

# Western Regional Honors Council Conference



“

vision without  
execution is  
hallucination

– Thomas Edison

A special thank you to the 2020  
conference planning team:

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# Accepted Conference Proposals

## Brigham Young University

### **Madison Allred**

#### ***Dictators Employing Memorialization in the Human Landscape: A Case Study on Saddam Hussein's Regime, 1979-'03***

If dictators use memorialism to build nationalism, can memorialism be used preventatively in fractured states to prevent the rise of potentially bloody dictatorial regimes?

### **Abby Clayton**

#### ***Who Owns the Bard?: Barnum, Dickens, and the Shakespeare Birthplace Showdown of 1847***

I spent the summer of 2019 working at the Shakespeare Birthplace Trust in Stratford-upon-Avon, England. My interest in Victorian cultural studies led me to investigate this rumor about the history of the birthplace. I went on to sleuth through collections of printed ephemera across England, piecing together this account and argument that has been overlooked by cultural historians.

### **Drew Dowling**

#### ***Building Smart Air Quality Aware Systems using Smart Thresholding***

This project aims to help make air quality sensors more "smart" by adding thresholding capabilities. These thresholding methods can turn on and off a smart air purifier in order to save power.

### **Aspen Greaves**

#### ***Women in the Early Mongol Empire: Archetypes and Gender Roles***

Mytho-historical sources from the early Mongol Empire are too often interpreted without consideration for the decisions and lives of women. A feminist archetypal analysis shows four archetypes that these women fulfill, and how these archetypes, both negative and positive, are perpetuated.

# Accepted Conference Proposals

## **Sam Heywood**

### ***Forgetting the Mine Wars: The Erasure of Insurrection in West Virginia***

The West Virginia Mine War was the largest and most violent insurrection in the United States since the Civil War. Why is it not being taught in the schools of the Mountain State?

## **Rebekah Pimente**

### ***Understanding the Women of the Aeneid through Homeric Similarities***

Drawing on the parallels between Homeric epics (the Iliad and the Odyssey) and Vergil's Aeneid, we can see how Vergil lets his female characters accelerate the plot. It is because of the women Aeneas encounters on his journey to his destiny that he becomes the mythic founder of the Roman Empire.

## **Jacob Price**

### ***Revisiting Just War Theory: Considering the Use of Special Operations***

The principles of Organizational Unity and Preventability will help assessing and improving the ethical and institutional justification for the use of Special Operation within modern conflict.

## **California State Polytechnic University, Pomona**

## **Marina Alvarado**

### ***Health and Well being of First-Generation Undergraduate Student Leaders***

This project identifies the ways in which first-generation student leaders at Cal Poly Pomona prioritize their time, health, and well being, specifically how being a first-generation college student influences that decision making process.

# Accepted Conference Proposals

## **Sydney Ghazarian**

*Site-directed mutagenesis of B345: Effects on host ESCRT recruitment by STIV.*

This study focuses on archaea and the viruses that infect them. Specifically, we study the archaeal virus Sulfolobus turreted icosahedral virus (STIV).

## **California State University, Bakersfield**

### **Alisa Iduma**

*Beyond Classroom Perspectives: How Study Abroad Helps Students Navigate Life*

My partner Klarisse Vela and I will be giving a short speech. This will be followed by a video showcasing our study abroad programs and the interviews we conducted of other study abroad students.

## **California State University, Los Angeles**

### **Hatya Khanooki**

*"Justice Is an Inside Revolution"*

"Justice Is an Inside Revolution," it is an inner inspiration like a sparkling flame until it makes a huge difference. Internal change and progress are like breaking the glass ceiling and moving towards a brighter and more colorful future.

### **Klarisse Vela**

*Beyond Classroom Perspectives: How Study Abroad Helps Students Navigate Life*

My partner (Alisa Iduma) and I will be giving a short speech. This will be followed by a video showcasing our study abroad programs and the interviews we conducted of other study abroad students.

# Accepted Conference Proposals

## Central Arizona College

### **Stacie Burns**

#### *Financial Literacy and Education*

I am researching the effects of obtaining financial literacy during primary education prior to graduation, versus not getting that education and how that education helps to make better financial choices.

### **Rebekah Calvert**

#### *Technology integration in schools*

I have sought out the best practices for incorporating effective technology methodologies, while minimizing burdensome costs for teachers.

### **Tisha Castillo**

#### *US Dietary Guidelines are Making Us Sicker & Fatter*

You may not think that the dietary guidelines affect what you eat, but they do. If you attend school, are in the military, go to the hospital, live in a group or nursing home, ask a doctor or medical professional for nutritional advice, join a diet program, receive federal assistance or shop at your local grocery store, the guidelines are dictating what you eat. And by following these guidelines Americans are getting sicker & fatter.

### **Hollye Fielder**

#### *Tales Mummies Tell*

The field of Paleopathology studies infectious microorganisms which can be obtained from the tissue of ancient Egyptian mummies. These studies help understand and treat conditions such as heart disease, bladder cancer, and other diseases we face today.

# Accepted Conference Proposals

## **Skyler Wyly**

### ***Applied Growth Mindset***

The concept of a growth mindset seems to be something everyone has heard of—yet how many people are applying this idea?

## **Central Washington University**

## **Katharyn Curry**

### ***Fear Mongering and the Environment***

A presentation on the importance of looking to the past before the world solves the environmental problems of the future.

## **Savannah Fields**

### ***A Cost-Benefit Analysis on Nativescaping for a Cold Desert***

Comparing the costs and benefits of landscaping with lawns and imported plants and landscaping with drought-tolerant native plants. Research conducted with the City of Ellensburg and Central Washington University by changing their current landscape policies.

## **Emma Houghton**

### ***Mary Cynthia Dickerson: A Forgotten Female Herpetologist***

Mary Cynthia Dickerson (1866-1923) was a museum curator and herpetologist for the American Museum of Natural History who battled sexism in order to produce a comprehensive guide of the known toads and frogs of the Northeastern United States entitled: "The Frog Book: North American Toads and Frogs with a Study of the Habits and Life Histories of Those of the Northeastern States". Her work contributed to the foundation of herpetological research in the United States, however she is absent from the majority of historical documents.

# Accepted Conference Proposals

## **Aletha Kleis**

### ***An Analytical Examination Of Vegetarian and Omnivorous Diets on Health***

There is a lack of research regarding how following a vegetarian or omnivores diet effects inflammation levels of people as seen through results from an analysis of data gathered from the National Health and Nutrition Examination Survey (NHANES). This project takes a data driven approach to discover the link between what a person eats and their health.

## **Thomas Ortega**

### ***Beethoven Clarinet Trio In B-Flat Major Opus 11***

Beethoven Trio no.4, "Gassenhaur." Reagan Nguyen, piano; Rebekah Janway, clarinet; Thomas Ortega, cello. A study of early Beethoven as an appreciation of retrospect without reliance thereupon.

## **Chapman University**

## **Natalie Brown**

### ***An Investigation Into the Real Reasons Behind Segregated Bathrooms***

Have you ever wondered why there is a longer line for the ladies' room? Hint: It isn't because anyone takes longer than another.

## **Dylan Holder**

### ***Religious and Cultural Perspectives on Organ Donation***

People's decisions on organ donation stem primarily from their religious and cultural views. This project outlines the cultural implications of religious views of Christianity, Islam, Jehovah's Witness, and Shinto faith on organ donations.

# Accepted Conference Proposals

## **Kylie Miller**

### ***Beyond Just Borders: An Alternative Analysis of the Meaning of Sovereignty and Its Policy Implications***

This presentation will interrogate the traditional concept of sovereignty as being tied to territory and will analyze policies related to the concept of sovereignty through alternative lenses. By redefining the term it may become possible to create policies that more accurately reflect reality in an increasingly globalized world.

## **Priya Mistry**

### ***Comparative analysis of hyperosmotic stress-mediated modulation of cytokine gene expression in human conjunctival and corneal epithelial cells***

Our research demonstrates that an increase in osmolarity could cause release of proinflammatory cytokines on human ocular surface epithelial cells, which would contribute to the ocular surface damage associated with dry eye.

## **Hayley Nelson**

### ***TikTok: Entertainment as International Relations***

TikTok is a popular short-form video app in both The People's Republic of China and the United States of America. This project examines the political relationship between the countries, and how that relationship might change as the popularity of the app increases.

# Accepted Conference Proposals

## **Elyse Runkle**

### ***Sex in Film: How what we see on screen informs gender dynamics***

Women are consistently cast in roles that are less substantial and sophisticated than their male counterparts. I will analyze how these characterizations either contribute to existing gender norms or challenge them in the modern day. I will examine films that draw a large fanbase and therefore have the capacity to impact society (“Fifty Shades of Gray,” “Booksmart,” “Wolf of Wall Street”) and TV shows (“Game of Thrones,” “Sex and the City,” and “The Girlfriend Experience”). Sex is uniquely prominent in these films and TV shows. The portrayal of female autonomy embodied in these sexual encounters bleeds not only into how women perceive themselves and their sexual autonomy but also into how they are perceived by others.

## **Pippa Russell**

### ***Bestiaries and The Lion King: The Long-Lasting Impact of Medieval Comics***

The powerful imagery of bestiaries has had a long lasting effect that persists to this day through modern literature and films. If one considers bestiaries a form of comic, then we can use the incredible persistence of bestiary tales as a possible model for the cultural influence of today’s comics.

## **Shreya Sheth**

### ***Displaced by Cyberspace: Cyber-borders Curbing Human Rights for Rohingya Refugees***

Governments in Myanmar and Bangladesh are imposing ‘cyber-borders’ in order to border off Rohingya refugees from the local populations. This presentation discusses the changing nature of bordering practices from physical borders to cyber-borders, to explain that imposing cyber-borders, through largely internet shutdowns, obstruct human rights and transcend beyond justifications for security.

# Accepted Conference Proposals

## **Corinne Tam**

### ***Tiger Moms, Dragon Dads, and Baby Pandas: Cultural Expectations of Success Among Asian-American College Students***

This interview-based project asks, How do college-aged Asian-Americans deal with expectations of success in a contemporary society that presents them with pressures of having to return home due to financial instability? I argue that Asian-Americans go through emerging adulthood with extra pressures due to their racial identity.

## **Colorado School of Mines**

## **Jason Ganley**

### ***Development of an Honors Track in Chemical Engineering***

This presentation describes the aspects and the curricular design of an undergraduate Honors Track for the Chemical Engineering Bachelor of Science Degree at the Colorado School of Mines.

## **Wyatt Hinkle**

### ***Addressing Student Reality: the Effects of Campus Culture on Student Wellness***

This project investigates impostor syndrome, the false sensation of inadequacy and not belonging, at the Colorado School of Mines, a STEM university. The presentation focuses on the ways campus culture can contribute to the phenomenon, as well as how it can be combated.

## **Tori Marbois**

### ***Your Inner Identities: They Are Not Who You Think They Are***

We can take advantage of the creative freedom in honors curriculum to emotionally explore the parts of ourselves we reject. Making peace with our inner identities cultivates mental harmony that gives us energy and focus to pursue more joyful and successful lives.

# Accepted Conference Proposals

## **Susan Reynolds**

### ***From Trailhead to Summit***

“From Trailhead to Summit” uses mountain trail imagery to show prospective students that honors can be a portal to their future. The simple metaphor of life’s climb has been customized to the Colorado School of Mines, featuring graphic references to the foothills surrounding campus and the iconic “Welcome to Golden” sign.

### ***GPS-Based, Dynamic, Geophysical Mapping***

GPS-based, dynamic, geophysical mapping has been added to City as Text- (CAT) to aid in more robust interdisciplinary and integrative learning. This poster is intended to provoke conversations on digital modalities for CAT and to share step-by-step procedures which may be adapted by faculty at other institutions.

### ***An Experimental Lattice Structure for Collaborative and Interdisciplinary Teaching Teams***

An experimental course structure fosters increased interdisciplinarity between disparate disciplines and promotes cross-pollination through a lattice of course meeting times, section sizes, and space allocations. Despite the model’s complexity and initial challenges, the experimental structure has largely been successful and may serve as a model for other institutions with similar aspirations.

## **Cypress College**

## **Nguyen Tran**

### ***National Interest vs. Global Ethic: “Made in China 2025” at the Expense of the World Economy***

“Made in China 2025” signifies the hustle of China’s government to rid of past problems through direct interventions in the economy. However, this dependence on the past reveals the drawback that distorts the global market and provokes trade conflicts, thus exacerbating the world economy.

# Accepted Conference Proposals

## Dixie State University

### **McKelynn Barber**

#### ***In That Which We Cannot See***

This piece was created with the intention of creating a reflective state of one's interaction with beauty in objects that possess apparent beauty and experiences that are laced with beauty presented in a less conventional fashion.

### **Dresdan Quackenbush**

#### ***An Analysis and Consideration of Allowing Euthanasia for Criminals***

A written artifact concerning the consideration of allowing euthanasia for criminals. It examines the philosophies and dilemmas that surround the euthanasia debate.

### **Lindsey Stutman**

#### ***Veterinary Medicine & Public Health: Overlaps and Oversights***

Antibiotics: the intersection of veterinary medicine and public health.

### **Noelle West**

#### ***A Mathematical Model of West Nile Virus: The Effects of Passive Immunity in Birds and Vertical Transmission in Mosquitoes***

Our work is a mathematical model of West Nile Virus that includes passive immunity in birds and vertical transmission in mosquitoes, an addition that has never been considered before in mathematical modelling of West Nile Virus. This work is imperative to controlling the spread of West Nile Virus to birds and humans in the United States.

# Accepted Conference Proposals

## **Noelle West**

### ***Promoting Feminism in STEM: Exploring the Disenfranchisement and Discouragement of Women in STEM***

The disenfranchisement of women in STEM fields is ongoing and detrimental to the future success in these fields. We have analyzed the works of feminists such as Valerie Solanas and Sara Hottinger in order to highlight the destructive nature of male-centered hierarchies and structures in STEM and promote change in these fields.

## **Eastern Washington University**

## **Danica Jenck**

### ***Philosophy of Urinetown***

The project is focused around my experience studying abroad and looking at ways to address social issues that are still present today. Using the Holocaust as a focal point, I will discuss the importance of continuing to teach history, while also discussing the dangers of idolizing people in the past.

## **Hope Sands**

### ***Examining the Physical Realm of History Through the Holocaust***

The purpose of this NCHC Portz Fellowship and NASA Arizona Space Grant Consortium funded research is to conduct the first preliminary design, manufacturing, and testing of a cube satellite compliant, SPT type Hall thruster on the Embry-Riddle Aeronautical University campus. The exploratory design will focus exclusively on synthesizing a procurable and realizable plasma accelerator stage.

# Accepted Conference Proposals

## Embry-Riddle Aeronautical University

### **Alexis Hepburn**

#### *Preliminary Design of a Cube Satellite Compliant Hall Thruster*

The purpose of this NCHC Portz Fellowship and NASA Arizona Space Grant Consortium funded research is to conduct the first preliminary design, manufacturing, and testing of a cube satellite compliant, SPT type Hall thruster on the Embry-Riddle Aeronautical University campus. The exploratory design will focus exclusively on synthesizing a procurable and realizable plasma accelerator stage.

## Estrella Mountain Community College

### **Anastasia Martinez**

#### *Home Aquaponics System*

I am taking the research I have done on aquaponics and using it to build my own system. I will be taking samples and data collection to find the best possible method for my design.

### **Nancy Rojas-Garcia**

#### *The Impact of Sexism and Self-Esteem on Leadership*

Considering sexism, self-esteem, and group processes in relation to individuals' leadership aspirations and beliefs

### **Cerah Schaffer**

#### *Animatronic Bird*

An animatronic bird that can move its head and stretch and flap its wings.

# Accepted Conference Proposals

## Fort Lewis College

### **Alyssa Begay**

#### ***Anarcha-Feminism: Beyond the Misconceptions***

My poster explores how anarcha-feminism works as a force against all forms of oppression and what aspects were evident throughout the three waves of feminism. Understanding what anarcha-feminism is, will provide insights of the movements that strove for true liberation for all and what potential it could have for other movements today.

### **Spencer Busick**

#### ***Motivational Interviewing for at-risk youth mentors***

Motivational interviewing is a non-directive, client-centered counseling technique originally purposed for eliciting behavior change among ambivalence that emphasizes collaboration as well as evoking the client's strengths and motivation for changing behaviors. My poster presentation covers training motivational interviewing to a group of mentors working with at risk youth.

### **Brooke Hampton**

#### ***Encouraging Creative Problem-Solving Skills in K-12 Classrooms***

In my project I argue that creative activities are key to K-12 students' success and explore ways to integrate creative problem-solving tools into everyday school curricula.

### **Josh Lingbloom**

#### ***Human Migrations as a Response to Arroyo-cutting on the Colorado Plateau***

This project assesses the strength of the correlation between arroyo-cutting events and their effects on prehistoric human migration patterns on the Colorado Plateau.

# Accepted Conference Proposals

## **Julian Maissel**

### *Why do Some Terrorist Threats Receive More Attention Than Others?*

Fighting terrorism is the number one priority of the FBI, but white nationalist mass murders are not taken as seriously as Islamist terrorism. Using FBI documents, I argue that racism and an effort to stifle political dissent are the causes of this dangerous lack of concern.

## **Kathryn Smith**

### *Dionysus at the Apollo*

My project is a historical and sociological analysis of Hip-Hop music's propensity for both boundary-breaking and boundary-making.

## **Christina Stanton**

### *Confessions of a Cradle Catholic: A Memoir*

Through the use of many of the same writing techniques found in fiction, memoirs are an effective and creative outlet for relatable and honest stories. My presentation focuses on my own memoir, which explores my conversion experience within the Catholic Church, especially during my high school years.

## **Gateway Community College**

## **Anisa Afkhami**

### *Diversity: (noun) A New Approach for Future Leaders*

This project will explain why accepting challenges, changing our views on perspectives, and using these changes helps bring diversity in the business industry and reduces our dependence on retrospective clarity. As a reference in my Honors Project, the project will explain how these ideas and techniques can help leaders focus more on current and future perspectives and help decrease the chance to replicate mistakes.

# Accepted Conference Proposals

## **Nylah Anderson**

### ***Passing Your CNA Exam the First Time, Rather Than the Third***

Two approaches for increasing the number of students who pass the CNA exams on their first attempt by taking more perspectives of the exam.

## **Maria Flores**

### ***The Art of Storytelling and it's healing properties***

The story of "La Llorona" is a widely known story in Hispanic households. Do you know the true story? My story provides an alternative version of the widely known story with the goal of it providing a sense of understanding but most importantly it has therapeutic properties.

## **Dhanak Kainaat**

### ***Distillation, Molar Ratio, and Nuclear Magnetic Resonance***

According to a statement from FDA, blood pressure medicine was not purified. Without purifying medication, you can't sell it in the market. On March the 7th drugs like Valsartan, Losartan and other BP medicines were recalled. "Federal investigators discover potentially cancer-causing impurities in them." (WebMD, 2019) The root cause of the impurity was distillation. "When these impurities are identified, there are ways to re-engineer manufacturing processes to find pathways that don't create these by-products." (FDA, 2018). In the lab we learned that distillation is a process by which purer substances are achieved. Drugs can only be sold when they are fully purified. To confirm that a drug has no impurities, or at least 98% pure, NMR is used to confirm the trace of impurities. These two examples illustrate the importance of efficient purification techniques.

## **Angelina Montano**

### ***Workplace Culture in Today's Culture***

I will be providing an oral presentation. With this I will possibly also provide PowerPoint slide presentations along with the oral speech. I will be discussing the importance of culture in the workplace and describe how it can be implemented. This will entail the pro's and possible con's in addition to elaborating as to what culture is .

# Accepted Conference Proposals

## **Marissa Sands**

### ***Avoid reinventing of the wheel by reading as many proofs as possible***

We look at known formulas for Pythagorean Triples in an effort to discover new formulas for Pythagorean Triples. In this way you know what is already known, and are more likely to produce a novel idea.

## **Young Thornton**

### ***Expanding the pool of stakeholders in the pursuit for breakthrough treatments ultimately leading to the cure of Sickle Cell Disease***

We can dramatically increase our chances for curing this deadly disease by expanding the number of stakeholders, who could give this disease priority through the power of social media, international chat rooms, and daily patient logs uploaded by the sufferers themselves. This oral presentation would take a glimpse at the possibility of humanity rising together to find a cure for an international disease.

## **Idaho State University**

## **Joe Effingham**

### ***Got Bone?: Building Networks Between Forensic Anthropology and Law Enforcement in Rural Intermountain West, Idaho***

Law enforcement (LE) in the Intermountain West face unique challenges in search and recovery of skeletal remains.

## **Zachary Fishburn**

### ***What Variables Predict the Rate of Pace Decline in Men and Women in 100-mile Ultramarathon Races?***

Because 100-mile ultramarathon races are becoming increasingly popular, athletes and their coaches are interested in determining what factors influence race performance. This study addresses some variables commonly thought to be associated with the rates of pace decline among men and women and to what extent these variables explain their performance.

# Accepted Conference Proposals

## **Trinity Hammond**

***The Functional Neuroanatomy of Motor Performance & Neuroplasticity to Increase Athletic Performance Through Mindfulness Training; A Review.***

A meta-analysis on mindful meditation in athletics and how it positively contributes to the performance of the players. The project will be presented on a poster to show the progress of the research and where the research will hopefully end.

## **Zakarie Macpherson**

***Analysis of Antiquated Aviation Systems Using Modern Methods***

Using SolidWorks, the compressor section of a Westinghouse J34 turbojet engine was modeled and simulated to obtain theoretical values associated with compression and efficiency.

## **Adriene Pavek**

***Sphingomyelin synthase inhibition in sarcomas results in ceramide accumulation and apoptosis***

The natural marine product, jaspine B, was tested as a cell targeted therapy for connective tissue cancers.

## **Dustyn Walton**

***Relationship Between Physical Activity and Executive Function in Older Adults of Southeastern Idaho***

This project evaluates the relationship between exercise intensity, as measured by accelerometry monitors, and cognitive performance in older adults. The discussion will focus on how we, as a society, can shift our focus to promoting physical activity not only for the physical health benefits, but also for cognition benefits.

## **Metropolitan State University of Denver**

# Accepted Conference Proposals

## **Jared Dubiel**

### ***New Frontiers In Understanding Human Behavior***

This project will be an overview of evolutionary psychology and its relationship to evolutionary theory. It will evaluate evolutionary psychology on its ability to contribute to a better understanding of human nature.

## **Amy Bowman**

### ***The Importance of Safety Expertise in High School Theater***

Not commonly known, many high school theaters do not instill safe working practices regarding a set's structural integrity, materials used, and general safe building practices. I plan on conducting interviews with different high school theater teachers in their successes and struggles with incorporating safety in their theaters and to make this information accessible to other educators.

## **Olivia Czarnecki**

### ***Community Land Trusts- Then and Now***

This presentation will examine the history of community land trusts (CLTs) and their contemporary impact, and will address common concerns around the CLT model. The first CLT, New Communities, Inc. and Elevation Community Land Trust, one of the first statewide CLT's in the country, operating out of Denver, will be highlighted.

## **Anna Erickson**

### ***Spacial Rhetoric and Design***

By linking the ideas of rhetoric and design, both disciplines can understand their own theories and principles in a new light. Once there is new understanding, designers and rhetoricians can work together to create more meaningful objects and spaces.

# Accepted Conference Proposals

## **Elizabeth Henderson**

### ***The Environmental Implications of Building a US-Mexican Border Wall***

This piece is an evaluation of the Environmental and Economic impacts of building a US-Mexican border wall.

## **Colton Lee**

### ***The Infinite Predicate of god***

God has been referred to as infinite, with various intended meanings. These various meanings will be explored.

## **Sophia Nem**

### ***Early Detection of Acral and Subungual Melanoma: A Proposal on Patient Education Protocol for Increasing Awareness and Referral Patterns in Nails Salons***

Acral melanoma and its subungual variant are both rare forms of cutaneous melanoma that can affect the hands, feet and nails. Difficulty in identification and misdiagnosis commonly leads to a delay in early detection responsible for its advancement. This thesis explores general patient knowledge of acral and subungual melanoma in the development of a patient education protocol intended for use by nail professionals in an attempt to increase referral patterns and aid in early detection.

## **Kelsey Percival**

### ***The Significance of the Misunderstood Monster in Children's Film***

Despite the natural tendency to shelter children from fear, horror film—when certain inappropriate elements are omitted—can be enjoyable and instructional for children. With the presence of misunderstood or redeemable monsters in these films, children are taught the consequences of Othering, and the value of diversity and multiculturalism.

# Accepted Conference Proposals

## **Dylan Poch**

### ***Novel Electrochemical DNA Biosensors for the Detection of Pathogenic Nontuberculosis Mycobacteria (NTM)***

Due to the rapidly growing global health crisis caused by pathogenic Nontuberculosis Mycobacteria (NTM), the need for rapid diagnostics and subsequent treatment has never been so imperative. Here, we propose an electrochemical DNA-based biosensor that could be used for NTM identification in both patient and environmental samples.

## **Liam Price**

### ***Vowels and Culture: A Sociophonetic Analysis of Ch'orti' Mayan***

This is a sociophonetic study of Ch'orti', a Mayan language spoken in Guatemala.

## **Chance Rich**

### ***Weak Men Breed Weak Virtues***

The wheels of history are greased in blood yet contemporary society continues to praise and breed weakness, this present predicament has been foreshadowed in the analyses of influential thinkers such as Nietzsche, Weber, and Freud. In this paper, I will offer a concrete methodology for addressing contemporary ills (modern virtues and mass media) and offer a genealogy of morality (good and bad are subjective, there is no such thing as human progression) by examining the development of technology, and other modern vices; (instantaneous) transmissibility has replaced (inherited) aura.

# Accepted Conference Proposals

## **Anna Sanchez**

### ***Anxiety***

The American Psychological Association found that “12% of millennials have an officially diagnosed anxiety disorder—which is nearly double the percentage of baby boomers” (Garden of Life). Through my research, I expect to find data showing that anxiety has increased drastically in recent decades, and that due to the various stressors that were not present for previous generations, I expect to see Millennials with the highest rates of anxiety. I will answer the following questions: What is anxiety? How does it occur? Why do so many people have it? How does anxiety shift between generations? What does it feel like?

## **Brianna Simmons**

### ***Hyperbaric Oxygen Therapy: An Overlooked Treatment with Traumatic Brain Injuries***

Hyperbaric Oxygen Therapy (HBOT) can improve the overall health of those affected by traumatic brain injuries. This form of treatment uses pure oxygen at one atmospheric level, which helps to promote repair to the damaged tissue through oxygenation, growth development can occur for new tissue and aids in fighting infections.

## **Andrew Smith**

### ***Rapid and Affordable Diagnostic Methods Against Carrion's Disease***

Carrion’s disease is an infectious disease which affects mainly rural, impoverished populations in Northern Peru, Ecuador, and Colombia which is difficult to treat due to a lack of available, accurate diagnostic methods. We are developing an E-DNA biosensor which will be capable of detecting the etiological agent, Bartonella bacilliformis, even in patients with low bacteremia.

# Accepted Conference Proposals

## **Nicholas Sundstrom**

*Can Golf Lessons Help Save the Environment? The effects of various aqueous conditions on golf ball degradation.*

The objective of this project is to identify which imitated, natural aqueous condition(s) produce measurable degrees of degradation in modern plastic-based golf balls.

Understanding the extent of the physical or chemical degradation will aid further research to determine if aqueous ecosystems are affected by said degradation.

## **Brianna Winkler**

*Evaluation of Writing Center Use, Growth Mindset, and Help-Seeking Behavior in STEM and Honors Students*

Writing Centers are excellent resources for all manner of people at all levels of learning, but Honors and STEM students do not use the Writing Center as much as other students.

This research project examines why, as well as how growth mindset and help-seeking behaviors are factored in.

## **Mount Saint Mary's University**

### **Isabel Bustos**

*Using Social Work Values to Promote Voter Participation*

This study was conducted to inform undergraduate social work students' voting practices in national and local elections.

### **Nayeli Dominguez**

*The Ugly Face of the Media: Creating Psychological Trauma on Immigrants Families*

The purpose of this thesis was to investigate how the media creates trauma to immigrant families facing deportation situations.

# Accepted Conference Proposals

## **Angel Iwuoma**

### ***What Is It Like to be a Correctional Nurse? Work Experiences of Correctional Nurses***

Novice nurses who enter correctional nursing are often unfamiliar with or ill-prepared to deal with challenges inherent to correctional facilities due to the lack of coverage in nursing school and media. This proposed study aims to understand correctional nurse work and experiences.

## **Itzel Macedo**

### ***The Barriers of Deferred Action of Childhood Arrivals Latino Recipients on Obtaining Higher Education***

Latino DACA recipients endure significant barriers that limit their success in pursuing higher education. Through the knowledge of these barriers, higher education institutions have implemented resources specifically to these recipients to help them achieve success and a sense of stability in our current political climate.

## **Reena Palero**

### ***Filipino American College Students: How Their Identity Impacts their Education***

This research develops insight on Filipino American college students. Filipino American college students use values from their cultural identity that affect their performance on education.

## **Isabel Villarreal**

### ***Forever at War: A Historical-Literary Perspective on the Social and Psychological Effects of 20th Century Warfare***

Using 20th century war novels to reflect the social and psychological reoccurrences that shaped United States history, transforming the political perspectives of future generations.

# Accepted Conference Proposals

## Paradise Valley Community College

**Daniel Avila, Jackson Comes, and Aaron Fawley**

*Analysis of Physical Scenarios Portrayed in "The Martian"*

"The Martian" depicts the story of Mark Watney, a professional botanist who unfortunately was left behind by his crew and now is alone on Mars. The science portrayed in this movie is inaccurate, and this research project uses Chemistry, Astrophysics, Biology, and Mathematics in an attempt to prove so.

**Alkhattab Hashim**

*Spider Man Physics*

We are Trying to Make Physics more relatable to the every day person. We believe these types of projects will reach a broader community of people and will help them appreciate science more

## Pima Community College

**Maria Ewing**

*Identity Of An Athlete*

An Athletes Identity: A close look at the rising epidemic in mental health regarding collegiate athletes and a lack of resources in transitioning athletes out of their sport into other possible careers or a continuation of their education.

# Accepted Conference Proposals

## Red Rocks Community College

### **Stacie Barbarick**

#### ***Creating a Data Discussion Between Human-Robot Teams***

A robust glove fitted with flex sensors and LEDs (worn by the human user) will wirelessly control a 3D printed robot hand. Initially, users will wear the glove while “training” and be asked to complete a set of specified motions (pulling, pushing, grasping). They then will be tested by controlling a robot hand with the glove interface and scored on accuracy. I hope to find a correlation between the amount of time training with the glove and increased accuracy with the robot prosthetic.

## Reedley College

### **Jazzeen Aguilar**

#### ***Burned to the Bone: Burnout Syndrome in Healthcare Professionals***

The goal of this study is to determine the level of burnout syndrome among primary healthcare professionals in the Central Valley and if there is a link between the levels of burnout and the setting of where you work.

### **Jenesis Mendez**

#### ***Vaccines: What does the Research Really Say?***

An analysis and comparison between the past and present consequences of the anti-vaccine movement.

# Accepted Conference Proposals

## Scottsdale Community College

### **Andrew Wilson**

#### *Using Hindsight, Can We Navigate the Present and Future of Computerised Flight Control Systems?*

In recent decades, the flight control system of virtually all commercial aircraft has become increasingly computer controlled. However, with recent accidents involving flight control software over the past year, many are questioning how we will adapt and grow with such technology.

## Southern Oregon University

### **Prakash Chenjeri**

#### *Integrating Civic Ideals in Honors Curriculum: Science, Democracy, and Citizenship*

Honors education aims to produce an active and engaged citizenry. This session presents one avenue: An innovative and creative course designed at the Honors College at Southern Oregon University will be used to explore this theme.

### **Jack Diab**

#### *Exploring Exploration*

This presentation aims to investigate the topic of a rapidly changing space exploration industry, its increasing feasibility with modern technology, and its relationship with present day democracy.

# Accepted Conference Proposals

## **Maya Helms**

### ***Next-generation Zn-ion batteries with enhanced rechargeability and high-rate operation via 3D nanostructured electrodes and mixed salt electrolytes***

Maya E. Helms,<sup>1</sup> Megan B. Sassin,<sup>1</sup> Joseph F. Parker,<sup>1</sup> Christopher N. Chervin,<sup>1</sup> Jesse S. Ko,<sup>2</sup> Debra R. Rolison,<sup>1</sup> and Jeffrey W. Long<sup>1</sup>

<sup>1</sup>U.S. Naval Research Laboratory, Surface Chemistry Branch, Washington, DC 20375

<sup>2</sup>Former Naval Research Laboratory–National Research Council Postdoctoral Associate, Washington, DC, 20375

Next-generation “zinc-ion batteries” with a near neutral-pH Zn<sup>2+</sup>-based electrolyte are low cost and have safety advantages. These Zn-ion batteries can be recharged (100s of cycles) and operate at high-rates (300 mAh g<sup>-1</sup> at 1C and 100 mAh g<sup>-1</sup> at 20C) by using a 3D nanoarchitected MnOx@carbon nanofoam–paper (CNF) electrode and a mixed salt electrolyte (e.g., ZnSO<sub>4</sub> + Na<sub>2</sub>SO<sub>4</sub>).

## **Samantha Jestadt**

### ***Queer Gender Expression in Music Videos***

This presentation explores how music videos from the 1970s to 2019 have represented gender stereotypes and performative gender through the lense of queer theory.

## **Cherstin Lyon**

### ***Working Group: Student Representation in WRHC Governance***

I would like to host a conversation between directors, faculty, students, and WRHC leadership about the possibility of creating some form of student representation to the WRHC.

# Accepted Conference Proposals

## **Jesse Jo Rego**

### ***A Geovisualization of the Effects of Clear-Cutting at the Natural Resource Center in Butte Falls: A Map of Slope Stability***

This project is a ground work based analysis of the slope stability of a clear cut hill in Butte Falls, OR. The infinite slope formula is used to assess the degree of slope stability, in addition to marker poles that are measured to analyze the angle change and mass movement of the slope over the course of several months.

## **Southern Utah University**

## **Ethan Blair**

### ***There is Nothing Either Good or Bad, but Casting Makes it So: Discussing the Efficacy of Different Casting Practices in Educational Theatre***

This paper attempts to determine which of these two philosophies of casting in educational theatre—opportunity- versus product-based casting—is more important, relevant, or prominent among theatre educators in secondary and post-secondary schools. Opportunity-based casting involves casting those students that have been in the program the longest (juniors and seniors) and those who would benefit most from being cast in that role. Product-based casting practices include casting those students that are best for the role and therefore best for the show. My research included gathering articles about student-centered learning practices in education, theatre classroom pedagogies, and the influence of funding and administration onto a theatre program. I synthesized this research with interviews from eleven people who were involved in theatre in high school and/or college. These interviews provided oral histories of experiences in high school and collegiate theatre programs which included commentary on the two casting practices as well as other useful insights when considering casting a show. I concluded that there is no one right way to cast a show in educational theatre; it comes down to the preference of the theatre educator.

# Accepted Conference Proposals

## **Brenton Bushnell**

### ***Methylene Blue Derivatives As Potential Photosensitizers In Photodynamic Therapy***

Using Gaussian 16 and TDDFT methods, we simulated absorption spectra of methylene blue derivatives and determined possible efficacy for photodynamic therapy.

## **Abigail Chapman**

### ***How to Raise of Daughters to Be Leaders***

A study on the similarities between women serving in politics or public office.

## **Samantha Child**

### ***STEAM in elementary education: What it is, why it should be implemented, and how it benefits students learning experiences***

STEAM (Science, Technology, Engineering, Art, and Mathematics) education has numerous benefits that are only beginning to be expounded upon now. A preservice teacher shares what some of these benefits are through her own experience in integrating STEAM.

## **Taylor Clement**

### ***The Acute Effects of Bang Energy Drinks on Problem Solving Skills in Young Adults***

The acute effects of Bang energy drinks on young adults who completed a problem solving task (The Tower of Hanoi) will be presented.

## **Billy Clouse**

### ***URCA: Publishing Undergraduate Excellence***

URCA: The NCHC Journal of Undergraduate Research and Creative Activity is a student-run publication. Learn about the opportunities to edit the journal and how to get your work published.

# Accepted Conference Proposals

## **Billy Clouse**

### ***Monument***

This photography series uses the human figure to depict iconic Utah landscapes, challenging the viewer to consider how people and nature influence each other. This project includes nudity.

## **William Cowser**

### ***Romania Theatre Cultural Exchange***

This presentation analyzes the cultural, historical, and technical elements of a cultural theatrical exchange conducting between Southern Utah University and Romania's Universitatea Babes-Bolyai.

## **Mykel Hall**

### ***Death of the Actor: The Use of Suicide in Theatrical Pieces***

There is an examination of the use of suicide in theatrical pieces, specially looking at the difference between male completed suicides and female completed suicides and the nature of each.

## **Jazmine James**

### ***Review of Surgical Peripheral Nerve Repair Techniques***

Review of surgical techniques and additional techniques that can be used along during a surgery to repair a damaged peripheral nerve.

## **Elizabeth Lee**

### ***Making it Matter: Improving Learning Through Relationships and Self-Reference***

This study supports that learning is maximized when the student forms a healthy, constructive relationship with the instructor and can apply what they learn to their personal lives.

# Accepted Conference Proposals

## **Andrew Lloyd**

### ***Designing an Aircraft Handbook***

For my honors Capstone, I have rewritten and expanded on an experimental (home-built) aircraft's operating handbook. By adding my own flight testing information and reorganizing important checklists, myself and future pilots can safely use this aircraft.

### ***At Odds***

This photo series pulls attention to two tenuous relationships I see in the world. The concepts are juxtaposed against each other using multiple exposures.

### ***Peering Into the Fae***

A pinhole camera offers a new perspective on everyday scenes. It's often surprising what we find if we look through a different lens.

## **Christine Lopez**

### ***A Physiological Approach to Diagnosing Separation Anxiety Disorder in Canine Companion Animals (*Canis lupus familiaris*)***

A thorough investigation of the viability of diagnosing separation anxiety and anxiety-related disorders in canine companion animals (*Canis lupus familiaris*) on the presence of characteristic physiological deviations.

## **Brittany Petersen**

### ***Criminal Courts in the U.S. and Mexico***

This is an experiential project which compares the criminal court systems of Mexico and the U.S.

# Accepted Conference Proposals

## **Parker Vesely**

### ***Conservative Colonization: An Ethical Analysis of Galactic Expansion***

Space has long been viewed as the final frontier for human exploration, but as the realities of space travel and colonization become more apparent we are faced with a crucial concern: If we can live in space, does that mean that we should? Join us for an ethical discussion of the implications of space travel and colonization.

## **University of California, Davis**

## **Michael Montgomery**

### ***Living in the Glacial Landscape***

This project is for a senior thesis in the UC Davis University Honors Program. Drawing on relevant literature in climatology, geology, hydrology, archaeology, paleoecology, and environmental history, it is a scientific explication of what one writer, Gary Snyder, has written about ice ages, with a goal of better appreciating the processes of change that have shaped our lives and the landscapes in which we live them.

## **Navjot Kaur**

### ***Autonomous Vehicle Design Project***

Autonomous racecar follows the white track sharp turns, curves and long straightaways as it is turned on without any external control.

## **Marjan Moghaddam**

### ***Fusion of SUMO to Msh4 SUMOylation mutant recovers its function.***

Fusion of SUMO to a pro-crossover protein Msh4 SUMOylation mutant significantly compensates the function, suggesting the importance of protein SUMOylation in meiotic crossover regulation.

# Accepted Conference Proposals

## **Tara Shahrivini**

### ***Function and regulation of C. elegans BRC-1-BRD-1 E3 ubiquitin ligase activity***

This project aims to elucidate the relationship between the role of C. elegans BRC-1-BRD-1 in maintaining meiotic integrity and its function as an E3 ubiquitin ligase. Understanding the multifaceted function of the complex may shed light on the specific mechanism through which BRCA1-BARD1 prevents tumorigenesis.

## **Eric Thai**

### ***Do Labor Provisions in Trade Agreements Actually Improve Workers' Rights?: On the Empty Promises of Developing States***

Does the inclusion of more labor provisions in trade agreements improve workers' conditions on the ground in developing countries? Empirical evidence shows that labor provisions are not efficacious in improving workers' conditions.

## **Felicia Yen**

### ***Application of Microscopy with UV Surface Excitation (MUSE) for Deceased Donor Kidney Biopsy Assessment***

MUSE (microscopy with UV surface excitation) is a rapid, non-destructive fluorescence microscopy technique. Frozen section (FS) is currently the gold standard for intraoperative consultation, but can lead to artifacts that can complicate interpretation. The implementation of MUSE in place of or in concordance with FS would allow for reduced artifact and streamline accurate diagnoses of deceased donor kidney tissue, as well as preservation of tissue for downstream molecular analysis.

# Accepted Conference Proposals

## **Xingyue Zhang**

### ***Predicting the Responses of Soil Microbial Biomass to Short-term Organic Fertilizer Applications***

This study conducts a meta-analysis investigating how the initial properties of organic fertilizers and soils affect soil microbial biomass (MB) in short-term incubation experiments. It further trains a random forest model that is capable of predicting the responses of MB to the input of organic fertilizers.

## **University of California, Riverside**

## **Grisel Vargas**

### ***"When We're Human": A Look at Speciesism and Anthropocentrism in the 2009 Walt Disney Animation Studios Film "The Princess and the Frog"***

This project analyzes the character Ray the firefly in the 2009 Walt Disney Animation Studios film "The Princess and the Frog." Using animal studies as a basis, this project explores the speciesism and anthropocentrism that Ray experiences throughout the film and how this parallels the racist treatment the film's princess, Tiana, received in the Disney Princess franchise as a whole.

## **University of Nevada, Las Vegas**

## **Kendahl Servino**

### ***human TOUCH: Storytelling through Anatomy***

While Kendahl is a biology major planning to attend medical school, her interest in science has never shadowed her love of art. Through "Human TOUCH: Storytelling through Anatomy," she hopes to explore the intersection between the two.

# Accepted Conference Proposals

## **Mark Adriatico**

### ***Metabolism of Tenrec ecaudatus Under Extreme Temperatures***

This research project investigates the phenotypic plasticity of *Tenrec ecaudatus* with concentration on their metabolic rates. We will see how they respond to extreme temperatures by monitoring oxygen consumption, heat transfer, body temperature, and movement.

## **Alvaro Carbonero**

### ***Exploring Preference Orderings Through Discrete Geometry***

A peak of voting theory through discrete geometry.

## **Madison Frazee**

### ***Economic Diversity of Las Vegas***

This project utilizes location quotients to measure the job concentration of various jobs in the Las Vegas metro as they compare to the national average. This data can then be used to identify key areas in the local economy that need to be strengthened.

## **Emily Gelbart**

### ***Microwave Optimization for Testing Total Solids and Total Suspended Solids Content in Wastewater Facilities***

This project aims to understand the effectiveness of microwave technology as a process control check to test for total solids and total suspended solids content in wastewater materials. While ovens are typically utilized, microwaves provide faster data which can optimize daily operations in wastewater facilities.

# Accepted Conference Proposals

## **Alina Lindquist**

### ***Emic Perspective on Ritualistic Ingestion of Entheogenic Substances***

This project took a cross-cultural comparison approach to look at ritualentheogenic substance use amongst nineteen different cultures and eight different substances. It compared the emic views of substance use across the cultures selected from the electronic Human Relation Area Files (eHRAF).

## **Ei Myint**

### ***Predictors of adolescents' interest in STEM majors and careers***

Amongst the predictors of grades, gender bias, and self-expectancies and values, my project examined how powerful each predictor is relative to the others in predicting adolescents' interest in STEM majors and careers. Moderation analyses were additionally conducted to examine whether the associations between the predictors of adolescents' interest in STEM majors differ for girls and boys.

## **Nader Nabeih**

### ***Role of Iron Sulfide Minerals in the Preservation of Organic Carbon***

This project explores the mechanisms by which organic carbon is removed from the carbon cycle in anoxic environments.

## **University of Nevada, Reno**

## **Erin Edgington**

### ***Students' Perspectives on Service***

While students clearly see the value in performing service, service seems also to be viewed from a different perspective than other similar forms of engagement. In this presentation, I consider responses to service of varying intensity among University of Nevada, Reno honors students and identify points of alignment and divergence between these responses and characteristics associated with Generation Z students.

# Accepted Conference Proposals

## University of New Mexico

### **Bettyjane Hoover**

#### *Developing Diversity: Scribendi Magazine*

Join the Scribendi magazine editors as they discuss diversity within the staff, submitters, and published contributors of recent issues of Scribendi. This talk is part of a larger discussion on diversity within honors and publishing nationwide and is connected to the talks titled *Developing Diversity: the Makeup of Honors* and *Developing Diversity: the Publishing Industry*.

### **Faith Montano**

#### *Developing Diversity: the state of Honors*

While promoting interdisciplinarity and diversity of thought, Honors programs can be very sociologically homogeneous spaces. This presentation will explore the reality of diversity in Honors, investigate the possible causes and effects of this reality, and consider the ways in which Honors programs might increase the diversity of their student body.

### **Tirzah Reeves**

#### *Developing Diversity: The Publishing Industry*

A brief presentation on what diversity looks like in the world of literary publishing. An analysis on the statistics of where we are now and what we can do to get to where we want to go.

# Accepted Conference Proposals

## University of Portland

### **Madison Thibado**

#### ***Reproductive Biology of Clerodendrum trichotomum, a Nonnative Ornamental Shrub in Portland, OR***

A look into the reproductive success of the Harlequin Glorybower, a nonnative ornamental plant species in Portland, OR, with a discovery of certain chemicals that may deter the introduced Western Honeybee.

## University of Washington

### **Andrea Nadal**

#### ***Neocolonial Narratives and The Decolonial Potential of Language***

The power of Language in a Neocolonial world. How Bilingualism in education and society can lift up narratives which run counter to the colonial powers' own narratives.

### **Juliana Villegas**

#### ***Nepantla Pedagogy for Reflective Practice: the art of facilitating presence in the classroom***

The practice of critical reflection is embedded in the University of Washington's Interdisciplinary Honors Program curriculum with the senior Integrative Honors Portfolio as a tool for reflection. The portfolio also allows learning to be made visible through the practice of sustained reflection during the undergraduate experience and beyond. This talk will go over ways to bring intuitive knowledge and storytelling into the classroom and provide examples of holistic writing exercises to help students tap into relational narratives, both individual and social, and, "...shift out of habitual formations" (101). The talk will also discuss the resonant and profound impact of practicing Anzaldúa's theories of "autohistoria", within Nepantla, to sustain and deepen reflection through writing practice in daily life.

# Accepted Conference Proposals

## University of Washington, Tacoma

### **Zaira Rojas**

#### ***Coping in a World of Uncertainty: A Study in the Criminalization of Migration and its Impacts on Vulnerable Populations***

Shifting migration policies and perceived views while capable of engulfing migrants into feelings of despair, ultimately leads to unique coping mechanisms and hope as seen by a case study of one group of swap-meet vendors in the state of Washington.

### **Savannah James**

#### ***Shifting the Educational Approach for a Stronger Global Community***

This project would develop guidelines to incorporate multiculturalism into existing public school curricula for all grades with the goal of developing knowledge, respect, and empathy for other cultures around the globe. This will set future generations up for success in the rapidly evolving global community; setting the stage for stronger, more cooperative globalism.

### **Isabel Kielmeyer**

#### ***Xenophobia in America***

America under the Trump administration has caused detriment to the treatment of many minorities. However, with changes such as early education or training on acceptance and understanding, or the enforcement of efforts of many organizations, the United States' social relations could improve.

### **Jessy Wolff**

#### ***Decolonizing the Mind through Re-Envisioning Education***

***This project examines the idea that the mind is a colonized space, which results in a perpetuation of colonial ideology. A potential solution is presented through a re-framing of the way American history is taught.***

# Accepted Conference Proposals

## **Angel Reddy**

### ***A Solution to the UN Security Council***

A project about the issues that plague the ability of the United Nations Security Council to function efficiently and address the world's problems. In this presentation, I attempt to offer a solution to create a fairer and more dynamic council that is able to take quick action and potentially solve pressing world issues.

## **Athena Brewer**

### ***Economic Decline of a Failing Moral Imperative***

Effects of the criminalization of migration on marginalized immigrant populations in the context of health and human rights observed from an economic cost benefit analysis perspective.

## **Brianna McNeley**

### ***Ecological Momentary Assessment of Meditation in Treatment of Mental Illnesses***

Meditation is a widely available and free practice that can be utilized to affect the same areas of the brain related to many mental disorders. Ecological Momentary Assessment (EMA), a real-time, app-based, data collection method can help determine culturally relevant and highly individualized treatment options by tracking mental illness symptoms and the outcomes from pairing such symptoms to meditations based on the brain structures known to be associated in each.

## **Sally Murphy**

### ***First Generation Students and Overcoming Imposter Syndrome***

# Accepted Conference Proposals

This paper examines the prevalence of imposter syndrome and anxiety related mental health issues among first-generation honors college students. The aim is to develop institutional best practices and honors advising strategies that both support and acknowledge lived experience while challenging the barriers created by imposter syndrome.

## Utah State University

### **Erin Butikofer**

#### *Your Love for Your Cat Doesn't Change its Behavior*

Scientists have recently drawn attention to the impacts of domesticated cats on rural and urban wildlife species. In this study, we address the influence of the cat-owner relationship on indoor-outdoor and free-ranging cat behavior.

### **Melissa Scheaffer**

#### *Using the Challenger Disaster to Teach Technical Communication: A Multifaceted Approach*

On January 28, 1986, the Space Shuttle Challenger exploded killing all seven astronauts aboard. Students in a technical communication for engineers honors course at Utah State University examine the factors that caused this failure including miscommunication of technical information and faulty decision making.

## Utah Valley University

### **Alyssa Chamberlain**

#### *The Art of Science*

# Accepted Conference Proposals

The Art of Science involves photography of botanical specimens found either in their natural habitat, or from the Utah Valley University Herbarium and Greenhouse. I believe the importance of art in science is greatly underestimated, and my goal as an artist is to help fuse the two.

## **Nathaniel Johnson**

### ***God: the Ultimate Nihilist***

An argument showing that God doesn't believe there is any ultimate point to the universe, and how, in light of this, God makes a personalized meaning to the universe.

## **Tiani Orr**

### ***Paradigm Shift: Student-Athletes and Nutrition Knowledge***

Analyzing the nutrition knowledge of student-athletes and implementing education to initiate perspective changes and facilitate application. Employment of correct nutrition knowledge optimizes performance and enhances recovery.

## **Joseph Sneddon**

### ***Microbial Source Tracking: Utah Lake Fecal Contamination***

In this project we established Microbial Source Tracking protocols at Utah Valley University. We then used those protocols to track fecal contamination at Utah Lake.

## **Anna Tibbitts**

### ***Social Media and the Social Penetration Theory***

# Accepted Conference Proposals

The social penetration theory was introduced long before social media was developed. This study aims to analyze and investigate the consequences of social media in relation to self-disclosure and relational intimacy, both principles of the social penetration theory.

## **Jehicob Torres**

### ***The Consequences of a Juvenile Criminal Record***

The collateral consequences of a juvenile criminal record can go beyond the initial sentence. Several reforms have currently been enacted at the state and federal level to mitigate the damage; however, there is still room for improvement.

## **Caterina Zapata**

### ***Relationship Skills for Newlyweds.***

Communication may be the key to keeping a relationship intact but friendship is what keeps the partners happy.

## **Washington State University**

## **Haley Morris**

### ***BRAF V600E Driver Mutation in Melanoma may be Caused by UV Exposure***

A Trp reversion assay was used to mimic a BRAF driver mutation seen commonly in melanoma to determine whether it is inducible by UV radiation. This was done by altering a section of the genetic sequence from GAA to GTG in the Trp5 gene of *Saccharomyces cerevisiae* and then irradiating cells with UV light to determine if UV caused the hypothesized T>A mutation via a reversion.

## **Gunnar Sly**

### ***Conversion of diatomaceous earth to silicon for use in high performance anodes for Li-ion batteries via magnesiothermic reduction***

# Accepted Conference Proposals

Optimizing the magnesiothermic reduction process in the context of converting diatomaceous earth silica into high-performance silicon anodes for use in Li-ion batteries.

## **Sean Thompson**

*Investigating chromatin architecture and fibroblast heterogeneity during skin development*

We used scATAC-seq and scRNA-seq to probe the relationship between fibroblast chromatin accessibility and gene expression. Our data supports a connection between chromatin architecture and gene expression, and we also identify new unique genes and regulators between fibroblast lineages.

## **Christina Webster**

*Optimizing growth of "Candidatus Liberibacter asiaticus"*

In order to further research on citrus greening disease, a pure culture of the suspected causing agent, "Candidatus Liberibacter asiaticus," needs to be developed. The goal of this research project is to study how separation of mixed culture by size and the use of antibiotics affect the growth of this bacterium.

## **Weber State University**

### **Luke Albertson**

*Music To Burn To: Climate Change and Popular Music*

Exploring themes relating to climate change in popular music, their evolution over time, and how these themes influence our perception of the issue today and beyond.

### **Daniel Bedford**

*Dual Mission, Dual Identities: Reconciling inclusive and exclusive Honors*

# Accepted Conference Proposals

This presentation tells the story of how the Honors Program at Weber State University has successfully changed focus, while balancing multiple new, externally-imposed demands. This story serves as a case study in finding synergy in seemingly competing tasks.

## **Tyler Browning**

### ***Reactions of disubstituted peroxides: Approach to the synthesis of strained bicyclic ethers***

This project explores the application of disubstituted peroxides as a method of synthesis for bicyclic ethers.

## **Joseph Gilbert**

### ***Determination of Acyl Peptide Enzyme Hydrolase and Aminoacylase-1 Sequential Activity by Gas Chromatography-Mass Spectrometry***

Our project worked to identify a method to quantify the sequential activity of Acyl Peptide Enzyme Hydrolase (APEH) and Aminoacylase-1 (ACY1).

## **Melissa Hanni**

### ***Holistic Nursing Care of War Correspondents: The Spiritual Domain***

Applying holistic nursing care to analyze war correspondents' perception and practice of spirituality through open-ended questions in unstructured interviews to determine the effects of reporting war on their health.