, Ayana Srivastava, Nicolas Sayegh, Sumati Gupta, Benjamin L. Maughan, Soumyajit Roy, Neeraj Agarwal, Umang Swami

Mentor: Neeraj Agarwal

University of Utah

Presentation Time: 10:20 AM

Cancer Research Lightning Poster Presentations

Removing CD6 to enhance CAR T cell therapies, by Sophie Daines, Carlos Moreno, Alka Gour, K Scott Weber

Mentor: Scott Weber

Brigham Young University

Presentation Time: 10:35 AM

The Caregiving Experience for Children Diagnosed with Cancer: A Secondary Analysis, by Sofia Denise Flowers

Mentor: Lauri Linder

University of Utah

Presentation Time: 10:35 AM

Using Transfection as a Annotation-free Ground Truth for Training Noninvasive Metastatic Cancer Mapping Methods, by Drew Allred, Vern Hart

Mentor: Vern Hart

Utah Valley University

Presentation Time: 10:35 AM

Generative AI and Image Manipulation, by Tayler Fearn, Caroline Torgensen, Vern Hart

Mentor: Vern Hart

Utah Valley University

Presentation Time: 10:35 AM

Transcriptome-Based Risk Score Predicts Time to First Treatment for Multiple Myeloma Patients, by Ishmael Elliott Molina-Zepeda, Brandt Jones, Myke Madsen, Douglas Sborov, Brian Avery, Nicola J. Camp

Mentor: Nicola J. Camp

University of Utah

Presentation Time: 10:35 AM

GPU-Accelerated Monte Carlo Raman Spectroscopy Simulation: Unlocking Computational Speed for Cancer Detection, by Thomas Caldwell

Mentor: Dustin Shipp

Utah Valley University

Presentation Time: 10:35 AM

Session A2: Science Oral Presentations, 9:00 AM in Sorenson Center (SC) Room 213 B

Crest Factor Analyses for Launch Vehicle Noise, by Zach Hendry, Carson Cunningham

Mentor: Micah Shepherd, Kent Gee

Brigham Young University

Presentation Time: 9:00 AM

Glucose concentration's effect on binding interactions beta cell transcription factors Nkx6.1 and Pdx1 and subsequent transcriptional regulation of downstream targets, by Nathan Vaughan

Mentor: Jeffery Tessem

Brigham Young University

Presentation Time: 9:15 AM

Genomic Characterization and Mass Spectrometry Analysis of Gordonia Phage SummitAcademy, by Sierra M Mellor, Madilyn Brandt, Nathaniel Eberhart, Samuel Flor, Julianne H Grose

Mentor: Julianne Grose

Brigham Young University

Presentation Time: 9:30 AM

Eigenvalue Finders using Complete Equitable Partitions, by Peter Seely, Joseph Henderson, Benjamin Webb

Mentor: Benjamin Webb

Brigham Young University

Presentation Time: 9:45 AM

Exploring Methods to Characterize Seizure-like Activity in Mouse Brains, by Benjamin D Kearsley, Jacob H Norby, Micah R Shepherd, R Ryley Parrish

Mentor: Micah R Shepherd

Brigham Young University

Presentation Time: 10:00 AM

Complete Equitable Partitions, by Joseph Henderson, Peter Seely, Benjamin Webb

Mentor: Benjamin Webb

Brigham Young University

Presentation Time: 10:15 AM

Session A3: Arts Oral Presentations, 9:00 AM in Keller Building (KB) Room 362

Implementation of Culturally Relevant Teaching in Private Studios, by Aullora Fekete

Mentor: Karen Jensen

Brigham Young University

Presentation Time: 9:00 AM

Asian Representation Within Theatre: Journey Through the Past and the Representation of the Present, by Joseph Stahle

Mentor: Jeb Branin

Southern Utah University

Presentation Time: 9:15 AM

The Grieving Process, by Becca Fabis

Mentor: Alexandra Giannell

Utah Valley University

Presentation Time: 9:30 AM

Ballet, Film, and Mythology: A Focus on Persephone, by Samantha Marx, Jessa Wright, Nathan Dobbin

Mentor: Christa St John

Utah Valley University

Presentation Time: 9:45 AM

Dance and Music: Pathways for Success, by McKayla Pehrson, Emily Hyde

Mentor: Lyndsey Vader

Utah Valley University

Presentation Time: 10:00 AM

Session A4: Education Oral Presentations, 9:00 AM in Sorenson Center (SC) Room 208

Enhancing Emotional Resilience among American Samoan Children: Lessons from a Community-Based Intervention, by Lexi Todd, Jessica Jespersen, Isabel Medina Hull, Mary Crawford, Taylor Powell, Ashley Roberts, Melia Fonoimoana Garrett, Kris Urbina, Elizabeth A Cutrer

Mentor: Elizabeth A Cutrer

Brigham Young University

Presentation Time: 9:00 AM

Exploring the Use of Virtual Reality to Teach Academic, Behavioral, Independent Living and Social Skills to individuals with Disabilities, by Megan Sorensen, Lianna Olsen, Maleah Bowen

Mentor: Ryan Kellems, Cade Charlton

Brigham Young University

Presentation Time: 9:15 AM

ROSflight: A Lean Research Autopilot, by Jacob Moore, Ian Reid, Brandon Sutherland

Mentor: Tim McLain

Brigham Young University

Presentation Time: 9:30 AM

Navigating Neurodiversity Online: Inclusive Educational Materials for Autistic Learners, by Sara Peel, Addisyn Bushman, Adam Rice

Mentor: Xinru Page

Brigham Young University

Presentation Time: 9:45 AM

Design insights for extended reality technical training, by Ezra Bradley, Sam Wald, Steve Francis, Derek Hansen, Jason McDonald, Jon Balzotti

Brigham Young University

Presentation Time: 10:00 AM

Virtual Reality: The Next Step in Technology-Based Education, by Payton Jones

Mentor: Jamie Spinney

Southern Utah University

Presentation Time: 10:15 AM

Session A5: Engineering Oral Presentations, 9:00 AM in Keller Building (KB) Room 244

Rotational Robotic Trigger, by Mitch McEntire

Mentor: Marc Killpack, John Salmon

Brigham Young University

Presentation Time: 9:00 AM

Fault Injection Testing FPGA Structural Comparison Tools, by Keenan Faulkner

Mentor: Jeff Goeders

Brigham Young University

Presentation Time: 9:15 AM

Optimizing wafer placement in an origami-based LIDAR array, by Brooklyn Clark

Mentor: Larry Howell

Brigham Young University

Presentation Time: 9:30 AM

Guidelines for Manufacturing Compliant Mechanisms using 3D Printing, by Austin Martel, Bethany Parkinson, Spencer Magleby

Mentor: Spencer Magleby

Brigham Young University

Presentation Time: 9:45 AM

Building the Groundwork for the Equitable Integration of Wireless Power Technology, by Josie Allred

Mentor: John Salmon

Brigham Young University

Presentation Time: 10:00 AM

First Measurements of the Longitudinal Shear Modulus of Corn Stalk Tissues, by Braxton Fjeldsted, Joseph Carter, Grant Ogilvie, Josh Hoffman

Mentor: Douglas Cook

Brigham Young University

Presentation Time: 10:15 AM

Session A6: Health & Medicine Oral Presentations, 9:00 AM in Keller Building (KB)
Room 248

Recommendations for Adapting Religious Materials for People with Aphasia, by Allison Dahl

Mentor: Dallin Bailey

Brigham Young University

Presentation Time: 9:00 AM

Neural Gene Expression: An Insight into Opioid Addiction, by Addison Smartt, Timothy Smartt

Mentor: Jeff Edwards

Brigham Young University

Presentation Time: 9:15 AM

The effects of access to healthcare in varying levels of urbanization on mortality, by Jaren Wilson

Mentor: Joshua Price

Southern Utah University

Presentation Time: 9:30 AM

Intact endothelial cell autophagy attenuates outcomes of acute ischemic stroke in mice, by Milo E Light, Sohom Mookherjee, J. David Symons, Megan Tandar, Nathan Hill

Mentor: John David Symons

University of Utah

Presentation Time: 9:45 AM

Autism Friendly Healthcare: Improving Patient Care for Individuals with Autism through an Evidence-Based Educational Video, by Gaby Sutton Clark, Emily Santillán, Katreena Merrill

Mentor: Katreena Merrill

Brigham Young University

Presentation Time: 10:00 AM

“Utah Women in Medicine,” pioneering physicians, by Maddie Reese, Meg Boren, Emma Sellers, Sheri Tesseyman

Mentor: Sheri Tesseyman

Brigham Young University

Presentation Time: 10:15 AM

Session A7: Humanities Oral Presentations, 9:00 AM in Keller Building (KB) Room 302

A Passion for Regression: The Psychology of Hume's Skepticism at THN 1.4.1, by Brandon Ascione

Mentor: Katie Paxman

Brigham Young University

Presentation Time: 9:00 AM

Integrating Longitudinal Peer-tutoring in University Composition Classes for Multilingual Students, by Luke Beckstrand

Mentor: Tyler Gardner

Brigham Young University

Presentation Time: 9:15 AM

Divine Encounters and Phenomenological Christology: A Comparative Analysis of Theophanies in Ether 3 and Exodus 3, by Lincoln Whitney

Mentor: Jordan Watkins

Brigham Young University

Presentation Time: 9:30 AM

中文的名词动词化: The Denominal Verbalization of Chinese Nouns, by Anna Hutchinson, Sean Cameron

Mentor: Shupe Wang

Brigham Young University

Presentation Time: 9:45 AM

How English verbs are borrowed into Jordanian Arabic: morphological integration and social perception, by Hannah Smith

Mentor: Jeff Parker

Brigham Young University

Presentation Time: 10:00 AM

Maria Firmina dos Reis: A Voice from the Past that Echoes in the Present, by Joshua Cook Wright

Mentor: Jordan Jones

Brigham Young University

Presentation Time: 10:15 AM

Session A8: Science Oral Presentations, 9:00 AM in Keller Building (KB) Room 306

Investigating Knot Invariants Arising from Petal Diagram, by Adam Call, Parker Myers

Mentor: Mark Hughes

Brigham Young University

Presentation Time: 9:00 AM

Using reinforcement learning to study problems in braiding, by Abraham Harris, Juliana Corbridge

Mentor: Mark Hughes

Brigham Young University

Presentation Time: 9:15 AM

Using reinforcement learning to model topoisomerase action during cell division, by Samantha Richardson, Sam Simmons

Mentor: Mark Hughes

Brigham Young University

Presentation Time: 9:30 AM

Leveraging Deep Reinforcement Learning and Braid Representations to Explore Knot Theory, by Dylan Skinner

Mentor: Mark Hughes

Brigham Young University

Presentation Time: 9:45 AM

Protein-Protein Binding Between the Beta Cell Transcription Factor Nkx6.1 and PACS1 in Rat Beta Cells, by Spencer Paulsen

Mentor: Jeffery Tessem

Brigham Young University

Presentation Time: 10:00 AM

Estimating the Prevalence of Images in Biology Literature that are Problematic for People with a Color-Vision Deficiency, by Harlan Stevens, Arwen Oakley

Mentor: Stephen Piccolo

Brigham Young University

Presentation Time: 10:15 AM

Session A9: Social Science Oral Presentations, 9:00 AM in Keller Building (KB) Room 344

Detecting Fake People in the United States Census, by Allen Otterstrom

Mentor: Joe Price

Brigham Young University

Presentation Time: 9:00 AM

Counsellor Knockolds and Captain Swing: Urban-Rural Relations and Social Protest in Early 19th-Century East Anglia, by Hyrum Veach

Mentor: Amy Harris

Brigham Young University

Presentation Time: 9:15 AM

Broken Heart Syndrome: Understanding the Spousal Correlation in Mortality Using Kin-Linked Data, by Sven Wilson, Joseph Price, Hannah Hammond, Katharine Wilson

Mentor: Joe Price

Brigham Young University

Presentation Time: 9:30 AM

Legal Representation and Fairness in the Provo City Justice Court, by Macaulay Gould, Chelsea Romney, Andrew Moss

Mentor: Chelsea Romney

Brigham Young University

Presentation Time: 9:45 AM

Perceptions of National Identity Among Brazilian Americans Living in Northern Utah, by Elisabeth Morris

Mentor: Desiree Oliveira

Brigham Young University

Presentation Time: 10:00 AM

The Hyrum Smith Papers Project: Uncovering 19th Century History, by Liberty Rausch

Mentor: Kenneth L Alford

Brigham Young University

Presentation Time: 10:15 AM

Session A10: Nursing Oral Presentation, 9:00 AM in Keller Building (KB) Room 346

Perceived Risks for Maternal Mortality Among Utah Women, by Marie Gibb

Mentor: Francine Jensen

Utah Valley University

Presentation Time: 9:00 AM

Session A10: Health & Medicine Rapid-fire Oral Presentations, 9:00 AM in Keller Building (KB) Room 346

Meta-Analysis of Success Determining Factors of Healthcare Innovations, by Barry Gyman

Mentor: Cody Reeves

Brigham Young University

Presentation Time: 9:15 AM

Health Insurance Literacy Among UVU Students, by Emmalie Parker

Mentor: Heather Thiesset

Utah Valley University

Presentation Time: 9:23 AM

The Inseparable Connection Between Body and Mouth, by Maddy Howard, Brooke Dension, Shanna Groesbeck

Mentor: Sandy Wilson

Utah Valley University

Presentation Time: 9:31 AM

Actitudes, Barreras, y Cambios: Adapting Prehabilitation for Latino Patient Populations, by Quinn Gerber, Lucas Carpenter, Jacob Clemons, Cindy Kin

Mentor: Cindy Kin

Brigham Young University

Presentation Time: 9:39 AM

Geminivirus Resistance in Mustard Plants, by Adam K Hales

Mentor: Yu Ya Liang

Utah Valley University

Presentation Time: 9:47 AM

Assessment of the Use of Phragmites australis as a Biomarker for Trace Metal Pollution, by Aljexi Olsen, Hali Lukacs

Mentor: Eddy Cadet

Utah Valley University

Presentation Time: 9:55 AM

Analysis of Estrous Cycle in POMC-deficient mice, by Isaac Gillins, Zoe Thompson

Mentor:

Utah Valley University

Presentation Time: 10:03 AM

Investigating Intraspecific Temporal Behavior in Mule Deer (*Odocoileus hemionus*) across Life Stages: Fawning and Non-Fawning, by Danielle Terry, Seth Helton, Michael Creer

Mentor: Austin M Green

University of Utah

Presentation Time: 10:11 AM

Using Snapshot Camera Trap data to evaluate the extent of the “weekend effect” across varying climatic regions of the contiguous United States, by Austin Green, Gaby Karakcheyeva

University of Utah

Presentation Time: 10:19 AM

Session B: Poster Presentations, 10:45 AM in Keller Building (KB) Rooms 401/403/405

Implicit Bias: Impacts of a Transformative DEIB Business Course, by Ramon Zabriskie, Erica Miller, Felicia Korth, Anna Taylor

Mentor: Ramon Zabriskie
Brigham Young University
Poster Number: 1

Social Connection in Shared Experiences, by Lizzie Stewart, Hayden Underwood, Dallas Goolsby, Spencer Sears

Mentor: Camilla Hodge
Brigham Young University
Poster Number: 2

Face it! How reliable is emotional facial expression coding within and across raters?, by Anna Norman, Chloe Houghton, Macall Walker, Audrey Saunders

Mentor: Tyson Harmon
Brigham Young University
Poster Number: 3

A gamified app that educates autistic population on social media safety, by Changxi Xing, Kirsten Chapman

Mentor: Xinru Page
Brigham Young University
Poster Number: 4

Art Beyond the Bars: The Value of Arts Programming in Correctional Settings, by Brenda Payan Medina

Mentor: Andy Eisen
University of Utah
Poster Number: 5

Automating the Analysis of Language Samples Obtained from the Frog Story Series: Step 1, by Tessa Sabin, Derek Bagley, Kylie Olsen, Alexis Klein, Haven Broadhurst

Mentor: Sandi Gillam
Utah State University
Poster Number: 6

Examination of Effort Belief and Self-Competence in Classrooms Using Mastery-Based Grading and Active Learning, by Grant Hendrickson, Christian Moody, Nellie Bowman, Nick Jeffery, Cairo Ziebarth, Joel Davis, Melissa Reeves, Heather Wilson Ashworth

Mentor: Heather Wilson Ashworth
Utah Valley University
Poster Number: 7

Gender disparities in the pursuit of biology at UVU, by Eden Backman, Britt Wyatt, Kandace Flanary, Jessica Cusick, T Heath Ogden, Joshua Premo

Mentor: Joshua Premo
Utah Valley University
Poster Number: 8

How different students' groups perceive learning in out-of-class collaborative environment?, by Sophia Kramer, Violeta Vasilevska

Mentor: Violeta Vasilevska
Utah Valley University
Poster Number: 9

Sodium to Potassium Ratio Is Associated with Increased Blood Pressure in Males but Not in Females, by Karen Hoggan, Adia Migliori, Jonathan Harr, David Aguilar Alvarez

Mentor: David Aguilar Alvarez
Weber State University
Poster Number: 10

Factors Associated with Depression Risk in Post-Concussive Syndrome Patients in Hawaii, by Miriya Ogawa, Eli Snyder, Ryan Nakamura, Kaylin Bersamin, Edward Weldon, Julia Jahansooz, Anson Lee, Kyle Ishikawa, Janette Abramowitz, Enrique Carrazana, Jason Viereck, Kore Liow

Mentor: Janette Abramowitz
Brigham Young University
Poster Number: 11

Cell Death, Inflammation, and Extracellular Vpr in the R77Q Mutation of Vpr in HIV-1, by Amanda Carlson

Mentor: Bradford Berges
Brigham Young University
Poster Number: 12

Changes in receptor sensitivity in the ventral regiminal area after morphine conditioning, by Calista Greenwood, Ciera Sanders, Pacen Williams, Kaleb Gardner, Caylor Hafen, Hillary Wadsworth

Mentor: Jordan Yorgason
Brigham Young University
Poster Number: 13

Staying Hydrated - A Comparative Analysis of Humectants in Human Cadaveric Tissue, by Rachel Prince, Joseph Monsen

Mentor: Jason Adams
Brigham Young University
Poster Number: 14

Investigating Gender Differences in Facial Expressiveness during Personal Narratives Using a Modified FACES Protocol, by Leila Moore, Marin Farnsworth

Mentor: Tyson Harmon
Brigham Young University
Poster Number: 15

Assessing Eccentric Hamstring Strength in football Players: Muscle-Specific contributions, by Logan McMaster, Joshua Sponbeck, Malorie Wilwand, A. Wayne Johnson

Mentor: A Wayne Johnson
Brigham Young University
Poster Number: 16

Lesion Network Mapping of Anosognosia for Hemiplegia, by Joseph Holmes

Mentor: Jared Nielsen
Brigham Young University
Poster Number: 17

No Difference Found in Hamstring Strength Across Division I Football Positions, by Spencer Jezek, Malorie Wilwand, Joshua Sponbeck, Hunter Jack, Kaden Kennard, A Wayne Johnson

Mentor: A Wayne Johnson
Brigham Young University
Poster Number: 18

The effects of terminating a 24-hr fast with a low versus a high carbohydrate shake on hunger and appetite, by Katelynn Hales, Katya Hulse, Spencer Hawes

Mentor: Bruce Bailey Jr.
Brigham Young University
Poster Number: 19

The Effects of a High Carbohydrate vs. High Fat Pre-Fast Meal on Incretin Hormone Secretion: A Randomized Crossover Study, by Parker Graves, Landon Deru, Bruce Bailey

Mentor: Bruce Bailey
Brigham Young University
Poster Number: 20

The Effects of Dual-Task Activities on Language Fluency: Language Production While Driving, by Alex Jarvis, Brooklyn Flowers, June Oaks, Sadie North

Mentor: Tyson Harmon
Brigham Young University
Poster Number: 21

The Cold, Hard Truth: Cryopreserved Tissue is Superior to FFPE Tissue in Molecular Analysis, by Ken Dixon, Jack Davis, DeLaney Anderson, Mackenzie Burr, Peyton Worley, Isaac Packer, Bridger Kearns, Jeffrey Okojie

Mentor: Jared Barrott
Brigham Young University
Poster Number: 22

Differences in Ultrasound Elastography Measurements Of The Patellar Tendon Using Pad vs No Pad and Of Dominant vs Non Dominant Legs, by Ashley Allan, Mikayla Kimball, Noah Bezzant, Brent Feland, Josh Sponbeck

Mentor: Brent Feland
Brigham Young University
Poster Number: 23

The Effects of Initiating a 24-hour Fast with a Low Versus a High Carbohydrate Shake on pancreatic hormones in the Elderly: A Randomized Crossover Study, by Spencer Hawes, Katya Hulse, McKay Knowlton, Landon Deru, Bruce Bailey

Mentor: Bruce Bailey
Brigham Young University
Poster Number: 24

Transcriptomic Analysis of B cell RNA-seq Data Reveals Novel Targets for Lupus Treatment, by Sehi Kim, Naomi Rapier-Sharman, Michael Told

Mentor: Brett Pickett
Brigham Young University
Poster Number: 25

Addressing Health Care Access Disparities: Bridging the Gap for a Healthier Society, by Jayden Peacock

Mentor: Jodi Corser
Southern Utah University
Poster Number: 26

Concurrent Validity of Heart Rate Measurements by Bicep Worn Polar Verity Sense and OH1 Devices During Moderately Heavy Resistance Training, by Marcus M Lawrence, Merrill Funk, Jeffrey C Cowley, Amanda Hawkes, Aaron McKenzie, Alexandra Routsis, Wesley Ziegler, Talon Thornton, Spencer Maxwell, Korina Ziegler, James Navalta

Mentor: Marcus Lawrence
Southern Utah University
Poster Number: 27

Differences in Absolute and Relative Upper and Lower Body Strength Measures in Intermediate and Advanced Climbers, by ANNA EDLER, RYAN KUNKLER, CASEY WEBB, JACOB MANNING, MARCUS M LAWRENCE

Mentor: Marcus Lawrence
Southern Utah University
Poster Number: 28

Repetition Count Concurrent Validity of Various Garmin Wrist Watches During Light Circuit Resistance Training, by Wesley Ziegler, Spencer Maxwell, Aaron McKenzie, Talon Thornton, Alexandra Routsis, Korina Ziegler, Jae Bovell, Devin Green, Bryson Carrier, James Navalta, Setareh Star Zarei, Kaye Lavin, Jeffrey C Cowley, Amanda Hawkes, Merrill Funk, Marcus M Lawrence, Charli Aguilar

Mentor: Marcus Lawrence
Southern Utah University
Poster Number: 29

Perceived Fatigue and Physical Activity Enjoyment Following Indoor and Outdoor Moderately Heavy Superset Resistance Training, by Korina Ziegler, Aaron McKenzie, Wesley Ziegler, Spencer Maxwell, Bryson Carrier, Charli Aguilar, Alexandra Routsis, Talon Thornton, Jae Bovell, Setareh Star Zarei, Devin Green, Amanda Hawkes, Jeffrey C Cowley, Merrill Funk, James Navalta, Marcus M Lawrence

Mentor: Marcus Lawrence
Southern Utah University
Poster Number: 30

Relationships Between Dominant and Non-Dominant Finger Rate of Force Development (RFD) and Finger Strength, Shoulder Strength, and Lower-Body Strength in Recreational to Advanced Climbers, by Ryan Kunkler, Marcus Lawrence, Anna Edler, Casey Webb, Jacob Manning

Mentor: Marcus Lawrence
Southern Utah University
Poster Number: 31

Nutrient Release of Tumor Stroma is Controlled by Glucocorticoids, by Libby Brooks

Mentor: Natasha Pavlova
University of Utah
Poster Number: 32

Behavioral Effects of Trauma Recruit Separate Populations of Ventral Hippocampal Neurons, by Addison Hedges, Kevin Sattler

Mentor: Moriel Zelikowsky
University of Utah
Poster Number: 33

EFFECTS OF DOCOSAHEXAENOIC ACID ON NEURONAL OUTCOMES IN A RAT MODEL OF PEDIATRIC TRAUMATIC BRAIN INJURY, by Amber Brooks

Mentor: Michelle Schober

University of Utah

Poster Number: 34

Advanced Alkaline Amine Fuel Cell Development, by Jackson Rose, Kevin Shurtleff

Mentor: Kevin Shurtleff

Utah Valley University

Poster Number: 35

Investigating the Role of Concurrent NF1 and BRAF Mutations in Melanoma, by Lorelei Sole, Riley Elmer, Gennie Parkman, David Kircher, Katie Culver, Tursun Turapov, David Viskochil, Sheri Holmen

Mentor: Sheri Holmen

University of Utah

Poster Number: 36

Three-Dimensional Construction of Coronary Vasculature Geometries, by Aksel Anderson, Lindsay Rupp, Anna Busatto, Rob MacLeod

Mentor: Rob MacLeod

University of Utah

Poster Number: 37

Internalized HIV stigma among women giving birth in Tanzania: A mixed-methods study, by Anya Weglarz

Mentor: Melissa Watt

University of Utah

Poster Number: 38

Ovarian Exosomal Therapy for Nuerological Health in mice, by Nathan McCoy

Mentor: Jeff Mason

Utah State University

Poster Number: 39

Antioxidant Combinatory Cytomegalovirus Treatment, by Kade Robison, David Britt, Elizabeth Vargis

Mentor: David Britt

Utah State University

Poster Number: 40

An Investigation into the Effect of Access to Dental Radiology Skill Practice in Virtual Reality on Undergraduate Dental Hygiene Student Competency and Learning Compared with Access to Traditional Study and Practice Methods, by Michaela Lovejoy, Rylee Udom, Lindsey Fry, Hailey Roubidoux, Makayla Dunbar, Kali Hunt, Mandy Gibbs, Lisa Welch

Mentor: Lisa Welch
Utah Tech University
Poster Number: 41

The Effects of Pterostilbene on NADH Oxidase in Endothelial Cells Exposed To Hyperglycemic Conditions, by Gabe Matthews, Easton Eddie

Mentor: Jennifer Meyer
Utah Tech University
Poster Number: 42

Revolutionary goniometric knee attachment, by Syrus Miner, Ryland Day, Justin LeClair, Adam Dimaio

Mentor: Randy Klabacka
Utah Tech University
Poster Number: 43

Opioid Use Disorders Treatment Related Disparities in Patients with Psychiatric Illness, by Caroline Nielson, Connor Baird

Mentor: Robert Kagabo
Utah Tech University
Poster Number: 44

Velocity-based training instruments compared to 3D motion capture analysis, by Anthony Cornwall, Jake Rhea, Travis Ficklin

Mentor: Travis Ficklin
Utah Tech University
Poster Number: 45

Experimentally determined moments of inertia for a regulation baseball vs. a baseball with redistributed mass, by Dylan Snook, Anthony Cornwall, Travis Ficklin

Mentor: Travis Ficklin
Utah Tech University
Poster Number: 46

The relationship between differential finger force in a squeezing task and spin characteristics of a four-seam fastball thrown by division-I collegiate baseball pitchers, by Anthony Cornwall, Dylan Snook, Travis Ficklin

Mentor: Travis Ficklin
Utah Tech University
Poster Number: 47

Plants, oral health, and microbes: Properties of North American chewing sticks, by Kevin Kuehne, Jake Hess

Mentor: Michael C Rotter

Utah Valley University

Poster Number: 48

The Impact of Population Density on COVID-19 Case Numbers during the Omicron Surge: A Comparative Analysis of US Counties and Sweden, by Hazel Ticas, Daniel Scott

Mentor: Daniel Scott

Utah Valley University

Poster Number: 49

Whiter than a Toilet Bowl, by Tiba Hasan, Elise Larsen, McKell Gillins

Mentor: Jodie Lopez

Utah Valley University

Poster Number: 50

Intersectionality in Science, by Britt Wyatt, Alyssa Habel, Jess Cusick, Heath Ogden, Josh Premo

Mentor: Dr. Britt Wyatt

Utah Valley University

Poster Number: 51

Lower Limb Asymmetries in Unilateral Jump Mechanics as Possible Risk Factor for Injury in Collegiate Wrestlers, by Jacob Armstrong, Tyler Standifird

Mentor: Tyler Standifird

Utah Valley University

Poster Number: 52

Closely related Enterobacteriaceae species with antibiotic class and subclass resistance, by Coleman Judd, Alexander Beagley

Mentor: Michelle Culumber

Weber State University

Poster Number: 53

Ecogeographic effect on color pigmentation: Assessing the application of Gloger's Rule in Robber Flies, by Lauryn Dupaix

Mentor: Riley Nelson

Brigham Young University

Poster Number: 54

Comparison of *Aposthonia ceylonica* genome size to repetitive elements and the analysis of silk-coding sequencing and their proteins, by Lillian Davis, Paul B Frandsen

Mentor: Paul B. Frandsen
Brigham Young University
Poster Number: 55

LAB Diet Preference, by Andrew Call

Mentor: John Chaston
Brigham Young University
Poster Number: 56

Elucidating the Neural Mechanisms of Dopamine and Drugs of Abuse on Anxiety Using Dlight1 Sensors, VR, and 2-Photon Microscopy in Mice, by Daniel Luke Isemonger, Jacob Cecil, Noah Moffat, Nathaniel Horne, Jordan Yorgason

Mentor: Jordan Yorgason
Brigham Young University
Poster Number: 57

Achievement Goals and Burnout in Pre-Health Profession Undergraduate Students, by Hunter Nelson

Mentor: Jamie Jensen
Brigham Young University
Poster Number: 58

Exploring the Role of Dopamine and ATP in Microglial Motility and Morphology, by Christopher Galbraith, Derek Langford, Hillary Wadsworth, Eliza White, Erin Taylor, Lauren Ford

Mentor: Jordan Yorgason
Brigham Young University
Poster Number: 59

Effect of food depth on microbiome of *Drosophila melanogaster*, by Rebecca Kreutz

Mentor: John Chaston
Brigham Young University
Poster Number: 60

The Effect of Epicatechin and its Microbial Metabolites on Differing Pathways of Beta-Cell Death in Type I and Type II Diabetes, by Aubree Bench, Eden Beazer, Ethan Jones, Jared Carter

Mentor: Jeff Tessem
Brigham Young University
Poster Number: 61

The effect of microbiota on *Drosophila melanogaster* activity at low temperatures, by Cooper Johnson

Mentor: John Chaston
Brigham Young University
Poster Number: 62

Investigating the Potential Toxic Dust Pool Generated by the Shrinking of the Great Salt Lake, by Kirsten Sanders

Mentor: Ruth Kerry
Brigham Young University
Poster Number: 63

Using Chimeric autoantigen receptor (CAAR) T cells to eliminate autoreactive B cells in autoimmune diseases, by Abigail Cheever, Chloe Kang, Hunter Lindsay, Mackenzie Hansen, Kim O'Neill, K Scott Weber

Mentor: K Scott Weber, Kim O'Neill
Brigham Young University
Poster Number: 64

Using a Pricking Method for Inoculating *Drosophila melanogaster* with *Wolbachia*, by Naavah Craze, crazen@byu.edu

Mentor: John Chaston
Brigham Young University
Poster Number: 65

Causal Brain Networks in Insomnia, by Levi Pouwer, Keaton Helquist

Mentor: Jared Nielsen
Brigham Young University
Poster Number: 66

Gene analysis of gut microbiota that improves chill coma recovery rates in *Drosophila Melanogaster*, by Lauren Heath, John Chaston

Mentor: John Chaston
Brigham Young University
Poster Number: 67

Seasonal Coloration in Utah Dragonflies and Damselflies, by Eva Driggs, Megan Cahoon, Seth Bybee

Mentor: Seth Bybee
Brigham Young University
Poster Number: 68

What brings us together: how global identity is influenced by images of success or suffering, by Jaiden Sherratt, Madison Ward, Alexandra Clements, Makenzie Vance, Christopher Furlow

Mentor: Julie Johnson Pynn
Southern Utah University
Poster Number: 69

Antihistamines Blunt the Effect of Localized Vibration on Arterial blood Flow, by Dustin Edmonds, Devin Needs, Riley Fisher

Mentor: Brent Feland
Brigham Young University
Poster Number: 70

The Effects of Latitude and Other Microbiota on the Microbiota of *Drosophila Melanogaster*, by Connor Hough

Mentor: Johnny Chaston
Brigham Young University
Poster Number: 71

ATP and Dopamine Co-Release in the NAc, by Jonathan Dickerson, Christian Ahrens, Zach Valentine, Sara Linderman, Hillary Wadsworth, Lauren Ford, Jordan Yorgason

Mentor: Jordan Yorgason
Brigham Young University
Poster Number: 72

Seasonal Effects on *Drosophila* Development Rates, by Peyton Jackson

Mentor: John Chaston
Brigham Young University
Poster Number: 73

Designing Inducible DNA Constructs for the Chicken, by Lant Jenkins, Dalyn Davis, Caleb Kratt

Mentor: Jeffery Barrow
Brigham Young University
Poster Number: 74

Epigenetic Marks of Antiaging Pioglitazone Hydrochloride (PGZ) on Progeny, by Wesley Hendricks

Mentor: Steve Johnson
Brigham Young University
Poster Number: 75

Natural Transformation in *Staphylococcus aureus* biofilms, by Julia Gilpin, Lucy Bowden, Sela Harris, Elisa McRae, Jenny Bean, Brooklyn Jones

Mentor: Bradford Berges
Brigham Young University
Poster Number: 76

Do Predators Cause Maternal Effects in Livebearing Tropical Fish?, by Nolan Rodeback, Jerald Johnson

Mentor: Jerald Johnson
Brigham Young University
Poster Number: 77

CICNT surfaces block *Staphylococcus aureus* biofilm formation on implanted devices in mice, by Brooklyn Jones

Mentor: Bradford Berges
Brigham Young University
Poster Number: 78

Keystone Species in an Urban Environment: Do Raptors Control the Mexican Gray Squirrel in Mexico City?, by Byron Adams, Elias Johnson, D Alejandro Espinosa-Lucas, R Darío Perez-García, Israel Solano-Zavaleta, J Jaime Zúñiga-Vega, Gonzalo A Ramirez-Cruz

Mentor: Byron Adams
Brigham Young University
Poster Number: 79

Fish Tattoos: The Evolutionary Cost of Black Spot Disease, by Eric Morris

Mentor: Jerry Johnson
Brigham Young University
Poster Number: 80

Feasibility Analysis of Mixed Solvent Waste Recycling: A Green Chemistry Project, by Amanda Pay, Kaylee Anderson, Amber English, Jie Mei Chong

Mentor: Mary Alvarez
Salt Lake Community College
Poster Number: 81

Establishing a Common Framework for Triangles, by Jordan Gertino, Bryan Wilson

Mentor: Bryan Wilson
Salt Lake Community College
Poster Number: 82

Chemical Synthesis of Aerogel Fabrics using Standard Lab Conditions, by Antonio Ruiz Ayala, Cristina Kinosian

Mentor: John Flood
Salt Lake Community College
Poster Number: 83

Differentiation of VOC emissions of heat-stressed *Populus trichocarpa* with varying levels of mycorrhizal colonization, by Luis Valdez, Mary Alvarez, Jessica Berryman, Ron Valcarce

Mentor: Jessica Berryman
Salt Lake Community College
Poster Number: 84

Comparison of low-cost synthesis methods for pharmaceutical-grade purity of the anticonvulsant Phenytoin using traditional reflux techniques verses Microwave-Assisted Extraction, by Katherine Christensen, Danielle Kemmer

Mentor: Ron Valcarce
Salt Lake Community College
Poster Number: 85

Rearrangement of Indolizines to Quinolizinium Salts, by Alexander Binsacca, Jackson Merriam, Brighton Stringham, Allyssa Platt

Mentor: Rajan Kochambilli
Salt Lake Community College
Poster Number: 86

Genetic Modification of Cyanobacteria to Break Down Organic Compounds and Inhibit Toxin Production, by Lonnie Ernst

Mentor: Lane Law
Salt Lake Community College
Poster Number: 87

Isolation of Microcystin-producing Cyanobacteria, by Alix Elliston

Mentor: Lane Law
Salt Lake Community College
Poster Number: 88

Determining Ant Species Diversity Through DNA Barcoding at Snow College, by Brynlyn Hastings, Dante Cervantes, Jaime Analuisa

Mentor: Lindsay Chaney
Snow College
Poster Number: 89

Variation of Grasshopper Species Found in Human Populated and Unpopulated Locations in Sanpete County, by Joshua Thlaman, Brynlei Luke, Emily Pattee

Mentor: Lindsay Chaney
Snow College
Poster Number: 90

Synthesis of Trans-Stilbene Derivatives by Palladium-Catalyzed Cross-Coupling of trans-2-Phenylvinylboronic Acid Pinacol Ester with Aromatic Chlorides, by Braden Nelson

Mentor: Nathan S Werner
Southern Utah University
Poster Number: 91

Spatial visualization versus memorization differences among sexes in organic chemistry, by Derek Baker, Lauren Jensen, Dagney Goodfellow, Seunghwan Shin

Mentor: Guizella Rocabado
Southern Utah University
Poster Number: 92

The Megasauro pods: Using Ecological and Histological Analogues to Predict Maximum Sauropod Body Sizes With Implications for Paleobiology, by Isaac Wilson, Bree Wilson

Mentor: Arianna Harrington
Southern Utah University
Poster Number: 93

Organic chemistry students' perceived costs and goal orientations, by Seunghwan Shin, Sydney Coates

Mentor: Guizella Rocabado
Southern Utah University
Poster Number: 94

Temperature-Dependent Substitution for the Synthesis of Triazine Crown Ethers: A Versatile Approach to Novel Molecular Structures, by Mackay B Steffensen, AustinRyan A Kirkby, Kieran L Richards

Mentor: Mackay B Steffensen
Southern Utah University
Poster Number: 95

Microfossils of the McCarty Mountain's Locality, southwestern Montana, by Cate Bateman, Jose Aurelio De La Rocha Tapia, Ethan Fulwood, Arianna Harrington

Mentor: Arianna Harrington
Southern Utah University
Poster Number: 96

The Effects of Reptile Handling on the Cardiovascular System, by Ashley Hartwig, Dr. Weeg

Mentor: Matthew Weeg
Southern Utah University
Poster Number: 97

Isolation and Characterization of Bovine Milk Derived Extracellular Vesicles, by Logan Whitney, Jaren Wilson, Elley Colledge, Jamie Thygersen

Mentor: Jessica Pullan
Southern Utah University
Poster Number: 98

MICP-Mediated Biobrick Formation: Evaluating Urease-Active Strains, by Sydney Pruet

Mentor: Roger Gold
Southern Utah University
Poster Number: 99

Synthesis of 1,3-Diphenylpropene from Benzyl Bromide Through a Hydroboration and Palladium-Catalyzed Cross-Coupling Sequence, by Michal Hansen, Nathan Werner

Mentor: Nathan Werner
Southern Utah University
Poster Number: 100

Designing a Non-Invasive Molecular Assay to Detect Batrachochytrium dendrobatidis Infection in Invasive Bullfrogs, by Gabriella Proctor, Luke Alder

Mentor: Marcos Corchando Sonera
Southern Utah University
Poster Number: 101

Assessing Plant Adaptability to Wildfire Impact and Drought, by Clista Galecki

Mentor: William Anderegg
University of Utah
Poster Number: 102

Session B1: Art/Education/Humanities Oral Presentations, 10:45 AM in Sorenson Center (SC) Room 213 A

NIQUE: Evolution of Contemporary Ballet, by Andy Sefcik

Mentor: Jamie Johnson

Utah Valley University

Presentation Time: 10:45 AM

Unfinished Portrait Faces on Roman Sarcophagi, by Harmony Newbrough

Utah Valley University

Presentation Time: 11:00 AM

Action Research: Will Direct Phonics Literacy Instruction Help Students Learn and Retain Irregular Words?, by Angela Gomez

Mentor: Chizu Matsubara

Utah Tech University

Presentation Time: 11:15 AM

How the Media Portrays Physical Disabilities, by Jessica Anderson

Mentor: Jennifer Kohler

Utah Tech University

Presentation Time: 11:30 AM

Session B2: Social Sciences Oral Presentations, 10:45 AM in Sorenson Center (SC)
Room 213 B

A Place for the Arts: Creating Spaces for Cross-Community Contact in Belfast, by Addie Ressler

Mentor: Jacob R. Hickman
Brigham Young University
Presentation Time: 10:45 AM

Fremont Red-on-Gray Pottery, by Talia Berglund

Mentor: Michael T. Searcy
Brigham Young University
Presentation Time: 11:00 AM

Foreign Textiles at the Early Christian Fag el-Gamous Cemetery in Egypt, by Jenna Norris

Mentor: Kerry Muhlestein
Brigham Young University
Presentation Time: 11:15 AM

Faunal Remains from Hinckley Mounds, by Amber Clayton

Mentor: Michael Searcy
Brigham Young University
Presentation Time: 11:30 AM

The Transmission of National Identity: A Case Study of Japan's Memorialization of the Past, by Ashlyn Clark

Mentor: Lynnette Finau
Brigham Young University
Presentation Time: 11:45 AM

Session B3: Science Oral Presentations, 10:45 AM in Keller Building (KB) Room 362

The effects of stinging nettle oil on the vascular smooth muscle in frogs, by Tia Dudley, Ty Erickson

Mentor: Matthew Weeg, Mary Jo Tufte

Southern Utah University

Presentation Time: 10:45 AM

An Analysis of the Neuroscience of Love and the Physiological Similarities it Holds to Addiction, by Audrey Wells

Mentor: Fredric Govedich

Southern Utah University

Presentation Time: 11:00 AM

Pollen DNA Metabarcoding to Analyze the Effect of Formic Acid Treatment on Foraging Behaviors of *Apis mellifera*, by Claudia Wiese, Josh Steffen, Heather Briggs, Rodolfo Probst

Mentor: Josh Steffen

University of Utah

Presentation Time: 11:15 AM

Conserving a keystone predator in the Americas: integrating phylogenomics, biogeography, and species-level taxonomy for a widespread army ant genus, by Megan DuVal, John Longino, Rodolfo da Silva Probst

Mentor: John Longino

University of Utah

Presentation Time: 11:30 AM

Group Theory for Procedural Content Generation: Towards Generating Objects from Mathematical Description, by Jonas P Knochelmann

Mentor: Rogelio E. Cardona-Rivera

University of Utah

Presentation Time: 11:45 AM

Session B4: Social Sciences Oral Presentations, 10:45 AM in Sorenson Center (SC)
Room 208

Photographic Depictions of Polygamy from 1878-1953, by Holly Biesinger

Mentor: Ran Qi

Southern Utah University

Presentation Time: 10:45 AM

Pandemic Effects on the Work From Home Market, by Eve Christensen, Chase Redd, Bailey Uzzardo

Mentor: Elijah Neilson

Southern Utah University

Presentation Time: 11:00 AM

The Effect of State Abortion Policy on Birth Control Consumption, by Lauren Howell

Mentor: Joshua Price

Southern Utah University

Presentation Time: 11:15 AM

The Relationship Between Economic Sector & Job Satisfaction, by Kelsey Grimshaw

Mentor: Joshua Price

Southern Utah University

Presentation Time: 11:30 AM

Session B5: Education Oral Presentations, 10:45 AM in Keller Building (KB) Room 244

Long-Term Substitutes Effect on Student Scores in California, by Kira Swann, Cody Dirks

Mentor: Joshua Price

Southern Utah University

Presentation Time: 10:45 AM

Pertenece a los Estados Unidos: The Benefits of a Bilingual Education in the United States, by Beckham Trigo

Mentor: Johnathan Chidester

Southern Utah University

Presentation Time: 11:00 AM

Vocabulary Intervention: Supporting English Language Learners in Vocabulary Development, by Allie Baumgartner

Mentor: Chizu Matsubara

Utah Tech University

Presentation Time: 11:15 AM

Struggling Readers: Action to Improve Comprehension, by Cari Richards

Mentor: Chizu Matsubara

Utah Tech University

Presentation Time: 11:30 AM

Bloom's and SOLO: A Comparison of Educational Taxonomies, by Spenser A Clark

Mentor: Acacia Overono

Utah Valley University

Presentation Time: 11:45 AM

Session B6: Engineering/Science Oral Presentations, 10:45 AM in Keller Building (KB)
Room 248

Chronic obstructive pulmonary disorder remote patient monitoring using spirometry: a systematic review, by Joseph Nielson, Ben Schooley

Mentor: Ben Schooley

Brigham Young University

Presentation Time: 10:45 AM

Bacterial Separation by poly-Dopamine Coated Magnetic Nanoparticles, by Camille Bryner, Alyson Camacho, Bowen J Houser

Mentor: William G Pitt

Brigham Young University

Presentation Time: 11:00 AM

Preferential Capture of Bacteria Using pDA-coated Magnetic Nanoparticles, by Alyson Camacho, Camille Bryner, Bowen Houser

Mentor: William Pitt

Brigham Young University

Presentation Time: 11:15 AM

Constant pressure untethered soft robotics: an adaptable solution to the limitations of soft robots, by James Wade, Chris Paul

Mentor: Nathan Usevitch

Brigham Young University

Presentation Time: 11:30 AM

Session B7: Humanities Oral Presentations, 10:45 AM in Keller Building (KB) Room 302

Information-Gaining Moves in Game Theory, by Kevin Young

Mentor: Gretchen Ellefson

Southern Utah University

Presentation Time: 10:45 AM

The Portrayal Of Reality Through The Lens Of The Astonishing World Of Studio Ghibli, by Emma Manley

Mentor: Johnathan Chidester

Southern Utah University

Presentation Time: 11:00 AM

Musical Manipulation: Controlling Memory And Emotions Through Auditory Processing, by Kaerli Ringle

Mentor: Johnathan Chidester

Southern Utah University

Presentation Time: 11:15 AM

Digging the Rabbit Hole: Jean Baudrillard and Mike Rothschild's "The Storm is Upon Us", by Ezra Stein

Mentor: Nicole Dib

Southern Utah University

Presentation Time: 11:30 AM

Feminine versus Freakish: The Silence of the Lambs and TERF Rhetoric, by Kenna Johnson

Mentor: Nicole Dib

Southern Utah University

Presentation Time: 11:45 AM

Session B8: Science Oral Presentations, 10:45 AM in Keller Building (KB) Room 306

De novo genome assembly and annotation of *Curculio* sp. (Coleoptera: Curculionidae) provides insight into diapause evolution, by Daniel Davis, Paul B Frandsen

Mentor: Paul B. Frandsen

Brigham Young University

Presentation Time: 10:45 AM

Updated Third Generation Sequencing: Assembly Insights, by Danyon Gedris, Paul Frandsen

Mentor: Paul Frandsen

Brigham Young University

Presentation Time: 11:00 AM

Adverse effects of Nr4a3 full body knockouts on adipose tissue, by Jared Carter

Mentor: Jeff Tessem

Brigham Young University

Presentation Time: 11:15 AM

Unlocking the Mechanism Behind Depotential: A Cellular Model for Forgetting, by Justin Webb

Mentor: Jeffrey Edwards

Brigham Young University

Presentation Time: 11:30 AM

Diversity and community in macroinvertebrates of Timpanogos Cave, Utah, by Erika Frandsen

Mentor: C. Riley Nelson

Brigham Young University

Presentation Time: 11:45 AM

Session B9: Social Sciences Oral Presentations, 10:45 AM in Keller Building (KB) Room 344

Guiding Souls, Shaping Towns: Clergy's influence on Population Dynamics, by Seth Cannon

Mentor: Joe Price

Brigham Young University

Presentation Time: 10:45 AM

Bridging the Gaps: Geo-Coordinated Land Patent Linking for Socioeconomic Analysis, by Zachary Flynn, Britton Davis, Josh Nicholls, Bryson Mumford

Mentor: Joseph Price

Brigham Young University

Presentation Time: 11:00 AM

Low Academic Self-Efficacy Predicts Higher Depression and Anxiety in Students of Color, by Nathaniel Call

Mentor: Chelsea Romney

Brigham Young University

Presentation Time: 11:15 AM

Tin Foil Prophets: The Moral Worlds of Conspiracy and Apocalypse, by Soren Pearce

Mentor: Jacob Hickman

Brigham Young University

Presentation Time: 11:30 AM

Agency and Support: A case-study of a mental well-being support group for Latina Immigrants, by Vanessa Lozano

Mentor: April Reber

Brigham Young University

Presentation Time: 11:45 AM

Session B10: Rapid-fire Arts & Humanities Oral Presentations, 10:45 AM in Keller Building (KB) Room 346

Shaping Futures: The Evolution of Elementary School Architecture, by Samuel Zenteno

Mentor: Brandon Ro

Utah Valley University

Presentation Time: 10:45 AM

The Jazz Standard as Archive in Utah Jazz Performance, by Jens Watts

Mentor: Brian Harker

Brigham Young University

Presentation Time: 10:53 AM

Breaking Boundaries, by Arawyn Walter

Mentor: Alexandra Giannell

Utah Valley University

Presentation Time: 11:01 AM

The Gallery Space as Medium, Curating as Artistic Practice, by Zoe Elwood

Mentor: Jason Lanegan

Utah Valley University

Presentation Time: 11:09 AM

Crafting Secure System Messages, by Spencer Thompson

Mentor: Sayeed Sajal

Utah Valley University

Presentation Time: 11:17 AM

What Makes a Legend: Characterization's Role in Arthurian Universality, by Em Hart

Mentor: Nicole Dib

Southern Utah University

Presentation Time: 11:24 AM

Session B11: Architecture/Business Oral Presentations, 10:45 AM in Keller Building (KB) Room 348

Subconscious Comprehension of Structural Forms: An Eye-Tracking Study, by Jared K Bradshaw

Mentor: Brandon Ro

Utah Valley University

Presentation Time: 10:45 AM

Income Inequality for Women in the Psychology Field, by Jacob Willoughby

Mentor: Joshua Price

Southern Utah University

Presentation Time: 11:00 AM

What role does gig work play in bridging or widening the gender pay gap among underrepresented groups?, by Katrina Kim

Mentor: Joshua Price

Southern Utah University

Presentation Time: 11:15 AM

The Gender Pay Gap in FinTech: An Analysis of Womens Compensation in the Industry, by Rachel Bi, Chong Meng

Mentor: Rachel Bi

Utah Valley University

Presentation Time: 11:30 AM

Session C: Poster Presentations, 1:45 PM in Keller Building (KB) Rooms 401/403/405

Music and Recall: A study of the impacts of Music on Performance, by Cari Monson, Julie Pynn

Mentor: Julie Pynn

Southern Utah University

Poster Number: 1

Understanding the Effect of Printing Parameters and Prewetting on Binder Jetting Continuous Line Formation, by A. Kalani Brubaker

Mentor: Nathan Crane

Brigham Young University

Poster Number: 2

Eating Disorders and ADHD, by Danielle Black

Mentor: Chris Anderson

Utah Valley University

Poster Number: 3

The State of Student Media at HBCUs and HSIs, by Marianna Lopez Luritta, Mckinna Baird

Mentor: Jean Norman

Weber State University

Poster Number: 4

Going Green in a General Chemistry Teaching Lab: Assessment of Learning Outcomes, by Cooper Bell-Hunley, Ming Yu, Emily Heider

Mentor: Emily Heider

Utah Valley University

Poster Number: 5

Genetic Mutations in the Genomes of Mother-Offspring Pairs Shows Link Towards Nausea and Vomiting in pregnancy, by Dallin Oyler, Ana Alfaro, Kailee Myxter, Ben Brooks, Amanda Brooks

Mentor: Jessica Pullan

Southern Utah University

Poster Number: 6

Lighting for Different Land Uses: A Case Study in Cedar City, by Sebastian Partida

Mentor: Jamie Spinney

Southern Utah University

Poster Number: 7

The use of ecological niche modeling to characterize the microhabitat of oak hybrids (*Quercus undulata*) in Utah, by Cate Bateman, Carson Veazie,

Sydney Sandall

Mentor: Matt Ogburn

Southern Utah University

Poster Number: 8

Social Effects of Bed Nucleus of the Stria Terminalis Corticotropin-releasing Hormone and Tachykinin 2 Neuronal Activation Using Optogenetic Stimulation, by Nicholas Poll

Mentor: Moriel Zelikowsky

University of Utah

Poster Number: 9

Reconstructing seasonality in African bovids using dental microwear, by Auriana Dunn

Mentor: Kathryn Sokolowski

University of Utah

Poster Number: 10

Evaluating the role of LRRC1 in melanoma growth and metastasis, by Kylee Fernandez

Mentor: Gennie L Parkman

University of Utah

Poster Number: 11

Impact of Inducible Depletion of Sequestosome-1 (p62) From Endothelial Cells On Intrinsic Arterial Stiffness, by G. Colton Gardner, Lynasi Gapelu, Sohom Mookherjee, Sihem Boudina, J. David Symons

Mentor: J. David Symons

University of Utah

Poster Number: 12

Using Past Ecosystems to Understand Modern Climate Change: A Case Study from Utah's House Mountain Range, by Jane Damstedt, Kasey Cole

Mentor: Kasey Cole

University of Utah

Poster Number: 13

A Metagenomic Analysis the Microbial Composition of *Apis mellifera* Pollen Preserves throughout the Foraging Season, by Sydney Larsen

Mentor: Joshua Steffen

University of Utah

Poster Number: 14

Nonequilibrium Thermodynamics of Voltage-Gated Ion Channels, by Ada Cottam Allen, Mikhael T Semaan

Mentor: Mikhael T Semaan
University of Utah
Poster Number: 15

Bx42 is Required for Brain Development and is Linked to Microcephaly, by Adriana Bibo, Nicole Losurdo, Nichole Link

Mentor: Nichole Link, Cindy Greaves
University of Utah
Poster Number: 16

Synthesis and testing of hydrophobicly-modified pyridyl-aza crown ethers as chelators of rare earth elements, by William Lee, Rishab Nayak, Cecilia Knapp, Camila Soderholm

Mentor: Ryan Stolley
University of Utah
Poster Number: 17

A Glance into the Origin of Life through the Lens of the DNA Repair Enzyme MutY from the Lost City Metagenomes, by My Nha Quyen Tran, Cindy Greaves

Mentor: Martin Horvath, Cindy Greaves
University of Utah
Poster Number: 19

Murine Model of Hepatitis Delta Virus-Associated Salivary Gland Impairment, by Alexander Romano, Matthew Hesterman, Rachel Hill, Melodie Weller

Mentor: Melodie Weller
University of Utah
Poster Number: 20

In the Depths of the Understory: Costa Rican Associations Between Ants and Coccoidea Unraveled using NGS DNA Barcoding, by Sylvia Lee, Ainsley Parkins, Rodolfo S Probst

Mentor: Rodolfo S Probst
University of Utah
Poster Number: 21

Nanopore sequencing as a tool supporting pharmacological research in historically neglected marine micromollusks: from traditional knowledge to pharmacological targets, by Libby Heath, Kyle Cink, Thomas Petitjean, Ainsley Parkins, Sylvia Lee, Rodolfo S Probst, Matias Giglio, Baldomero Olivera, Macy Olivera

Mentor: Rodolfo S Probst
University of Utah
Poster Number: 22

Information Anatomy Over Partition Space, by Nathan Jackson, Ryan James, James Crutchfield

Mentor: Mikhael Semaan

University of Utah

Poster Number: 23

Unveiling Cryptic Avifauna Diversity Using Nanopore DNA Sequencing: A Case Study in the Passerine Genus *Emberiza*, by Ainsley E Parkins, Sylvia Lee, Elizabeth J Heath, Thomas Petitjean, Kyle Cink, Kyle Kittelberger, Cagan Sekercioglou, Rodolfo S Probst

Mentor: Rodolfo S Probst

University of Utah

Poster Number: 24

Quaking Aspen Pathogen Defense in the Presence of Climate Change Related Drought, by Allison Perkins, Aubrey Hawks, Talia Karasov

Mentor: Talia Karasov

University of Utah

Poster Number: 25

Evolution of TETR/TETO system toward orthogonal transcriptional repression, by Alexa N Gormick, Adam M Zahm, Justin G English

Mentor: Justin G English

University of Utah

Poster Number: 26

Lysine Methyltransferase SETD7 Methylates Two Novel Residues on Histone H3, by Braxton Bird

Mentor: Sarah Franklin

University of Utah

Poster Number: 27

Investigating Neuronal Networks Behind Learning in *Drosophila melanogaster*, by Dua Azhar, Alexander MacKenzie, Sophie Caron

Mentor: Sophie Caron

University of Utah

Poster Number: 28

Utilizing Genomic and Metabolic Data to Investigate the Evolutionary Ecology of Ant-Farmed Fungi, by America Cox, Kendra Autumn, Bryn Dentinger

Mentor: Bryn Dentinger

University of Utah

Poster Number: 29

Building the Labyrinth: Evolutionary Algorithms, Behavioral Analysis Generative AI in Information Security Assurance, by Daniel Lentz

Mentor: Dave Norwood
University of Utah
Poster Number: 30

Using Technician Statistics For Productive Animal Care, by Grace Moore

Mentor: Aaron Olsen
Utah State University
Poster Number: 31

Optimization of Subcritical Water Hydrolysis of Microalgae Biomass for Clean Meat Production, by Bradley Lawson, Lukas Keller, Marshall Burrows, Sam Perkins, Emery Wheeler

Mentor: Ronald Sims
Utah State University
Poster Number: 32

Eolian Sediment as a Potential Soil Parent Material in Cache Valley, by Kylie Hansen

Mentor: Janis Boettinger
Utah State University
Poster Number: 33

Isolation on Plant Growth promoting bacteria from the hybrid buffaloberry Shepherdia x utahensis 'Torrey', by Ty Wilson

Mentor: Amita Kaundal
Utah State University
Poster Number: 34

Hollow hair and how its structure helps big game animals thermoregulate, by Taylor Millett, Wendy Schatzberg, Samuel Tobler

Mentor: Wendy Schatzberg
Utah Tech University
Poster Number: 35

Computational analysis of cyclic aminoborane complexes that exhibit potential to act as hydrogen storage molecules, by Amy Richards, Caleb Shelton, Jordan Colmenero, Mason Warenski

Mentor: Diana Reese
Utah Tech University
Poster Number: 36

Synthesis and Characterization of Novel Pterostilbene Derivatives for Potential use as Therapeutics, by Ashley Staten

Mentor: Jennifer Meyer
Utah Tech University
Poster Number: 37

Rock Column Displacement in Zion National Park: A statistical Analysis, by Michael Orr

Mentor: Md Sazib Hasan, Alex Tye

Utah Tech University

Poster Number: 38

University Course Timetabling: From Sticky Notes to Automation, by Alyssa Muller, Russ Ross

Mentor: Russ Ross

Utah Tech University

Poster Number: 39

mitochondrial genes of hybrid whiptail parthenogens, by Dante Celani, Erin Bunch, Randy Klabacka

Mentor: Randy Klabacka

Utah Tech University

Poster Number: 40

fr10 Evolution, by Reagan McKee, Vicente Fernández Lara, Jeremy Bakelar, Randy Klabacka, Dustin Kolste

Mentor: Randy Klabacka

Utah Tech University

Poster Number: 41

Insane in the Membrane: Amino acid sequence evolution and conservation in vital protein complex in gram-negative bacteria, by Alexander Everett, David Bean, Jeremy W Bakelar, Randy L Klabacka

Mentor: Randy L Klabacka

Utah Tech University

Poster Number: 42

Introduced population of a unisexual lizard species in Southern Utah, by Vicente Fernández Lara, Reagan McKee, Randy Klabacka, Angelina Romero

Mentor: Randy Klabacka

Utah Tech University

Poster Number: 43

Computational analysis of cyclic aminoborane complexes that exhibit potential to act as hydrogen storage molecules, by Amy Richards, Caleb Shelton, Jordan Colmenero, Mason Warenski

Mentor: Diana Reese

Utah Tech University

Poster Number: 44

Cloning of ORC2 and ORC4 from HeLa Cells, by Austin Meyer, Gavin Grimmett, Martina Gaspari

Mentor: Martina Gaspari

Utah Tech University

Poster Number: 45

Thermochronometry dating of apatite (U-Th/He) of Andes Plate Tectonics from the Sierra de Altohuasi, by Charley Beck, Justin Hawkins

Mentor: Alex Tye
Utah Tech University
Poster Number: 46

Apatite (U-Th)/He dating of Andes Mountains near Sierra de Chango Real, Argentina, by Justin Hawkins, Charley Beck

Mentor: Alex Tye
Utah Tech University
Poster Number: 47

Analyzing the relationship between genes and survivability of breast cancer using machine learning, by Erick Gutierrez, Sazib Hasan, Vinodh Chellamuthu, Jie Liu

Mentor: Sazib Hasan
Utah Tech University
Poster Number: 48

Utah Tech Capus Temperature Mapping with GIS, by Grace Harang, Avery Hansgen

Mentor: Zhenyu Jin
Utah Tech University
Poster Number: 49

The Santa Clara River: A Vital Arid Waterway Under Human and Climate Pressures, by Emma Parry, Nikki Trush, Christina Pondell

Mentor: Christina Pondell
Utah Tech University
Poster Number: 50

Complex Responses of Desert Soil Properties to Organic Amendment Applications, by Trevor Ashby, Elizabeth MacLennan

Mentor: Gabriela Chilom
Utah Tech University
Poster Number: 51

Elevation and their relationship with Avalanches, by Savanna Greer

Mentor: Zhenyu Jin
Utah Tech University
Poster Number: 52

Solid Waste Production, City of Saint George, by Allie Pace, Conner Bennett

Mentor: Marzieh Ghasemi
Utah Tech University
Poster Number: 53

The nature of the negative relationship between phylogenetic distance and genomic mapping success, by Dante Celani, Laisha Noyes, Candice Johnson, Seun Onileowo, Randy Klabacka

Mentor: Randy Klabacka

Utah Tech University

Poster Number: 54

Aquatic plant-associated fungi along an urbanization gradient, by Jacob Mora, Geoff Zahn

Mentor: Geoff Zahn

Utah Valley University

Poster Number: 55

Bloom-B-Gone: Preventing Utah Lake Toxic Blooms by Phosphorous and Nitrogen Sequestration, by Elise Bennett, Zenos Thoreson, Blaise Bartlett, Jacob McFadden, Melanie Rosa, Nathan Walker, Logan Fenn, Eric Domyan, Colleen Hough

Mentor: Eric Domyan, Colleen Hough

Utah Valley University

Poster Number: 56

Safety and Fairness in the Courtroom, by Ella Johnson, Aubria Soto, Andrew Bodily

Mentor: Chelsea Romney

Brigham Young University

Poster Number: 57

The Value of Relationship Education for Youth and Teenagers, by Stefan Jezik

Mentor: Jocelyn Wikle

Brigham Young University

Poster Number: 58

Creating a Surname Lexicon for Historical US Records, by Spencer Timmerman

Mentor: Joseph Price

Brigham Young University

Poster Number: 59

Does talking about Suicidality help all populations? The data points to Yes, by Elizabeth Smith, Melissa Chavez

Mentor: Jared Neilsen

Brigham Young University

Poster Number: 60

The Influence of Problematic Media Use on Language Development, by Allison Weston, Summer Snow, Sophia James

Mentor: Sarah Coyne

Brigham Young University

Poster Number: 61

Feelings about Modesty and the Prevalence of Eating Disorders in Latter-Day Saint Men and Women, by Kate Binford, Marissa Roper, Brynn Eyre

Mentor: Sarah Coyne
Brigham Young University
Poster Number: 62

Using Automated Web Scraping to Document Variation in Sodium Content of Common School Meal Entrees, by Aaron Brown, Kimball Jardine, Nathan Schill, Courtney Webb, Joanne Guthrie

Mentor: Joseph Price
Brigham Young University
Poster Number: 63

The Relationship Between Social Media and Body Image, by Fiona Fox, Catherine Schumann, Cameron Monson

Mentor: Sarah Coyne
Brigham Young University
Poster Number: 64

The Physiological Effects of Capitalization in Ambivalent Marriages, by Abigail Williams, Kelsie Minga, Abby Baker, Ella Sieg, Olivia Harris

Mentor: Wendy Birmingham
Brigham Young University
Poster Number: 65

Relationship Between Income and Lifespan Using Historical Data, by Joseph Price, Britton Davis, Alexander Jenks

Mentor: Joseph Price
Brigham Young University
Poster Number: 66

Investigating the Effectiveness of Incentivized Efficient Watering Practices in 5 Western States with Focus on Utah, by Ashley Swensen, Ruth Kerry

Mentor: Ruth Kerry
Brigham Young University
Poster Number: 67

The Impacts of Distress and Perceived Social Support on Heart Rate Variability, by Mikel Cressman, Jackie Richey, Dantzel Petersen Hancey, Bianka Geraldo, Kayden Barlow, Ainsley Lumsden, Olivia Hubble

Mentor: Patrick Steffen
Brigham Young University
Poster Number: 68

Influence of Childhood Levels of Self Control on Adolescent Sleep Outcomes, by Jacalyn Richey, Hayley Pierce

Mentor: Hayley Pierce
Brigham Young University
Poster Number: 69

How Depression Affects “Feeling the Spirit” in College Age Latter-Day Saints, by Nadia Mando, Josh Shaeffer, Jared Nielsen

Mentor: Jared Nielsen
Brigham Young University
Poster Number: 70

Experience impact and the influence of novelty, social connection, and positive emotions on tourist experiences, by Braden Bringhurst, Michael Ray, Megan Barbier, Ellie Smith

Mentor: Peter Ward
Brigham Young University
Poster Number: 71

The Effects of Anterograde Amnesia on Mnemonic Discrimination: A Single-Subject Case Study, by Sara Knowlton, Sam Chipman, Samantha Stabler, Alex Osmond, Brock Kirwan

Mentor: Brock Kirwan
Brigham Young University
Poster Number: 72

Temporal Decay of Memory Discrimination: Investigating Mnemonic Similarity Task with Extended Delays, by Alexandra Osmond, Samantha Stabler, Sara Knowlton, Sam Chipman, Brock Kirwan

Mentor: Brock Kirwan
Brigham Young University
Poster Number: 73

Sodium Reduction Policy Response, by Jacob Hutchings, Harrison Li

Mentor: Joe Price
Brigham Young University
Poster Number: 74

Cross Cultural Privacy and Communication, by Tzu Yu Weng, Isaac Teuscher

Mentor: Xinru Page
Brigham Young University
Poster Number: 75

Prioritizing Kinship Care in Adoption Placements: Research Findings and Policy Solutions, by Gabriela Coca

Mentor: Jocelyn Wikle
Brigham Young University
Poster Number: 76

Intrinsic vs. Extrinsic Religiosity: Implications for the Parasympathetic Nervous System, by Parker McKasson, Hannah Hornberger, Sydnee Bond, Olivia Heller, Josh Marchant

Mentor: Patrick Steffen
Brigham Young University
Poster Number: 77

Social Media Use: Implications for Individuals Experiencing Stress and Neuroticism, by Cole Murphy, Andrew Blazzard, Austin Barney

Mentor: Patrick Steffen
Brigham Young University
Poster Number: 78

Unraveling the Threads of Confidence: Exploring Influences on Perceptions of Women's Leadership, by Vanessa Tuttle

Mentor: Liz McGuire
Brigham Young University
Poster Number: 79

From Pixels to Passion: How Mindfulness Reshapes the Landscape of Love and Intimacy as Counterbalance to Media Consumption, by Hadley Avila, Chelom Leavitt

Mentor: Chelom Leavitt
Brigham Young University
Poster Number: 80

Counting Crowds: An Analysis of Population 'Top-Outs' in Counties Across the United States, by Maisie Baird, Hugh Kerry, Samuel Otterstrom

Mentor: Samuel Otterstrom
Brigham Young University
Poster Number: 81

Frim Patron To Partner: Accomplishments of Museum-Armature Archaeology Relationships, by James Hall

Mentor: Paul Stavast
Brigham Young University
Poster Number: 82

Examining the Effects of Service on Male-Coded Committees on the Reelection of Female Legislators, by Annabelle Crawford

Mentor: Celeste Beesley
Brigham Young University
Poster Number: 83

Contrasting Representations of the Berlin Wall in American and German Museums, by Breanne Herrmann

Mentor: Paul Stavast
Brigham Young University
Poster Number: 84

Participation of Spanish-English Bilingualism in the US Political System: How Does Spanish Affect Voter Perception?, by Alexa Smith

Mentor: Iliana Portaro
Southern Utah University
Poster Number: 85

A look at Suicidality Among Various Demographics at Southern Utah University, by Maggie Smith, Bryan L Koenig

Mentor: Bryan L Koenig
Southern Utah University
Poster Number: 86

Do images of gender conformity affect individual comfort and conformity with gender expression, by Alexis Downey, Kylee Navin, Brice Page, Alyssa Franklin, Hannah Cluff, Julie Johnson Pynn

Mentor: Julie Johnson Pynn
Southern Utah University
Poster Number: 87

Meditation and Survival: Connections Between Humanity and Nature, by Reagan Wexels, Lauren Davis, Mason Peterson, Oliver Swanson, Rebekah Story, Julie Johnson Pynn, .

Mentor: Julie Johnson Pynn
Southern Utah University
Poster Number: 88

The Attitudes Towards Religion Scale (ATR): Development and Evaluation, by Samantha Denbow, Katie Finlinson, Carley Grube, Joseph Johnson, Tanner Dougherty

Mentor: Kirsten L Graham
Southern Utah University
Poster Number: 89

Seizures & Stigma, by Kelsey Grimshaw, Julie Pynn, Kirsten Graham

Mentor: Kirsten Graham
Southern Utah University
Poster Number: 90

Examining Implicit Bias on the Political Spectrum, by Jared Hanks, Kevan LaFrance, Julie Pynn

Mentor: Kevan LaFrance
Southern Utah University
Poster Number: 91

From Struggles to Strength: Strategies, Identity, and Acceptance with the LGBT Community, by Kirsten Graham, Julie Pynn

Mentor: Kirsten Graham
Southern Utah University
Poster Number: 92

Development of the Positive Awe Origin Scale, by Willow Norton, Kaleb Cox, Jaycen Sunderman, Jessalyn Warhurt

Mentor: Kirsten L. Graham
Southern Utah University
Poster Number: 93

Gambel Oak Acorns as a Food Resource in the Great Basin, Colorado Plateau, and Southwest, by Sophia Dodge

Mentor: Alex Greenwald
University of Utah
Poster Number: 94

Genomic Analysis of Male Reproductive Skew in Bornean and Sumatran Orangutans, by Gabriel Hammond, Rebecca Seegraber, Tim Webster

Mentor: Tim Webster
University of Utah
Poster Number: 95

"Am I a good student?": Examining Motivation Style Influences on Coping Strategies to Perceived Academic Failure and Self-Efficacy, by Broden Lund, John Jones

Mentor: John Jones
Utah Tech University
Poster Number: 96

From Self-Critique to Self-Care: Examining the Links Between Perfectionism and Self-Compassion, by Peg Bird, Maria Balaceanu, Grace Carsey, Tiffanee Suhaka, Hunter Mitchell, Ives Hong, Tara Caplin, Ed Wu, John T Jones, Dannelle Larsen-Rife

Mentor: John T Jones
Utah Tech University
Poster Number: 97

Assessing Risk Authoritarian Parenting and Adult Coping, by Hunter Mitchell, Grace Carsey, Maria Balaceanu, Peg Bird, Bridger Lisonbee, Dannelle Larsen-Rife

Mentor: John Jones
Utah Tech University
Poster Number: 98

The Relationship Between Sleep, Attachment, and Social Support, by Kendra Johnson

Mentor: Dannelle Larsen-Rife

Utah Tech University

Poster Number: 99

Examining the Efficacy of the UVU Stronger Families Project, by Derek Wolfgramm

Mentor: Kaicee Postler

Utah Valley University

Poster Number: 100

Connections between relationship perceptions and well being, by Lauren Hammond, Hailey White, McKayla Pittman

Mentor: Brandon Burr

Utah Valley University

Poster Number: 101

Support for learning and teaching in Utah, by Jennifer Mortensen, Melissa Lee, Jessica C. Hill

Mentor: Jessica C. Hill

Utah Valley University

Poster Number: 102

Quantitative Results of a Pre- and Post-Program Analysis of the Stronger Families Project in Fall 2023, by Taelyn Stinson, Kaicee Postler, Racel Arocho, Julie Nelson

Mentor: Kaicee Postler

Utah Valley University

Poster Number: 103

An Archival Research Study: Correlation Between Feeling Unloved and Neglected with Eating Disorder Behaviors, by Anna Trollmann

Mentor: Chris Anderson

Utah Valley University

Poster Number: 104

Gender differences in performance evaluation anxiety in faculty members on the tenure track, by Tatiana Leroy, Jessica C. Hill

Mentor: Jessica C. Hill

Utah Valley University

Poster Number: 105

Functional Near-Infrared Spectroscopy and Dementia, by Natalia Rubio, Madison Farrer

Mentor: Christopher Anderson

Utah Valley University

Poster Number: 106

The Effects of State Anxiety on Face Identification, by Patrick R Davies II

Mentor: Acacia Overono

Utah Valley University

Poster Number: 107

Infant Identity Among the Tiwanaku, by Matthew Hovorka

Mentor: Connie Ericksen

Utah Valley University

Poster Number: 108

Do Examples of Unethical Conduct Improve or Undermine Ethics Training in Psychology, by Joshua

Parmley, Acacia Overono

Mentor: Acacia Overono

Utah Valley University

Poster Number: 109

Drawing on Memory, by Corin Marsh, Acacia Overono

Mentor: Acacia Overono

Utah Valley University

Poster Number: 110

Session C1: Huntsman Cancer Institute Special Research Session 2, 2:00 PM in Sorenson Center (SC) Center Stage

Introduction, by Brad Cairns and Donald Ayer

Presentation Time: 2:00 PM

Combined Inhibition of RAF, MEK, and FAK Attenuates Melanoma Brain Metastases and Prolongs Survival in Preclinical Models, by Ana Paulina Medellin-Alvarez, Jared Almazan, Tursun Turapov, David A. Kircher, Karly A. Stanley, Gennie L. Parkman, MiKaela N. Field, Katie M. Culver, Silvia Coma, Jonathan A. Pachter, Howard Colman, Sheri L. Holmen

Mentor: Sheri Holmen

University of Utah

Presentation Time: 2:15 PM

Cryopreservation: The Chilly Future of Biobanking, by Jared Barrot, Mackenzie Burr, Isaac Packer, Peyton Worley, Delaney Anderson, Jack Davis, Jeffrey Okojie, Ken Dixon

Mentor: Jared Barrott

Brigham Young University

Presentation Time: 2:30 PM

The utility of ChatGPT in subspecialty consultation for patients (pts) with metastatic genitourinary (GU) cancer, by Ayana Srivastava, Gliceida Galarza Fortuna, Beverly Chigarira, Emre Dal, Chadi Hage Chehade, Georges Gebrael, Arshit Narang, Neeraj Agarwal, Umang Swami, Haoran Li

Mentor: Neeraj Agarwal

University of Utah

Presentation Time: 2:45 PM

Modeling Glioblastoma's Effect on Neural Networks using Brain Organoids, by Jude Werth

Mentor: Alex Shcheglovitov

University of Utah

Presentation Time: 3:05 PM

Using Gut Microbiota Derived Metabolites As a Proxy for Gut Permeability and Subsequent Risk of Cachexia, by Ellie P. Evans, Mmadili Ilozumba, Sheetal Hardikar, Neli Ulrich, Jennifer Ose

Mentor: Mmadili Ilozumba

Utah Valley University

Presentation Time: 3:20 PM

Association of Cyclooxygenase 1 (COX-1) rs4648298 and Cyclooxygenase 2 (COX-2) rs20417 Polymorphisms and Prostatic diseases Among Lebanese Males, by Brock Sheehan, Bryson Edwards, Ivanna Soto, Justice Vance, Tyler Haywood, Jefferey Goddard, Logan Seegmiller, Mohammed A. El Saidi, Wissam R Zaidan, Asmahan El-Ezzi, Dr. Ruhul Kuddus

Mentor: Dr. Ruhul Kuddus

Utah Valley University

Presentation Time: 3:35 PM

Cancer Research Lightning Poster Presentations

Transcriptomics Meta-Analysis Identifies Upregulation of Clotting and Fibrinolysis Cascades in Colorectal Cancer Tumors Containing Hereditary PMS2 Mismatch Repair Deficiency, by Trenton M.

Gibson, Brett E Pickett

Mentor: Brett E Pickett

Brigham Young University

Presentation Time: 3:50 PM

An Efficient Microwave Assisted Ullmann-Type Amination of 3- Bromopyrazolo[1,5-a]pyrimidine: Key Intermediate for Preparing 3,6-Di-Amino-Substituted Anticancer Heterocycles, by Bryce Tolman,

Jasper Terungwa Iorkula, Justin Singleton, Matt Peterson

Mentor: Matt Peterson

Brigham Young University

Presentation Time: 3:50 PM

Synthesis and Optimization of Novel Macrocylic TRK Inhibitors For Treating Drug-Resistant Cancers, by Matthew Stecher, Terungwa Iorkula, Matt A. Peterson

Mentor: Matt A. Peterson

Brigham Young University

Presentation Time: 3:50 PM

Inhibiting CDK9 and Autophagy in Pancreatic Cancer, by Isabella Scalise

Mentor: Conan Kinsey

University of Utah

Presentation Time: 3:50 PM

Investigating the Role of FBXO21 in Hematopoietic Malignancy, by Danielle Alvarado, Kasidy Weber, Shannon Buckley

Mentor: Shannon Buckley

University of Utah

Presentation Time: 3:50 PM

Elucidating the Role of TOX on Melanoma Cell Migration and Invasion, by Allison Stevens, Gennie Parkman

Mentor: Gennie Parkman

Weber State University

Presentation Time: 3:50 PM

Session C2: Science Oral Presentations, 1:45 PM in Sorenson Center (SC) Room 213 A

Waking up Rubus: germination protocols for thimbleberry, by Grace McFarlane

Mentor: Michael Rotter

Utah Valley University

Presentation Time: 1:45 PM

The "fly"-logeny of Drosophila Chromosome Evolution, by Audrey French, Carl E Hjelman

Mentor: Carl E Hjelman

Utah Valley University

Presentation Time: 2:00 PM

Using Graph Coloring to Optimize Monitoring Electric Power Networks, by Nathan Klundt, Violeta Vasilevska

Mentor: Violeta Vasilevska

Utah Valley University

Presentation Time: 2:15 PM

Interoperability and Artificial Intelligence, by Asher Mitchell, Neil Chilson

Mentor: Neil Chilson

Utah State University

Presentation Time: 2:30 PM

The More the Merrier: Building the Surface Brightness Fluctuation Distance Ladder, by Mikaela Cowles, Joseph Jensen

Mentor: Joseph Jensen

Utah Valley University

Presentation Time: 2:45 PM

Exploring Ontogenescence: The Impact of Food Availability and Variety on Early-Life Mortality and Development in Brine Shrimp, by Cassandra Nelson, Braden Richards, Grace Van Buren, Fernando Gonzalez, Ian Kirkpatrick, Paul Dunn

Mentor: Paul Dunn

Utah Valley University

Presentation Time: 3:00 PM

Session C3: Social Sciences Oral Presentations, 1:45 PM in Keller Building (KB) Room 362

Peer Tutoring as a High-Impact Practice (HIP) for Tutors, by Lisa Bell, Kelsey Hixon Bowles, Joni Hayward Marcum, Maren Neild, Asmaa Alsharif

Mentor: Lisa Bell

Utah Valley University

Presentation Time: 1:45 PM

Cognitive and Emotional Intersection: Investigating the Relationship Between Academic Performance and Depression Among Students, by Alley Fausett, Megan Ritter Martin, Kristin Davenport, Malisa Brooks, Kent Hinkson

Mentor: Kent Hinkson, Malisa Brooks

Utah Valley University

Presentation Time: 2:00 PM

Lithuania's Quest for Energy Independence from Russia, by Michelle Stanley

Mentor: Baktybek Abdrisaev

Utah Valley University

Presentation Time: 2:15 PM

The Relationship Among Attachment Styles, Couple Satisfaction, and Perceived Stress, by Noah James, Rebekah Hakala, Todd Spencer

Mentor: Todd Spencer

Utah Valley University

Presentation Time: 2:30 PM

Rattle My Bones: A Curation Experience, by Jalynn Lunceford

Mentor: Crystal Koenig, Arianna Harrington

Southern Utah University

Presentation Time: 2:45 PM

The Relationship Among Attachment Styles and Sexual Satisfaction and Frequency, by Brandie Statham, Rebekah Hakala

Mentor: Todd Spencer

Utah Valley University

Presentation Time: 3:00 PM

Session C4: Engineering Oral Presentations, 1:45 PM in Sorenson Center (SC) Room 208

A Global Pandemic's Effect on Mobile Device Security, by Ashton Walden

Mentor: Sayeed Sajal

Utah Valley University

Presentation Time: 1:45 PM

Forest Fire Detection Using Deep Learning Techniques, by Mason Davis

Mentor: Mohammad Shekaramiz

Utah Valley University

Presentation Time: 2:00 PM

Damage Detection on Wind Turbine Blades Using Deep Learning Algorithms, by Edwin Nazario, Mason Davis, Mohammad Shekaramiz, Mohammad Masoum, Abdenmour Seibi

Mentor: Mohammad Shekaramiz

Utah Valley University

Presentation Time: 2:15 PM

Autonomous Drone-Based Inspection of Wind Turbine Blades: A Computer Vision Approach for Navigation and Detection, by Angel Rodriguez, Mohammad Shekaramiz, Mohammad A S Masoum, Abdenmour Seibi

Mentor: Mohammad Shekaramiz

Utah Valley University

Presentation Time: 2:30 PM

Autonomous Inspection of Small Wind Turbines using Deep Learning Classification, Object Detection, and Autonomous Drones, by Joshua Zander, Angel Rodriguez, Mason Davis, Edwin Nazario Dejesus, Mohammad Shekaramiz, Mohammad A S Masoum, Abdenmour Seibi

Mentor: Mohammad Shekaramiz

Utah Valley University

Presentation Time: 2:45 PM

Chemical Herding: Controlling Collective Behavior of Active Brownian Particles, by Rebecca Burton

Mentor: Doug Tree

Brigham Young University

Presentation Time: 3:00 PM

Session C5: Humanities Oral Presentations, 1:45 PM in Keller Building (KB) Room 244

Rhetorical Weaponry: How the United States Government Participated in the Anti-Japanese Hysteria of 1942, by Amanda Kanno Davis

Mentor: Jerry Petersen

Utah Valley University

Presentation Time: 1:45 PM

Hildolf, Son of Odin, by Leif Ravnsen

Mentor: Rick McDonald

Utah Valley University

Presentation Time: 2:00 PM

The Lake of Salt: An Interdisciplinary Perspective of the Great Salt Lake, by Leif Ravnsen

Mentor: Scott Abbott

Utah Valley University

Presentation Time: 2:15 PM

The role of communication in managing college student stress, by Kathryn Hales

Mentor: Sarah Steimel

Weber State University

Presentation Time: 2:30 PM

Barking Up the Right Tree: Granting Moral Standing to Animals and Ecosystems, by Atira Schulte

Mentor: Michael Popich

Westminster College

Presentation Time: 2:45 PM

The Third Thing: Anti-sectarian Frameworks in Northern Ireland Music, by Joshua Booher

Mentor: Jacob Hickman

Brigham Young University

Presentation Time: 3:00 PM

Session C6: Science Oral Presentations, 1:45 PM in Keller Building (KB) Room 248

Climate change effects on plant functional traits in the Alaskan arctic, by Cristina Chirvasa, Tyler Williams, Matteo Petit Bon

Mentor: Karen Beard

Utah State University

Presentation Time: 1:45 PM

Deciphering Synergy: Pterostilbene and Dabrafenib in Melanoma Treatment, by Reno Blackmore, Jacob Mead, Wyatt Legas, Jennifer Meyer

Mentor: Jennifer Meyer

Utah Tech University

Presentation Time: 2:00 PM

The Relationship between Differential Finger Force in a Squeezing Task and Spin Characteristics of a Four-seam Fastball Thrown by Division-I Collegiate Baseball Pitchers, by Sierra Anderson

Mentor: Vinodh Chellamuthu

Utah Tech University

Presentation Time: 2:15 PM

Calculating genetic divergence between groups with underlying population structure using combinatorics and a permutation test, by Baylee Christensen, Reagan Mckee, Dante Celani, Candice Johnson, Randy Klabacka

Mentor: Randy Klabacka

Utah Tech University

Presentation Time: 2:30 PM

Modernizing data collection methods for animal population estimates by using unmanned aerial vehicles (UAVs), by Hunter Gordon, Jace Riley, McCade Larsen

Mentor: Aaron Davis

Utah Tech University

Presentation Time: 2:45 PM

Exploring the relationship between scalation and aridity in *Uta stansburiana* using modern and historical populations of the desert Southwest, by Hunter Gordon

Mentor: Geoff Smith

Utah Tech University

Presentation Time: 3:00 PM

Session C7: Social Sciences Oral Presentations, 1:45 PM in Keller Building (KB) Room 302

Does increase usage in pornography by males decrease marriage rates in women, by Tyler Randall

Mentor: Joshua Price

Southern Utah University

Presentation Time: 1:45 PM

Soundscapes & Their Effect on Anxiety, by Grace Collier, Sadee Ball, Shelby Shepherd, Madi Kotter, Sierra Jeppesen, Tanner Wilson

Mentor: Julie Pynn

Southern Utah University

Presentation Time: 2:00 PM

Loneliness and Parasocial Relationships at SUU, by Haley LeFevre, Julie Pynn

Mentor: Julie Pynn

Southern Utah University

Presentation Time: 2:15 PM

The Hard Life Of A Porn Star, by Kennley Cook

Mentor: Crystal Koenig

Southern Utah University

Presentation Time: 2:30 PM

Impact of Athletics United, by Alyssa Taylor

Mentor: Dr. Marquez-Velarde

Utah State University

Presentation Time: 2:45 PM

Exploring Food Insecurity among Utah Tech University Students: Insights from the National College Health Assessment Survey, by Ben Martinez, Virginia Merrill

Mentor: Muhammed Yildiz

Utah Tech University

Presentation Time: 3:00 PM

Session C8: Science Oral Presentations, 1:45 PM in Keller Building (KB) Room 306

An Individual Based Model of Japanese Beetle Control Methods, by Heather Smith

Mentor: Vinodh Chellamuthu, Jie Liu, MD Sazib Hasan

Utah Tech University

Presentation Time: 1:45 PM

Application of the Generalized Pareto Distribution to Extreme Stock Trading Volumes, by Rachel Krupnek

Mentor: Jie Liu, Sazib Hasan, Vinodh Chellamuthu

Utah Tech University

Presentation Time: 2:00 PM

Improving Protein-Ligand Docking Predictions Using Molecular Dynamics Simulations and K-means Clustering, by Matthew Williams

Mentor: Elena Laricheva

Utah Valley University

Presentation Time: 2:15 PM

The Impact of Inducible Depletion of Sequestosome-1 (p62) from Endothelial Cells on Mesenteric and Cerebral Artery Reactivity in Mice, by G. Colton Gardner, J David Symons, Sohom Mookherjee, Michael Judge, Lynasi Gapelu, Sihem Boudina

Mentor: J. David Symons

Utah Valley University

Presentation Time: 2:30 PM

Seasonal Variation in Essential Oil Composition and Yield of *Rhus aromatica* Aiton (Fragrant Sumac), by Tanner Beck, Prabodh Satyal, William N Setzer, Ambika Poudel, Joseph Hilton, Michael C Rotter

Mentor: Michael Rotter

Utah Valley University

Presentation Time: 2:45 PM

Numerical analysis of crowding effects in symbiotic species when $\delta=2$, by Chance Witt, Devan Hill

Mentor: Jianlong Han, Seth Armstrong, Sarah Duffin

Southern Utah University

Presentation Time: 3:00 PM

Session C9: Social Sciences Oral Presentations, 1:45 PM in Keller Building (KB) Room 344

Roe v Wade Overturned: Unpacking layers of systemic oppression, by Madison Webster, Kristina Oldroyd, Jennifer Shubert

Mentor: Jennifer Shubert

Utah Valley University

Presentation Time: 1:45 PM

Exploring the Complex Dynamics Between Anxiety and Academic Performance in College Students, by Megan Ritter Martin, Alley Fausett, Kristin Davenport, Malisa Brooks, Kent Hinkson

Mentor: Malisa Brooks, Kent Hinkson

Utah Valley University

Presentation Time: 2:00 PM

Waiting to Act: A Study of the Impact of Mandatory Firearms Purchase Delays on Suicide Rates, by Ian Macapagal

Mentor: Joshua Price

Southern Utah University

Presentation Time: 2:15 PM

"Woke" what does it really mean?, by Benjamin VanDreew

Mentor: Kal Munis

Utah Valley University

Presentation Time: 2:30 PM

A Qualitative Review of the Stronger Families Project at Utah Valley University, by Sage Wettstein, Kaicee Postler, Rachel Arocho, Julie Nelson

Mentor: Kaicee Postler

Utah Valley University

Presentation Time: 2:45 PM

Does Consumerism Have an Effect on Relationships? The Influence of Consumerist Tendencies and Empathy on Relationship Satisfaction, by Gregory Skinner

Mentor: Yi Yin

Utah Valley University

Presentation Time: 3:00 PM

Session C10: Social Science Oral Presentations, 1:45 PM in Keller Building (KB) Room 346

The Newborn Behavioral Observation (NBO) and Its Impact on Early Relationships, Postpartum Depression, and Infant Outcomes, by Tara Caplin, Tiffanee Suhaka, Maria Balaceanu, Peg Bird, Dannelle Larsen-Rife

Mentor: Dannelle Larsen-Rife
Utah Tech University
Presentation Time: 1:45 PM

When One is Loved: Attachment Security and Relationship Quality, by Maria Balaceanu, Dannelle Larsen-Rife, Tara Caplin, Peg Bird, Grace Carsey, Tiffanee Suhaka

Mentor: Dannelle Larsen-Rife
Utah Tech University
Presentation Time: 2:00 PM

Social Pains: Attachment, ACEs, Loneliness, and Social Support, by Ives Hong, Grace Carsey, Tara Caplin, Hunter Mitchell, Peg Bird, Bridger Lisonbee, Maria Balaceanu, Dannelle Larsen-Rife

Mentor: Dannelle Larsen-Rife
Utah Tech University
Presentation Time: 2:15 PM

Reclaiming Identity: A Journey of Chicana Empowerment, by Frankie Medina

Mentor: Joy McMurrin
Utah Tech University
Presentation Time: 2:30 PM

Addressing the Cause and Effects of Childhood Sexual Abuse, by Lilliana Rogers

Mentor: Dannelle Larson-Rife
Utah Tech University
Presentation Time: 2:45 PM

Unveiling the Challenges Faced by Deaf and Disabled Undocumented Immigrants, by Reagan Bartholomew

Mentor: Dylan Hansen
Utah Valley University
Presentation Time: 3:00 PM

Session C11: Rapid-fire Engineering & Social Science Oral Presentations, 1:45 PM in Keller Building (KB) Room 348

Diagonal Translation Involving Human-Robot Co-Manipulation, by Avary Fielding

Mentor: John Salmon

Brigham Young University

Presentation Time: 1:45 PM

Calibration and Validation for Flipper, by Kenneth Smith, Douglas Cook, Carter Noh, Kirsten Steele, Jordan Porter

Mentor: Douglas Cook

Brigham Young University

Presentation Time: 1:53 PM

Finite Element Simulation of Microfluidic Chips, by Robert Macdonald

Mentor: Troy Munro

Brigham Young University

Presentation Time: 2:01 PM

Stereotactic Body Radiation Therapy Success – What Role Does Connexin-43 Distribution Play?, by Tanner Frahm, Eugene Kwan, Ravi Ranjan

Mentor: Ravi Ranjan

University of Utah

Presentation Time: 2:09 PM

Daily Emotional Regulation Use: Predicting mood in autistic and socially anxious adults through various emotional regulation strategies, by Tavish King, Elizabeth Smith

Mentor: Jared Nielsen

Brigham Young University

Presentation Time: 2:17 PM

Visualizing the impact of the Arab Spring on Women Empowerment in the Middle East region, by Mary Harris

Mentor: Joshua Gubler

Brigham Young University

Presentation Time: 2:24 PM

Does an Insecure Attachment (Anxious and/or Avoidant) to God and the Contextual Perception of God (Belief that God's Character is Consistent with what the Bible says about God's Character) Affect Levels of Distress?, by Eliya Rodrigues

Mentor: Grant Corser

Southern Utah University

Presentation Time: 2:32 PM

IBD Support: Mental Health Matters, by Kacey Rowe, Rachel Arocho, Allison Ensign

Mentor: Rachel Arocho, Allison Ensign

Utah Valley University

Presentation Time: 2:40 PM

Transcriptome analysis to study the effects of drought in tomato, by Aubrilyn Johnson

Mentor: Yu Ya Liang

Utah Valley University

Presentation Time: 2:48 PM

Does God care about Premarital Sex? Diving into the sacred bed phenomenon, by Ivelynn Noel

Mentor: Julie Johnson Pynn

Southern Utah University

Presentation Time: 2:56 PM (15-minute Oral Presentation)

Session D: Poster Presentations, 3:30 PM in Keller Building (KB) Rooms 401/403/405

Towards Low-cost Diagnostics for Cancer Treatment Monitoring with a Cell-free Glutamine Biosensor,
by Cate Miller, Tyler Free, Brad Bundy

Mentor: Brad Bundy
Brigham Young University
Poster Number: 1

Towards the Development of at-home cell-free diagnostics to personalize treatment and improve the survival rates of Acute Lymphoblastic Leukemia, by Garrett Johnson, Tyler Free, Brad Bundy

Mentor: Brad Bundy
Brigham Young University
Poster Number: 2

Impacts of an Intercultural Teaching Experience in the Navajo Nation on Preservice Teachers, by Arahi Perdomo, Brooklyn Moore, Erin Kerr, Hula Santiago, Kylie Kay, Sarahi Joyner

Mentor: Krista Ruggles
Utah Valley University
Poster Number: 3

How substrate type influences the germination of *Ocimum basilicum*, by Emily Cherrington, Sam S Ingram, Chloe E Loveland, RYanne Welch

Mentor: Olga Kopp
Utah Valley University
Poster Number: 4

Impact of the Removal of CD6 on T Cell Metabolism, by Alexa Bailey, Sophie Daines, Joshua Bennett, Carlos Moreno, Scott Weber

Mentor: Scott Weber
Brigham Young University
Poster Number: 5

Comparative Analysis of Native and Non-Native Rose Prickle Microbiomes and Associated Microbes,
by Riley B. Jackson, Iris Cepeda

Mentor: Michael C Rotter, Kiara Whitley
Utah Valley University
Poster Number: 6

When does a granite become granitic? A record of major and accessory mineral re-equilibration from super- to sub-solidus within the Half Dome Granodiorite, Sierra Nevada, CA, by Emmaline M Saunders, Michael A Stearns, Ami Ward

Mentor: Michael Stearns
Utah Valley University
Poster Number: 7

Identification of an aphid-transmitted DNA virus in Brassica oleracea in Utah, by Travis Christensen, Geoff Zahn, Alma Laney

Mentor: Alma Laney
Utah Valley University
Poster Number: 8

Novel compounds produced by endophytes extracted from Cercocarpus ledifolius, by Ezra Wylie, Merrill Halling

Mentor: Merrill Halling
Utah Valley University
Poster Number: 9

Spatial Dynamics of Foliar Fungal Community Structure in the Pando Aspen Clone, by Austen Miller, Josh Leon, Geoffrey Zahn

Mentor: Geoffrey Zahn
Utah Valley University
Poster Number: 10

Remote sensing mineral identification: an intercomparison of Hyperspectral and multispectral imagery using open-source applications in the Marysville Volcanic Field, by Noah Christensen, Matt Olson

Mentor: Matt Olson
Utah Valley University
Poster Number: 11

Do the differences in size between heteromorphic sex chromosomes influence organism longevity?, by Olivia Frary, Carl Hjelman

Mentor: Carl Hjelman
Utah Valley University
Poster Number: 12

The Effects of an Antioxidant Supplemented Diet (Acai and Curcumin) on Learning and Memory of Drosophila melanogaster in a Model of Fetal Alcohol Spectrum Disorder (FASD), by Jaycob M Russell, Sujeong Hwang, Jake A Harward, Emily R Morden, Danielle T Taylor, Devin H Taylor

Mentor: Danielle Taylor, Devin Taylor
Utah Valley University
Poster Number: 13

Adapting a radiative forcing algorithm of dust on snow using higher resolution data, by Andrew Knowlton, Matt Olson

Mentor: Matt Olson
Utah Valley University
Poster Number: 14

What if WASP-39b was Twice as Hot?, by Brian Seamons

Utah Valley University

Poster Number: 15

The Field Manual of the Utah Valley Flora: An example from the the genus Veronica, by Danielle

Keysaw, Michael C Rotter

Mentor: Michael C Rotter

Utah Valley University

Poster Number: 16

Identification of Novel Viruses Infecting Utah Oil-Bearing Plants Hyssopus officinalis and Lavandula angustifolia, by Megan Frisby, Alma Laney, Geoff Zahn

Mentor: Alma Laney

Utah Valley University

Poster Number: 17

Analysis of Myoglobin as pseudo-peroxidase via macromolecular rate theory, by Grant Barron, Collin

Tuttle, Daniel Scott

Mentor: Daniel Scott

Utah Valley University

Poster Number: 18

Atmospheric Modeling of Brown Dwarfs With PICASO, SONORA, and JWST, by Brayden Roberts,

Joshua Lothringer, Denise Stephens

Mentor: Joshua Lothringer

Utah Valley University

Poster Number: 19

Utah Valley Flora Asteraceae Treatment, by Annika Wood

Mentor: Michael Rotter

Utah Valley University

Poster Number: 20

Host range testing and pathogenicity confirmation of potentially new blueberry fungus, by Kayla

Knaperek, Megan Frisby, Geoffery Zahn, Alma Laney

Mentor: Alma Laney

Utah Valley University

Poster Number: 21

Establishing and Monitoring New Populations of an Endangered Plant (Phacelia argillacea) Over Several Years, by Tyler R Shaver, Lainey S Smith, Michael T Stevens

Mentor: Michael T Stevens

Utah Valley University

Poster Number: 22

Production of Antibiotics in Soil Bacteria against ESKAPE Pathogens, by Cori Bailie, Arlene Majers, Katherine Judge

Mentor: Olga Kopp
Utah Valley University
Poster Number: 23

Using Carbon and Nitrogen Stable Isotopes to Determine the Diet Composition of Ground Beetles (Coleoptera: Carabidae) in Provo Canyon, Utah, by Hayley Karns, Dylan Bryant, Noah Christensen, David Kirby, Sarah Marchant, Sarah Nicholas, Emmaline Saunders, Hannan Thomas, Nathan Smith, Dan Cavan, Daniele Ghiretti

Mentor: Alessandro Zanazzi
Utah Valley University
Poster Number: 24

Your Teeths Appetite for Hydroxyapatite, by Megan Wesenberg, Britain Jeppesen, Brianna McDaniel

Mentor: Jodie Lopez
Utah Valley University
Poster Number: 25

Detecting Antibiotic Resistance Genes in The Environment, by Natalie Welsh, Lauren Brooks, Skyler Belka

Mentor: Natalie Welsh, Lauren Books
Utah Valley University
Poster Number: 26

Creating a universal framework for reconstructing phylogenies: Building trees at your fingertips using R, by Barbara Jetton, Carl E Hjelman

Mentor: Carl E Hjelman
Utah Valley University
Poster Number: 27

Survey of Blow Fly (Diptera: Calliphoridae) Species Across Utah and Salt Lake Counties, by Haylee Beck, Lauren Weidner, Carl E Hjelman

Mentor: Carl E Hjelman
Utah Valley University
Poster Number: 28

Detection of Beet curly top virus in Utah plants, by Elise Bennett, Megan Frisby, Rob Hess, Max Taylor, Erin Riggs, Alma Laney

Mentor: Alma Laney
Utah Valley University
Poster Number: 29

Analysis of Graphene Samples Using a 785nm Raman Spectrometer and Construction of a Carbon Spectral Library, by Seth Stringham, Audrey Elison, Kevin Shurtleff, Dustin Shipp

Mentor: Dustin Shipp

Utah Valley University

Poster Number: 30

Leveraging Machine Learning in Face Mask Formulation, by Alexander Goslin, Hazel Ticas, Morgan Covarrubias

Mentor: Daniel Scott

Utah Valley University

Poster Number: 31

Monarch Butterflies - What's in their Color?, by Kyri Forman, Craig Thulin, Heath Ogden

Mentor: Heath Ogden

Utah Valley University

Poster Number: 32

Antimicrobial Activity of Cetaphil, by Lillian Gee, Makaylie Moore

Mentor: Lauren Brooks

Utah Valley University

Poster Number: 33

Evaluation of Microplastic Pollution in Subterranean Systems and the Impact of Human Visitation, by Stone Smith, Ben Belt

Mentor: Sally Rocks

Utah Valley University

Poster Number: 34

Monte Carlo Raman Spectroscopy Simulation: Unlocking Computational Speed with GPU Acceleration, by Thomas Caldwell

Mentor: Dustin Shipp

Utah Valley University

Poster Number: 35

The Primary and Secondary Metabolites of Tomato as a Response to Herbivory and Simulated Herbivory, by Iris Cepeda, Tabitha Weir, Jonathan Cook, Honey Ordonez

Mentor: Olga Kopp

Utah Valley University

Poster Number: 36

Green Hydrogen Production from Wastes by High Temperature Plasma Pyrolysis, by Veronica Gunyan, Minh Nguyen

Mentor: Kevin Shurtleff
Utah Valley University
Poster Number: 37

Geminivirus Resistance in Mustard Plants, by Laureana Lazarte, Adam Hales

Mentor: yu ya liang
Utah Valley University
Poster Number: 38

Investigating the impact of artificial urine on the interaction between biomarker proteins and quantum dots, by Minh Nguyen, Eugene Leung

Mentor: Ming Yu
Utah Valley University
Poster Number: 39

Creation of a 3D fluorescent image using holographic and fluorescent imaging techniques, by Vince Rossi, Spencer Brown

Mentor: Vince Rossi
Utah Valley University
Poster Number: 40

Examination of Self-Efficacy, Effort Control, and Teacher Immediacy in Women and Minorities Participating in STEM Undergraduate Research Experiences, by Sadie Jensen, Nellie Bowman, Nick Jeffery, Heather Wilson Ashworth

Mentor: Heather Ashworth
Utah Valley University
Poster Number: 41

Can Practice Alter the Stress Response to a Stressor?, by Grant Cole, Vitaliy Walker, Daniel Adams, Nathan Twitchell, Melissa Lee, Jennifer Mortensen, Brittney Stockholm, Tatiana LeRoy

Mentor: Claudia Jorgensen
Utah Valley University
Poster Number: 42

Carbapenem Resistance on UVU Campus, by Zadi Carlson

Mentor: Lauren Brooks
Utah Valley University
Poster Number: 43

Thermoacoustic Heat Engine, by Euiyoung Kim, Bonnie Anderson

Mentor: Bonnie Anderson
Utah Valley University
Poster Number: 44

Improved low-cost, solar water purifier to reduce clean water scarcity, by Fatoumata N'diaye, Kevin Shurtleff

Mentor: Kevin Shurtleff
Utah Valley University
Poster Number: 45

DMS-MapSeq analysis of 3' UTR in Human Genome, by Silvi Rouskin, Matthew Allan, Dragui Salazar

Mentor: Merrill Halling
Utah Valley University
Poster Number: 46

Detection of a DNA Virus in Ornamental Plants at Utah Valley University, by Jaylee Montague, Skylar Belka, Gabe Espinoza, Geoff Zahn, Alma Laney

Mentor: Alma Laney
Utah Valley University
Poster Number: 48

Analysis of Super-Black Coatings versus Black Paints, by Tyler O'Loughlin, Tyler Daynes, Erik Prazak

Mentor: Dustin Shipp
Utah Valley University
Poster Number: 49

Does Greater Phylogenetic Distance Affect Competition Outcomes in Fungal Communities?, by Joshua Stubbs, Annette Lewis, Kendall Holcomb, Barbara Suassuna Schincariol

Mentor: Geoffery Zhan
Utah Valley University
Poster Number: 50

Groundwater and Surface Water Interactions in the Provo River Watershed, by Feyan Hoffman, Roshan Abraham, Christine Fowles, Abi Conger, Scott Jenson

Mentor: Daren Nelson
Utah Valley University
Poster Number: 51

Groundwater and Surface Water Interactions on the Hobble Creek Watershed, by Roshan Abraham, Parker Jorgenson

Mentor: Daren Nelson
Utah Valley University
Poster Number: 52

"Cognitive Insights into Madagascar Hissing Cockroaches: Memory, Learning, and Motivated Behavior", by Brandon Barlow, Ethan Reese, Victoria Vazquez, Abbi Stark, Alex Wilson, Rain Evans, Josef Becker, Monica Sanchez, Amy Chevrier, James Taylor

Mentor: James Taylor

Utah Valley University

Poster Number: 53

Investigating the relationship between natural environment and drosophilid genome size, by Samantha Curnow, Carl Hjelman

Mentor: Carl Hjelman

Utah Valley University

Poster Number: 54

Interior Environments influence on Mental Health, by Camille Sorenson Bown

Mentor: Kristen Arnold

Weber State University

Poster Number: 55

Assessing Genomic Diversity Via whole genome resequencing in bean cultivars (Phaseolus L. spp.) from Brazil, a putative secondary center of diversity, by Kaycie A Melville, Ashley N Egan, Yu Ya Liang

Mentor: Ashley N. Egan

Utah Valley University

Poster Number: 56

Identifying and Monitoring Groundwater and Surface Water Interactions Utilizing UAVs and Remote Sensing Applications in Wetlands in Utah Lake, Utah, by Anna Wilkinson, Feyan Hoffman, Roshan Abraham

Mentor: Daren Nelson

Utah Valley University

Poster Number: 57

The Ethnobotanical link between Tropane Alkaloids and Datura, by Cole Statham, Katelyn Thomas

Mentor: Michael C Rotter

Utah Valley University

Poster Number: 58

Variability in mechanical seizure induction methods using Drosophila melanogaster (fruit flies) as a model organism, by Vy Dao, Devin Taylor, Danielle Taylor

Mentor: Devin Taylor, Danielle Taylor

Utah Valley University

Poster Number: 59

Mechanical to Electrical Energy Conversion of a Door Swing, by Spencer Brown, Shawn Pepper, Carson Draughon, Ulises Thornock, Dustin Shipp

Mentor: Dustin Shipp
Utah Valley University
Poster Number: 60

Droplet Breakup: 'It's Not You, It's My Vibe' – Achieving Uniformity in Free Jets Through Vibrational Tactics, by Miranda Rose, Daniel James

Mentor: Daniel James
Utah Valley University
Poster Number: 61

Sound Levels on the UVU Pedestrian Bridge, by Jacob Sampson, Joshua Goates, Brian Patchett, Abolfazl Amin, Bonnie Andersen

Mentor: Bonnie Andersen
Utah Valley University
Poster Number: 62

Quantification of Microplastics in Utah Snow and How It's Affected by Skiing, Snowboarding, and Artificial Snow, by Sarah Adams, Bailey Bennion, Sara S Rocks

Mentor: Sara S Rocks
Utah Valley University
Poster Number: 63

Correcting Surface Brightness Fluctuation Distances for Stellar Populations, by Sydney Holt, Mikaela Cowles

Mentor: Joe Jensen
Utah Valley University
Poster Number: 64

Study of mode transitions with an artificially-blown clarinet, by Isaac Settle, Easton Gray, Bonnie Anderson

Mentor: Bonnie Anderson
Utah Valley University
Poster Number: 65

Evaluating Presence of Antibiotic Resistance Gene *vatA* on UVU Campus, by Dallin Zollinger, Lauren Brooks

Mentor: Lauren Brooks
Utah Valley University
Poster Number: 66

Meta-analysis of Eddy Current Braking Systems, by John Walton, Mason Astill, Jarrett Nelson

Mentor: Dustin Shipp

Utah Valley University

Poster Number: 67

Religion, Evolution and Vaccinations: Perceptions from a GE Student Population, by N. Kanon Black, T. Heath Ogden, Britt Wyatt, Josh Premo, Jessica A Cusick

Mentor: Jessica A Cusick

Utah Valley University

Poster Number: 68

Kynurenine Deamination and Synthesis of Xanthommatin, by Stephen Chamberland, Craig D. Thulin, Katherine Solorzano, Cassandra Beddes, Nathan Twitchell, Abram Caruso

Mentor: Steve Chamberland, Craig D. Thulin

Utah Valley University

Poster Number: 69

Identifying and photographing the instars of a parthenogenetic mayfly (*Centroptilum trianguilfer*; *Ephemeroptera*), by Heidi Kipp, Annika Jones,

T. Heath Ogden

Mentor: T. Heath Ogden

Utah Valley University

Poster Number: 70

Pubertal Development and Estrous Cycling in POMC-deficient Mice, by Jacob Prescott

Mentor: Zoe Thompson

Utah Valley University

Poster Number: 71

Mayfly Wing Wonders: Uncovering Genetic Threads in Parthenogenic Individuals using RNA, by Melissa Rangel, Avery Larsen, Heath Ogden

Mentor: Heath Ogden

Utah Valley University

Poster Number: 72

Deciphering the Impact of Pomc Mutation on Mouse Reproductive Behavior: A Comprehensive Data Analysis Approach, by Lauren Silvatti.

Mentor: Zoe Thompson

Utah Valley University

Poster Number: 73

CRISPR Deletion of Viral Receptor Genes in Human Cells, by Rylan Schmanski, Mason Masters, Emilee Snow, Alexandria Offringa, Paola Robles, Spencer Perry, Joshua Mackley, Alexander Beagley, Rainey Hughes

Mentor: Daniel Clark
Weber State University
Poster Number: 74

Brain-eating amoeba rescue-of-infection model using drug combinations, by Karissa Bauer, Kennedy Lewis, James Belnap, Andrew Torena, Braden Freestone, Luis Montenegro Calla

Mentor: Daniel Clark
Weber State University
Poster Number: 75

Microbiome of PCB Contaminated Sediments, by Jerzee Findlay, Gina Fuller

Mentor: Katrina Twing
Weber State University
Poster Number: 76

Cultivation of bacteria from PCB-contaminated sediments PCB Degradation, by Akir Rowe, Hali Hutchinson, Kingdom Wanjoku

Mentor: Katrina Twing
Weber State University
Poster Number: 77

Methods for assessing Ephydra gracilis populations across Great Salt Lake, by Cora Rasmuson, Carly Biedul, David Herbst

Mentor: Carly Biedul
Westminster College
Poster Number: 78

Cultural humility impacts on premature termination in psychotherapy, by Logan Walker, Kate Coneys, Nick Tops, Russ Bailey

Mentor: Russ Bailey
Utah Valley University
Poster Number: 79

UTAH'S HERITAGE: A LITTLE KNOWN STORY OF MORMONISM AND EUGENICS, by Lindsay Beekman

Mentor: Olga Kopp
Utah Valley University
Poster Number: 80

Change Over Time: Cultural Humility and Microaggressions in Therapy, by Kate Coneys, Nick Top, Russ Bailey, Logan Walker, Julia Toomey

Mentor: Russ Bailey
Utah Valley University
Poster Number: 81

Relationship with soul: a short excursion in psychology and religion, by Genna Howard, Cameron John

Mentor: Cameron John
Utah Valley University
Poster Number: 82

The Influence of Political Affiliation on Academic Performance: An Examination on How Familial Political Beliefs May Impact a Child's Educational Outcomes, by Ellery White

Mentor: Yi Yin
Utah Valley University
Poster Number: 84

We Are Not Alone: Examining the Impact of a Tween-Teen Diabetes Day Camp, by Heidi Blaylock, Carter Leuba, Eddie Hill, Christina Aguilar, Carla Cox, Aiden Hill

Mentor: Eddie Hill
Weber State University
Poster Number: 85

Investigating the Utility of Avatars and Actors in Undergraduate Psychology Role-Play Exercises, by Kennedy Parker

Mentor: Melinda Russell Stamp
Weber State University
Poster Number: 86

Mountain Haven - Senior Capstone, by Brandon Rojas

Mentor: Kristen Arnold
Weber State University
Poster Number: 87

Defect Detection in 3D Printing from Thermal Imaging, by Seth Leavitt

Mentor: Nathan Crane
Brigham Young University
Poster Number: 88

Increasing student capability to confront difficult topics through structured conversations, by Parker R. Carlquist, Lexi Brady, Seth Dotson, Jeff Glenn

Mentor: Jeff Glenn
Brigham Young University
Poster Number: 89

E-Cigarettes and Negative Impacts on Oral Health, by Nykitha chomina, Emalee Dias, Mary Roberts

Mentor: Jodi Lopez
Utah Valley University
Poster Number: 90

Addressing Teenage Pregnancy and Related Public Health Issues in Rhino Camp Refugee Settlements in Uganda, by Karina Geranios, Madison Mathews, Connor Baird

Mentor: Robert Kagabo
Utah Tech University
Poster Number: 91

Cognition in *Brachyrhaphis rhabdophora*, by Elizabeth Jenkins

Mentor: Jerry Johnson
Brigham Young University
Poster Number: 92

Bioluminescent *E. coli*, by Liv Harris

Mentor: Lane Law
Salt Lake Community College
Poster Number: 93

Generation and Characterization of a zebrafish 4H Leukodystrophy model, by Avery Zentner

Mentor: Hung Yu Shih
Utah Tech University
Poster Number: 94

Inexpensive Optical Power Meter, by John Walton, Dallin Durfee

Mentor: Dallin Durfee
Utah Valley University
Poster Number: 95

Who Split the Cheese? Search for *Paucilactobacillus wasatchensis* in a Local Creamery, by Brooklyn Matthews, Andrew Rowley, Michael Salas, Shaun Kader

Mentor: Michele Culumber, Daniel Clark
Weber State University
Poster Number: 96

Ecological Dynamics of the Hypersaline Great Salt Lake North Arm, by Amanda Lee, Alex Phillips, Bonnie Baxter, Amy Schmid

Mentor: Bonnie Baxter
Westminster College
Poster Number: 97

Family quality of life partially predicts parenting stress differences between parents with and without children with autism, by Megara Jensen, Matthew Hatch, Brock Hughes, Madeline Gillies, Spencer Myres, Maddie Blackham, Autumn Gould, Kate Leigh, Nate Lieshman

Mentor: Rebecca A. Lundwall

Brigham Young University

Poster Number: 98

Caffeine's Cognitive Edge: Investigating Memory Enhancement during Non-Optimal Times of the Day, by Greg Avalos

Mentor: Sierra Warner

Southern Utah University

Poster Number: 99

Session D1: Science Oral Presentations, 3:30 PM in Sorenson Center (SC) Room 213 A

Accelerated Rates of Evolution in hymenopteran DSCAM genes, by Remington R Motte

Mentor: Carl Hjelman

Utah Valley University

Presentation Time: 3:30 PM

Documenting the Flora of Utah Valley Using Student-written Treatments, by Gideon Bowes

Mentor: Michael Rotter

Utah Valley University

Presentation Time: 3:45 PM

Altered Estrus Cycles in POMC-deficient Mice, by Nathan Anderson

Mentor: Zoe Thompson

Utah Valley University

Presentation Time: 4:00 PM

Another Look at Underlying Mortality Model Used in Life Insurance Industry, by Benjamin Furniss,
Britton Borget, John Sanders

Mentor: Patrick Ling

Utah Valley University

Presentation Time: 4:15 PM

Construction Techniques in Ancient Fremont Pithouses, by Ellie Martin

Mentor: Mike Searcy

Brigham Young University

Presentation Time: 4:30 PM

"Cognitive Insights into Madagascar Hissing Cockroaches: Memory, Learning, and Motivated Behavior", by Brandon Barlow, Ethan Reese, Victoria Vazquez, Abbi Stark, Monica Sanchez, Alex Wilson, Rain Evans, Josef Becker, Amy Chevrier, James Taylor

Mentor: James Taylor

Utah Valley University

Presentation Time: 4:45 PM

Session D2: Science Oral Presentations, 3:30 PM in Sorenson Center (SC) Room 213 B

Development of the midwestern blot technique for elucidation of pigment-binding proteins, by Tessa C Black, Craig D Thulin

Mentor: Craig Thulin

Utah Valley University

Presentation Time: 3:30 PM

Asexual Aviators: Transcriptome Profile of the Life Stages of a Parthenogenic Mayfly, by Avery Larsen, Heath Ogden

Mentor: Heath Ogden

Utah Valley University

Presentation Time: 3:45 PM

Trace Metal Concentrations of Various Land Use Types Surrounding Utah Lake, by Alex Montgomery, Mason Gordon

Mentor: Eddy Cadet

Utah Valley University

Presentation Time: 4:00 PM

HEIGHTS IN THE abc CONJECTURE. AN UNDERGRADUATE APPROACH, by Brantson Yeaman

Mentor: Machiel van Frankenhuijsen

Utah Valley University

Presentation Time: 4:15 PM

Power Scaling a Nd:YVO₄ Laser for Use as the Optical Drive of a Long Wave Infrared Optical Parametric Oscillator, by Alexander Gibb

Mentor: York Young

Utah Valley University

Presentation Time: 4:30 PM

A Gyroscopic System for Magnified Coherent Diffraction Imaging, by Tyler Daynes, Jair Gonzalez, Jeremy Tait, Josh Jumper, Ellie Purcell, Tyler O'Loughlin, Vern Hart

Mentor: Vern Hart

Utah Valley University

Presentation Time: 4:45 PM

Session D3: Social Sciences Oral Presentations, 3:30 PM in Keller Building (KB) Room 362

Exploring the Differences Among Attachment Styles with Cognitive Appraisal and Emotional Suppression, by Rebekah Hakala, Moroni Black

Mentor: Todd Spencer

Utah Valley University

Presentation Time: 3:30 PM

Exploring Perfectionism: Growth, Suffering and Resolution, by Ethan Reese

Mentor: Russ Bailey

Utah Valley University

Presentation Time: 3:45 PM

Social Desirability, the Aim of Politics, and Neurodivergent Identity, by Adam Smith,
adam@tallsmith.com

Mentor: Kal Munis

Utah Valley University

Presentation Time: 4:00 PM

Duverger's Law and Polarization in a Ranked Choice Citizen-Candidate Model, by Bryan Jay Frandsen

Mentor: Joseph McMurray

Brigham Young University

Presentation Time: 4:15 PM

Political Violence and Place: The Role of Locality on American Attitudes Towards Politically Motivated Aggression, by David Schloesser

Mentor: B Kal Munis

Utah Valley University

Presentation Time: 4:30 PM

"Open Carry for All?": How Support for Open Carry Varies Based on Who is Carrying, by Matthew Drachman, Caden Weaver, Nicholas Martin

Mentor: Kal Munis

Utah Valley University

Presentation Time: 4:45 PM

Session D4: Science Oral Presentations, 3:30 PM in Sorenson Center (SC) Room 208

Analysis of gravitational fields inside of a cavity throughout different dimensions, by Tate Thomas

Mentor: Alexander M Panin

Utah Valley University

Presentation Time: 3:30 PM

Artificial black holes: are they a threat to humanity?, by Tate Thomas

Mentor: Alexander M Panin

Utah Valley University

Presentation Time: 3:45 PM

Efficiently and Accurately Simulating Coupled Nonlinear Schrödinger Equations with Exponential Time Differencing and Fourier Spectral Methods, by Nate Lovett

Mentor: Harish Bhatt

Utah Valley University

Presentation Time: 4:00 PM

Effect of a supernova explosion on the mechanical and thermal stability of orbiting planets, by Alexander Panin, Benjamin Miera

Mentor: Alexander Panin

Utah Valley University

Presentation Time: 4:15 PM

Using Ecological Niche Modeling to better understand *Pediomelum aromaticum*, a threatened Utah plant, by Ian Eggleston, Ashley N Egan

Mentor: Ashley N Egan

Utah Valley University

Presentation Time: 4:30 PM

MRSA induced biofilm clearance by bacteriophage and antibiotic, by Rainey Hughes, Avalon Marker, Elizabeth Bouwhuis, Yeshaswini Dudde, Bryan Dopp, Scot Carington, Jared Nelson

Mentor: Daniel Clark

Weber State University

Presentation Time: 4:45 PM

Session D5: Engineering Oral Presentations, 3:30 PM in Keller Building (KB) Room 244

Subtle Force Communication for Intuitive Human-Robot Co-manipulation, by Samuel Charles

Mentor: Marc Killpack

Brigham Young University

Presentation Time: 3:30 PM

Transdermal antiseptic products as a method to decrease skin bioburden prior to surgery, by Kiersten Gardner, Hannah Duffy, Abbey Blair, Nicholas Ashton, Porter Stulce, Dustin Williams

Mentor: Dustin Williams

University of Utah

Presentation Time: 3:45 PM

Rotational Dynamics of Thrown Food Items and Their Impact on Canine Catching Success, by Caleb Slade, Evelyn Davis, Michael Orr, Brevin Bell

Mentor: Vinodh Chellamuthu

Utah Tech University

Presentation Time: 4:00 PM

Effect of Print Parameters on tensile and flexure strength of 3D printed plastic, by Baylee Schumacher, Ryley Horrocks, Divya Singh

Mentor: Divya Singh

Utah Tech University

Presentation Time: 4:15 PM

Ransomware Resilience and Ethical Dilemmas: A Comprehensive Review of Threat Landscape, Impact, and Mitigation Strategies, by Asmaa Alsharif

Mentor: Sayeed Sajal

Utah Valley University

Presentation Time: 4:30 PM

Quantifying Approximation Errors in the Flash Thermal Diffusivity Measurement Technique Using High Fidelity Simulations, by Tage T Burnett, Jakob G Bates, Christopher R Dillon, Matthew R Jones

Mentor: Christopher R Dillon

Brigham Young University

Presentation Time: 4:45 PM

Session D6: Humanities Oral Presentations, 3:30 PM in Keller Building (KB) Room 248

Re-Membering and the Role of Community In Exorcism In Toni Morrison's Beloved, by Jen Hansen

Mentor: Nicole Dib

Southern Utah University

Presentation Time: 3:30 PM

Ethical Analysis of Web3 and Decentralized Internet, by Karli Kallas

Mentor: Jared Colton

Utah State University

Presentation Time: 3:45 PM

Is this you? Foucauldian ethics in multifactor authentication, by Maren Archibald

Mentor: Jared Colton

Utah State University

Presentation Time: 4:00 PM

The Impact of Augustine's Theory of Evil on Latter-Day Saint Teachings, by Miranda Judson

Mentor: Mike Ashfield

Utah State University

Presentation Time: 4:15 PM

The Folklore of the Ghastly Menace, by Matilda Gibb

Mentor: Ami Comeford

Utah Tech University

Presentation Time: 4:30 PM

More Than Accommodating, by Natalya Misener, John Wolfe

Mentor: John Wolfe

Utah Tech University

Presentation Time: 4:45 PM

Session D7: Science Oral Presentations, 3:30 PM in Keller Building (KB) Room 302

Unlocking the Mysteries of Glacial Watersheds: Tracing the Path of Water Chemistry Over Time and Space, by Miaja Coombs, Greg Carling

Mentor: Greg Carling

Brigham Young University

Presentation Time: 3:30 PM

Lake Bonneville's Legacy: Unraveling Genetic Drift and Diversity Loss in West Desert Bonneville Cutthroat Trout, by Tanner Van Orden, Dennis Shiozawa, Peter Searle, Ana Kokkonen, Paul Evans

Mentor: Paul Evans

Brigham Young University

Presentation Time: 3:45 PM

A novel method of predictive thermodynamic property mining using AIMD simulations of molten salts for use in molten salt nuclear reactors, by Maggie Wu, Ashley Littlefield, Bryant Jones

Mentor: Bryant Jones

Snow College

Presentation Time: 4:00 PM

Photo-induced Reactivity of a Model Dipyrrole, by Jaren Meikle, Samuel Archer

Mentor: Jacob Dean

Southern Utah University

Presentation Time: 4:15 PM

The Stability of the steady state solutions of a Gray-Scott model, by Samuel Andersen

Mentor: Jianlong Han

Southern Utah University

Presentation Time: 4:30 PM

Efficiently and Accurately Simulating Coupled Nonlinear Schrodinger Equations with Exponential Time Differencing and Fourier Spectral Methods, by Nathaniel Lovett

Mentor: Harish Bhatt

Utah Valley University

Presentation Time: 4:45 PM

Session D8: Humanities Oral Presentations, 3:30 PM in Keller Building (KB) Room 306

Practical Considerations for Creating Audio for Listening Tests, by Rafael Deo

Mentor: Matthew Wilcox
Brigham Young University
Presentation Time: 3:30 PM

The Many Names of Limahong: Remembering a Chinese Pirate in the Philippines, by William Martindale

Mentor: Diana Duan
Brigham Young University
Presentation Time: 3:45 PM

Ancestral Puebloan Ceramics Technology and Vessel Properties at Alkali Ridge Site 13, by Carolina Corrales

Mentor: James R. Allison
Brigham Young University
Presentation Time: 4:00 PM

Victor LaValle's Destroyer: Comic as a New Medium for Black Narratives, by Shauri Thacker

Mentor: Nicole Dib
Southern Utah University
Presentation Time: 4:15 PM

Theology and Prosperity of Women Within the Latter-Day Saint Church: Exploring Utah's Religiosity Effects On Feminism, by Alexis West Salinas

Mentor: Johnathan Chidester
Southern Utah University
Presentation Time: 4:30 PM

Session D9: Science/Engineering Oral Presentations, 3:30 PM in Keller Building (KB)
Room 344

Quantifying Approximation Errors in the Flash Thermal Diffusivity Measurement Technique Using High Fidelity Simulations, by Tage T Burnett, Jakob G Bates, Christopher R Dillon, Matthew R Jones

Mentor: Christopher R Dillon

Brigham Young University

Presentation Time: 3:30 PM

Measuring shear wave speed in tendons using low-cost accelerometers on a flexible PCB with an Arduino microcontroller, by Eli F Smith, Christopher Dillon, Matthew S Allen

Mentor: Matt Allen

Brigham Young University

Presentation Time: 3:45 PM

Reducing the Cytotoxicity of Polyethylene Glycol Diacrylate Microfluidic Devices Using an Isopropyl Alcohol Washing Method, by Parker Johns, Chandler Warr, Gregory P Nordin, William G Pitt

Mentor: William G Pitt

Brigham Young University

Presentation Time: 4:00 PM

Understanding the Microbiome, Chemistry and Physical Characteristics of the Coal Creek Drainage Basin, by Nathan Winters, Reed Schweighardt, Calton Millward

Mentor: Kim Weaver

Southern Utah University

Presentation Time: 4:15 PM

Arm Modeling in Preparation for Wearable Mobility-Enhancing Elbow Brace, by Samuel Stearman

Mentor: Jeff Hill

Brigham Young University

Presentation Time: 4:30 PM

Self-Deployable and Self-Stabilizing Satellite Array, by Aliya Bascom

Mentor: Spencer Magleby

Brigham Young University

Presentation Time: 4:45 PM

Session D10: Oral Presentations, 3:30 PM in Keller Building (KB) Room 346

The Repeated Use of Slurs In Class, by Zoë Beacham, Onon Harris, Mathias Amaya

Mentor: Megan Spurlock

Utah Valley University

Presentation Time: 3:30 PM

Unlocking Well-Being, Workplace Morale, and Employee Retention: A Tech Company's Success Story,
by Michaela Thackeray, Cicilee Petersen, Scott Wiltbank, Emma Newman, Enoch Thackeray

Mentor: Matt Draper

Utah Valley University

Presentation Time: 3:45 PM

The ABC conjecture and Mason's Theorem, by Juan Palencia, Tanner Probst, Clair Yeaman

Mentor: Machiel Van Frankenhuijsen

Utah Valley University

Presentation Time: 4:00 PM

Spatial visualization versus memorization differences among sexes in organic chemistry, by Derek Baker, Lauren Jensen, Dagny Goodfellow, Seunghwan Shin

Mentor: Guizella Rocabado

Southern Utah University

Presentation Time: 4:15 PM

Organic chemistry students' perceived costs and goal orientations, by Seunghwan Shin, Sydney Coates

Mentor: Guizella Rocabado

Southern Utah University

Presentation Time: 4:30 PM

Appendix: Accepted abstracts whose authors were unable to attend UCUR 2024

A Historiographical View of Originalism: The Evolution of Originalism to New Originalism, by Jaymon Roan

Mentor: Paul Kerry
Brigham Young University

Incorporation of American Clogging into the Dance Studio Setting, by Jillian Jarvis Iverson

Mentor: Karen Jensen
Brigham Young University

“Us Kids” vs. Them: X González and Weaponizing Youthfulness in Activism, by Luci Sullivan

Mentor: Jon Balzotti
Brigham Young University

Expanding the Lesion Network Mapping of Delusions, by Jared Nielsen, Austin Flitton, Cade Holdstock, Eli Baughan, Michael Ferguson, Fred Schaper

Mentor: Jared Nielsen
Brigham Young University

Dance and Body Image, by Taylor Davidson

Mentor: Karen Jensen
Brigham Young University

Effects of Post-Translational Histone Modifications on Transcription Rate, by Aaron Bohn, Luke Ramirez, Steven Johnson

Mentor: Steven Johnson
Brigham Young University

Emotional regulation and prosocial behavior, by Caroline Baldwin, Maleia Robinson, Adelaide Hunter

Mentor: Chenae Duerden
Brigham Young University

Using a Multi-Layered Design To Improve Nanocomposite High Deflection Strain Gauges, by Hadley Micheli, Spencer Baker, Cera Gowans, Ulrike H Mitchell, Anton E Bowden, David T Fullwood, Mckay

McFadden, Emma Bowden, Thomas Andrews
Mentor: Anton E Bowden
Brigham Young University

Recommendations for Addressing Depression among individuals living in long term care settings using a culture change approach, by Emily Lewis, Jessica Allen, Jessica Barney, Jeana Olmo, Fabianna

Stracuzzi, Jessica Clark
Mentor: Corinna Trujillo Tanner
Brigham Young University

Recommendations to Address Repetitiveness in People Living in Long-Term Care Settings Using a Culture Change Approach, by Jeana Olmo, Jessica Barney, Jessica Allen, Emily Lewis, Jessica Clark, Fabianna Lewis
Mentor: Corinna Tanner
Brigham Young University

Nursing Care of Older Adults with Dementia Related Combative Behavior: Recommendations to Foster Positive Outcomes in Long-Term Care Settings, by Emily Lewis, Jessica Allen, Jessica Barney, Jeana Olmo, Fabianna Stracuzzi, Jessica Clark
Mentor: Corinna Tanner
Brigham Young University

Recommendations to preserve autonomy and dignity among individuals in Long-Term Care Settings who decline personal care, by Emily Lewis, Jessica Allen, Jessica Barney, Jeana Olmo, Fabianna Stracuzzi, Jessica Clark
Mentor: Corinna Trujillo Trujillo
Brigham Young University

An Iterative Approach to Auto Indexing Historical Records: Evidence from the 1930 Mexico Census, by Joseph Price, Jackson Roubidoux, Robert Woodberry
Mentor: Joe Price
Brigham Young University

Gender-based mobility disparities: a literature review, by Molly Tolman
Mentor: John Salmon
Brigham Young University

Effects of Consolidation on Healthcare Prices: Evidence from Hospital Chargemasters, by George Smith
Mentor: Paul Eliason
Brigham Young University

Breaking from American Isolationism During the Franco-Prussian War, by Benjamin Rasband
Mentor: Paul Kerry
Brigham Young University

Dancing into the Future, by Makinley Butterfield
Mentor: Karen Jensen, Susan Morris
Brigham Young University

Emphasis on Commercial Dance at Brigham Young University: Bridging the Gap for Well-Rounded, Industry-Ready Dancers, by Lynnae Tumanuvao
Mentor: Karen Jensen
Brigham Young University

Measuring Local Thermal Properties with Thermoreflective Photothermal Methods, by David Leavitt, Alex Hansen, Thomas Andrews, Henry Wooley
Mentor: Troy Munro
Brigham Young University

The Impact of Dance Movement Therapy on Trauma Recovery, by Camille Litster
Mentor: Karen Jensen
Brigham Young University

For Such a Time as This: Interfaith Prayer in the U.K. Women's Suffrage Movement 1912-1914, by Grace Chipman
Mentor: Paul Kerry
Brigham Young University

Effects of electrostatic surface charge in electrowetting applications, by Madeline Ursenbach
Mentor: Nathan Crane
Brigham Young University

Dance Therapy in the Dance Studio, by KT Kossin
Mentor: Karen Jensen
Brigham Young University

The Stage-Oriented Treatment of Dissociative Identity Disorder, by Halle Schnackenberg
Mentor: Jared Warren
Brigham Young University

The Socioeconomic Impact of Interracial Parentage in the Early 20th Century, by Sam Eliason, Jacob Van Leeuwen
Mentor: Joe Price
Brigham Young University

Dance and Autism, by Annie Harris
Mentor: Karen Jensen
Brigham Young University

CD5: A Potential Method to Improve CAR T cell Therapy, by Cody McStraw, Carlos Moreno
Mentor: Scott Weber
Brigham Young University

The Need for Dance Movement Therapy for Dementia, by Sara Cruz
Mentor: Karen Jensen
Brigham Young University

Strength Training For Dancers, by Abbi Kelley

Mentor: Karen Jensen

Brigham Young University

Meaning in Emptiness: A Look at Cultural Negotiations and Identity Among Polynesian Immigrants in Japan, by Kaliopasi Uhi

Mentor: Greg Thompson, Jordan Haug

Brigham Young University

The Importance of Space in Building Community, by Hannah Slade

Mentor: Gregory Thompson

Brigham Young University

Dance is Manly: Changing the Stereotypes of Dancing Boys, by Mackay Butler

Mentor: Karen Jensen, Susan Morris

Brigham Young University

Training to Be Aware of Others: Sports, Respect, and Cosmopolitanism Tokyo, by Rhiannan Boseman

Mentor: Jordan Haug

Brigham Young University

Conversion, Relationships, and Identities: Searching the Asian Women of the Church of Jesus Christ of Latter-day Saints, by Madison Buckles

Mentor: Diana Duan

Brigham Young University

Cloud Based Penetration Testing in a Serverless Environment, by McKay Fawcett

Mentor: R Alexandar Nichols

Southern Utah University

The Perceived Monstrosity of American Black Male Childhood in Victor Lavalley's Destroyer, by Emily MacDonald

Mentor: Nicole Dib

Southern Utah University

Small Means to Happiness, by Danny Hatch, Julie Pynn

Mentor: Danny Hatch

Southern Utah University

Molecular Basis of Opioid Insensitivity in Frog Respiratory Neurons, by Michelle Tin, Adara Deniro, Ayako Yamaguchi

Mentor: Ayako Yamaguchi

University of Utah

A Case Study on Homeless Policy in the Greater Salt Lake Area, by Maddie Fuchs

Mentor: Jeff Rose

University of Utah

Analyzing inter- and intra-user variability of T1 reactivities for CAD assessment, by Creston Bettridge,
Johnathan Le, Edward Dibella, Ganesh Adluru

Mentor: Ganesh Adluru

University of Utah

Synthesis of Flexible Electrode Array, by Sanjana Aujla

Mentor: Simon Binder

University of Utah

Understanding Drivers of Chronic Wasting Disease Among White-tailed Deer in Northwest Arkansas,
by Diana Felipe, Elizabeth Warburton

Mentor: Elizabeth Warburton

Utah State University

Streamlining NEPA, by Steffen Rigby, Jennifer Morales

Mentor: Jennifer Morales

Utah State University

Natural UVA Light and Bird Window Collisions at Utah State University Classroom and Student Services Building, Brigham City, UT, by Tannon Merrill

Mentor: Jessica Habashi

Utah State University

A Mathematical Model of HPA Dynamics and Impacts of Alcohol Consumption, by Matthew Gergley

Mentor: Vinodh Chellamuthu

Utah Tech University

Thermodynamics Through a Hands-On Approach: A Refrigeration Lab Design, by Jordan Smith

Mentor: Russell Reid

Utah Tech University

Student-Created Patient Case Studies for Licensure Exam Preparation and Open Educational Resource (OER) Publication: A Collaborative Project, by Cynthia Reber, Emma Lanners

Mentor: Not applicable

Utah Tech University

Multivariate Statistical Analysis of Surface Water Quality in Southern Utah, by Bridger Farnsworth

Mentor: Md Sazib Hasan

Utah Tech University

Log4Shell: An In-depth Examination of a Pervasive Cybersecurity Threat in Enterprise Java

Applications, by William Casper

Mentor: Sayeed Sajal

Utah Valley University

Determining the Human OC43 RNA Structure using DMS-MaPseq, by Ethan Cox, Gabriel Romero, Dr.

Rouskin

Mentor: Daniel Horns

Utah Valley University

The Merger of Blockchain and Cybersecurity: Opportunities and Challenges Ahead, by Cassidy Jensen

Mentor: Sayeed Sajal

Utah Valley University

Measuring Password Strength: A Study of Digital Password Policies from Large Corporations, by

Dallon Monson

Mentor: Sayeed Sajal

Utah Valley University

Encryption Concerns with Quantum Computing and the Rise of Quantum-Resistant Encryption

Algorithms, by Ryland Freeman

Mentor: Sayeed Sajal

Utah Valley University

Classical vs Modern Architecture: Exploring Aesthetic Contrasts, by Kent Ips

Mentor: Brandon Ro

Utah Valley University

Hacking Wifi Basics, by Julianna Fotheringham

Mentor: Sayeed Sajal

Utah Valley University

Moments of Perfection, by Sabrina Nilson

Mentor: ALEXANDRA GIANNELL

Utah Valley University

Broken Access Control Vulnerabilities and Prevention, by Jeremiah Engel

Mentor: Sayeed Sajal

Utah Valley University

Broken Access Control: A Rising Security Concern for the Post-Covid World, by Kosuke Kobayashi

Mentor: Sayeed Sajal

Utah Valley University

The Prevalence of SQL Injection, by David Adamson

Mentor: Sayeed Sajal
Utah Valley University

Risk of Misconfiguration, by Nathan Smalling

Mentor: Sayeed Sajal
Utah Valley University

Political Cyber Attacks, by Garrett Christensen

Mentor: Sayeed Sajal
Utah Valley University

Negotiated Data, by Emily Burch

Mentor: Sayeed Sajal
Utah Valley University

Revolutionizing Sustainable Architecture: Biomimicry and Digital Tools, by Jean Claude Coomer

Mentor: Brandon Ro
Utah Valley University

The Effect of Data Breaches in Modern Day Business and Media, by Daniel Wilsher

Mentor: SAYEED SAJAL
Utah Valley University

Analytique of Memory Grove Park Pagoda, by Davis McDermott

Mentor: Ben Felix
Utah Valley University

Programing Robotic Arms for Use in IPSII Imaging, by Pedro Del Valle, Dallin Durfee

Mentor: Dallin Durfee
Utah Valley University

Covering our Digital Assets: An In-Depth Analysis of Data Breaches and Their Countermeasures, by

Justus Owen
Mentor: Sayeed Sajal
Utah Valley University

Navigating the New Norm: Ensuring Data Privacy and Cybersecurity in the Era of Remote Work, by

Mark Carroll
Mentor: Sayeed Sajal
Utah Valley University

Integration of AI and Radio Frequency Data Encryption, by Victoria Marques

Mentor: Sayeed Sajal
Utah Valley University

Quantum Computing: Is It Really Going To Break Cybersecurity?, by W. Byron Major

Mentor: Sayeed Sajal

Utah Valley University

Biometric Authentication Risks and Secure Data Storage for Biometric Templates, by Alexandria

McOmber, Sayeed Sajal

Mentor: Sayeed Sajal

Utah Valley University

The World In Your Chair, by Remington Hinton, Oakley Holmes, Taylor Calder

Mentor: Jodie Lopez

Utah Valley University

Sophisticated Spear-Phishing Strategies, by Morgan Molyneaux

Mentor: SAYEED SAJAL

Utah Valley University

What Makes a Password?, by Joshua Gray

Mentor: Sayeed Sajal

Utah Valley University

Security in the World of Cloud Computation, by Ammon Price

Mentor: Sajeed Sajal

Utah Valley University

Universal GPS Spoofing Detection, by Tyler Henry

Mentor: Sayeed Sajal

Utah Valley University

Cybersecurity in Digital Payments and its Effect on People, by Dlego Sigaran

Mentor: Sayeed Sajal

Utah Valley University

Investigating the role of machine learning in intrusion detection, by Carter Baxter

Mentor: Sajal Sayeed

Utah Valley University

Shift in Pediatric Concussion trends in Emergency Departments due to the COVID-19 Pandemic, by

Vonda Wright

Mentor: David Rallison

Utah Valley University

Taming the Hydra: Addressing Enterprise Security Tool Sprawl for Enhanced Cybersecurity Efficacy, by Andrew Moscrip
Mentor: Sayeed Sajal
Utah Valley University

Unveiling the Data Brokerage Industry: Know Thy Data, Control Thy Privacy, by Arza Henrie
Mentor: SAYEED SAJAL
Utah Valley University

Dangers of SQL Injections, by Michael Crowther
Mentor: SAYEED SAJAL
Utah Valley University

How Data Regulation will affect the Future of Security, by Corbin Folkman
Mentor: Sayeed Sayeed
Utah Valley University

Biometric Authentication Methods: Vulnerabilities and Risk Management, by Eden Barlow
Mentor: Sayeed Sajal
Utah Valley University

Security Concerns Raised by the "Internet of Things", by Jeffrey Mordecai Smith
Mentor: Sayeed Sajal
Utah Valley University

Bringing Order to Discord: How Discord Moderators Handle Server Attacks, by Simon Smith
Mentor: Sajeed Sajal
Utah Valley University

Quantum Computing: It's effects on cybersecurity and what its being done to deal with it, by Michael Hughes
Mentor: Sayeed Sajal
Utah Valley University

The Effectiveness and Faults of Privacy Laws, by Megan Black
Mentor: Sayeed Sajal
Utah Valley University

SQL Injection Detection using Machine Learning, by Jordan Miller
Mentor: Sayeed Sajal
Utah Valley University

Systematic Review of Literature in School Health in Developing Countries, by Sierra Phillips
Mentor: Melinda Barber
Utah Valley University

Burnout in Dental Hygiene, by Brendan Cannon, Katelyn Allen, Kara Poulson
Mentor: Jodie Lopez
Utah Valley University

AI Scams in the Digital Age, by Blake Johnson
Mentor: Sayeed Sajal
Utah Valley University

Spear-Phishing Attacks: Assessing Global Preparedness, by Jaden Albrecht
Mentor: Sayeed Sajal
Utah Valley University

AI Impacts on Biometric Security, by Isaac Johnson
Mentor: Sayeed Sajal
Utah Valley University

Legions of Rome, by Savannah Brady
Mentor: Stevie M Munz.
Utah Valley University

Conducting laser physics labs using compact USB spectrometer, by Tensor Elmikawy, Alexander Panin
Mentor:
Utah Valley University

We Are Not Broken, by Kaia Lane
Mentor: Alexandra Giannell
Utah Valley University

Survey Experiment on Climate Change Policy Framing, by Jared B Medlyn
Mentor: Kal Munis
Utah Valley University

Empowering female students in higher education: An In-Depth Exploration of Needs, Expectations, and Challenges, with a focus on learning disabilities, by Anna Titcomb
Mentor: Yi Yin
Utah Valley University

Validating an Updated Protocol for Predicting the Structure of HIV-RRE, by Ethan Cox, Gabriel Romero Agosto, Silvi Rouskin
Mentor: Daniel Horns
Utah Valley University

Political Framing and Zoning Reform: Measuring the Efficacy of Anti-California Rhetoric, by Brittain Corbett

Mentor: Kal Munis

Utah Valley University

Factors that Influence the Public's Support of Ex-Convicts' Reintegration Into the Workforce, by

Jessica McOmber, Mikelle Dahl

Mentor: Kal Munis

Utah Valley University

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by Ismael Cabadas, Alyssa Elizalde

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Sawyer, Ismael Cabadas, Amelia Doman, Carli Oyler

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by Austin Baldwin, Joshua Lothringer

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