UNDERGRADUATE SYMPOSIUM

Friday, April 28, 2017 | 9 AM – 4 PM

NAU.EDU/SYMPOSIUM
Dear students, faculty mentors, and guests:

I am privileged to welcome you to NAU’s ninth annual Undergraduate Symposium. The students presenting their ideas, creative endeavors, and research today will fill the Skydome and the University Union with the excitement of new discoveries.

The sheer scale of Symposium reflects the NAU community’s commitment to research and creative work at the undergraduate level. It also represents our shared dedication to service learning and collaborative projects that connect students with opportunities to make a difference.

Our faculty, who are world-class scholars with a passion for mentorship, create opportunities for exceptional undergraduate learning every day. Their influence, joined with the support of our donors and sponsors, creates an environment where intellectual discipline and joyful curiosity become lifelong habits for our students.

This devotion to student success pays rich dividends. NAU students are not average—they are exceptional. They are motivated self-starters who make the most of every opportunity we can give them, pursuing knowledge about the world around us and communicating their findings in imaginative ways. In doing so, they craft a brighter future for themselves and for all of us.

My hearty congratulations to our students and everyone who contributed to this event.

Sincerely,

Rita Hartung Cheng

President
Message from the Vice President for Research

Dear students, faculty mentors, and guests:

Today NAU is celebrating its tenth annual university-wide Undergraduate Symposium, which showcases our undergraduate students’ efforts in research, scholarship, and artistic endeavors. Through the enthusiastic efforts of faculty and student collaborations, this Symposium has grown over the years to now fill the Walkup Skydome. I am excited that NAU is highlighting the diversity of our students’ scholarship and creative outcomes under one roof, and I applaud their academic and creative achievements.

Thank you for joining me and the NAU and Flagstaff communities in congratulating these students and wishing for their future success.

Sincerely,

William Grabe, Ph.D.
Vice President for Research

Search for presenters, titles, and abstracts at the event kiosks or online at nau.edu/symposium.

Table of Contents

Special Events for the Week of April 24 – 30
College of Arts and Letters .................................................................................. 4
Hooper Poster Presentations & Reception Special Event ........................................ 5

Morning Session
Non-poster Listings ............................................................................................... 6
Poster Listings ....................................................................................................... 12
Luncheon and Awards Ceremonies ........................................................................ 31

Afternoon Session
Non-poster Listings .............................................................................................. 32
Poster Listings ....................................................................................................... 39
Accessibility Information ....................................................................................... 59
Thank You ........................................................................................................... 59

Search for presenters, titles, and abstracts at the event kiosks or online at nau.edu/symposium.

Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAL</td>
<td>College of Arts and Letters</td>
</tr>
<tr>
<td>CEFNS</td>
<td>College of Engineering, Forestry, and Natural Sciences</td>
</tr>
<tr>
<td>COE</td>
<td>College of Education</td>
</tr>
<tr>
<td>HHS</td>
<td>College of Health and Human Services</td>
</tr>
<tr>
<td>HONORS</td>
<td>Honors College</td>
</tr>
<tr>
<td>FCB</td>
<td>The W. A. Franke College of Business</td>
</tr>
<tr>
<td>CIE</td>
<td>Center for International Education</td>
</tr>
<tr>
<td>SBS</td>
<td>College of Social and Behavioral Sciences</td>
</tr>
</tbody>
</table>
College of Arts and Letters: Special Events for the Week of April 28

All College of Arts and Letters (CAL) special events for the Undergraduate Symposium can be located on the NAU campus map at the end of this program. All events are free unless marked “$admission.” Most tickets can be purchased through NAU Central Ticketing or at the door.

Monday, April 24 – Friday, April 28, 2017
"The Secrets of Bloom" by Janina Burton
8 AM – 5 PM
Riles Gallery (2nd Floor), Building 15

Tuesday, April 25, 27–28, 2017
BFA Show
10 AM – 5 PM
Beasley Gallery, Performing and Fine Arts (2nd floor), Building 37

Tuesday, April 25, 2017
CAL Film Series: "Taxi Driver"
7 PM – 9 PM
Cline Library, Assembly Hall, Building 28

Tuesday, April 25, 2017
NAU Big Band Jazz Concert
7:30 PM – 9:30 PM
Ardrey Memorial Auditorium, Building 37
$admission

Thursday, April 27, 2017
La Tertulia (Spanish Table)
6:30 PM
NiMarco’s Pizza (101 S. Beaver Street)
6

Thursday, April 27, 2017
Table française (French Table)
6:30 PM – 8:30 PM
Firecreek Coffee Company (22 E. Rt. 66)

Thursday, April 27, 2017
"Peter and the Starcatcher" by Rick Elice
7:30 PM – 9 PM
Clifford E. White Theater, Building 37
$admission

Friday, April 28, 2017
BFA Show Reception
5 PM – 7 PM
Beasley Gallery, Performing and Fine Arts (2nd floor), Building 37

Friday, April 28, 2017
NAU Percussion Ensemble
7:30 PM – 9 PM
Ardrey Memorial Auditorium, Building 37
$admission

Saturday, April 29, 2017
NAU Vocal Jazz Concert
7:30 PM – 8:30 PM
Ardrey Memorial Auditorium, Building 37
$admission

Sunday, April 30, 2017
NAU Spring Festival of Choirs
3 PM – 5 PM
Ardrey Memorial Auditorium, Building 37
$admission

Hooper Poster Presentations & Reception: Special Event By Invitation Only
The Office for Undergraduate Research & Creative Activity celebrates this year’s Hooper Undergraduate Research Award recipients, with special guest, Dr. Henry O. Hooper, retired NAU associate provost for academic affairs and physics professor emeritus.

Thursday, April 27, 2017: 4:30 PM – 6:30 PM
Native American Cultural Center, Building 14, Gathering Room

• Connor Auge: Turbulence and Star Formation in Interacting Galaxies (Mentor: Lisa Chien)
• Kathryn Barkley: Genetic Characterization of Seagrass in the Sapan Lagoon and its Effect on Community Diversity (Mentor: Russell Benford)
• Heather Centner: Investigating Plague in Madagascar’s Capital after 17 years of No Reported Cases (Mentor: David Wagner)
• Kevin Gochnour: From Primordial Lagoon to Self-Replicating DNA: Analyzing a Proposed Precursor of Modern Nucleobases (Mentor: Gerrit Lindberg)
• Emily Haworth: Milkweeds for Monarch Arizona (Mentor: Rich Hofstetter)
• Peter Herron: A Comparison of Fremont Cottonwood (Populus fremontii) Fungal Endophytes in High and Low Stress Areas near Joshua Tree National Park (Mentor: Catherine Gehring)
• Adam Hoffmann: Justifying Talc as a Suitable Marker for Search for Biologic Activity (Mentor: David Elliott)
• Amanda Ketting-Oliver: Tracing the Disruption of the Little Colorado River by Past Eruptions of the San Francisco Volcanic Field (Mentor: Nancy Riggs)
• Lindsay Klooster: Sex Differences in Resistance to Oxidative Stress (Mentor: Trina Trautladottir)
• Ryan Lancione: Understanding Interactions between Switchgrass and N-fixing Bacteria for Sustainable Biofuel Production (Mentor: Nancy Johnson)
• Christopher McDonell: Transtensional Faulting, Lake Uplift, Volcanism, and Mantle Flow of the Colorado Plateau (Mentor: Ryan Porter)
• Heather Mead: Investigating Differential Expression Utilized during the Fungal Morphogenesis of the Attenuated Strain of Coccidioides posadasii (Mentor: Bridget Barker)
• Ramon Mendoza: Removal of Salt from Sea Water Using Carbon Dioxide (Mentor: Michael Lee)
• Hayden Nehus: Philebus 28a-30d and 55d-67d: Commentary on the Grammar and Vocabulary of Plato on God and the Good (Mentor: George Rudebusch)
• Trevor Pacion: Uplift, Volcanism, and Mantle Flow of the Colorado Plateau (Mentor: Ryan Porter)
• Miles Scull: Biosemiotics: The Account of Meaningful Communication in the Natural World (Mentor: Jeffrey Downard)
• Isaiah Selt: Innovative Cost-effective Strategy for Monitoring Zoonotic Diseases to Understand Their Prevalence in Nature (Mentor: Dawn Birdsell)
• Kiley Sheehan: Chemical Signatures and Implications for the Provenance of the Green River Basin, Wyoming (Mentor: Michael Smith)
• Cloe Silva: Comparison of Silicate Minerals from Unusual and Compositionally Extreme Igneous Rocks (Mentor: James Wittke)
• Alexandra Tyra & Andrew Haynes: Let’s Keep It Casual: Comparing Friends with Benefits Relationships to Platonic Friendships (Mentor: Meliksah Dervi)
• Daniel Van Gundy: Post-Eruptive Explosive Hazards of Scoria Cone Volcanoes (Mentor: Nancy Riggs)
• Brandon VanBibber: Perceptions of Teacher Autonomy in Charter Schools: A Qualitative Study (Mentor: Ismael Munene)
• Patrick White: The Future of Natural Regenerating Southwestern White Pines (Mentor: Kristen Waring)
• Christopher Whitney: Predicting Muscle Force Output of Gurna Fowl during Guts with Perturbations (Mentor: Kiisa Nishikawa)
• Christi Williams: The Physiological Effects of Hydrocarbon and Noise on the Central Auditory Nervous System (Mentors: O’Neil Guthrie & William Cubberson)
• Brianna Zgurich: Philebus 31a-58b: Commentary on the Grammar and Vocabulary of Plato on the Forms of Pleasure (Mentor: George Rudebusch)
**MORNING SESSION**

**Skydome CAL Floor**

9 AM - 11 AM – Exhibit

**Figures and Their Relationship to Light**
CAL, School of Art
Hailee Sattley

**Independent Study Live Painting**
CAL, School of Art
Hana Lipke

**Independent Study Live Painting**
CAL, School of Art
Markie Scheidegger

9 AM - 11 AM – Exhibit

**Throwing Pottery on a Potter’s Wheel**
CAL, School of Art
Connor Slunaker, Sara Larosa, Elijah Pilkington, Matthew Wheeler, Matthew Carpenter

**Summer Study Abroad in Paris and Barcelona**
CAL, School of Art
McKaylee Lemon

**Skydome COE Table**

9 AM - 11 AM – Exhibit

**Hands on Education: Getting a Little Messy**
COE, Teaching and Learning
Shelby Kowalski, Kaylee Savoia

**Skydome Honors Floor**

9 AM - 11 AM – Exhibit

**Enlightenment Theatre and Social Stratification**
HONORS, Honors College
Zachary Mauck, Michelle Zhao

**Skydome Roundtable 1 (R1)**

9:30 am - 9:55 am – Roundtable Discussion

**Sexualization and Gender Roles in Video Games**
HONORS, Honors College
Josie Krajnak, Shelby Kershner, Nicole Rice

10 AM - 10:25 AM – Roundtable Discussion

**Doll Her Up: Society's Impact on Women**
HONORS, Honors College
Marcella Manzo, Dianna Johnson, Marley Kelso, Arthur Gibson, Annelise Wright

**Skydome Stage A**

9 am - 9:55 am – Oral Presentation

**Running the San Juan River: An Experiential Honors Class**
HONORS, Honors College
Shienna Braga, Emma Dahl, Jacob Miller, Claire Sipos

10 AM - 10:55 AM – Oral Presentation

**Social Robots - Societal Betterment?**
HONORS, Honors College
Emily Walcott, Megan Fostar, Will Farmer, Allen Clarke, Tristan Davis, Drake Maddern, Jonathan Chin

**Skydome Stage B**

9 am - 9:17 am – Oral Presentation

**Colonialism in the French Museum**
CAL, Global Languages and Cultures
Jessica Andrew

10 AM - 10:17 AM – Oral Presentation

**Le Végétarisme et le Végétalisme en France**
CAL, Global Languages and Cultures
Nina Wilson

9:20 am - 9:37 am – Oral Presentation

**Une Alliance Russo-Américaine**
CAL, Global Languages and Cultures
Taylor Garrett

10:20 am - 10:37 am – Oral Presentation

**La Cuisine: The Tenth Art?**
CAL, Global Languages and Cultures
Celina Vargas

9:40 am - 9:57 am – Oral Presentation

**The French Colonization in Algeria, the War for Independence, and Today**
CAL, Global Languages and Cultures
Kaitlyn Quinn

10:40 am - 10:57 am – Oral Presentation

**Roms in France**
CAL, Global Languages and Cultures
Jacqueline Garrett

**Skydome Stage C**

**Back to the Future: Histories in Dystopias**

9 AM - 9:17 AM – Oral Presentation

**Prediction of the Future: Time Travel in Media**
HONORS, Honors College
Sebastian Kastrul, Lauren Ely

9:20 AM - 9:37 AM – Oral Presentation

**Government Coverups and Fake News: an Analysis of Fictional and Nonfictional Dystopias**
HONORS, Honors College
Nevea Atherton, Katrina Harkleroad
Skydome Stage C

Real Dystopias: Past and Future

10 AM - 10:17 AM – Oral Presentation
Nuclear War and Interstellar Dystopias of Our Future
HONORS, Honors College
Alexandria Milzo, Abhishek Ryan, Vanessa Coyne, Lucas Mittelma, Kyle Gabby

10:20 AM - 10:37 AM – Oral Presentation
Something’s Catchy about Epidemics: Fear of Diseases across Time
HONORS, Honors College
Megan Zimmermann, Katelyn Mollak, Todd Takeno, Hannah Wagner

Skydome Stage D

9 AM - 9:55 AM – Oral Presentation
Future Scenarios of Human Experience
HONORS, Honors College
Tyler Neufeld, Alysson Mayoral, Samantha Seaman, Kassandra Rogers, Edwin Beraud, Rachel Mahkovec

10 AM - 10:55 AM – Oral Presentation
Future Life on Planet Earth
HONORS, Honors College
Kevin Wasikoski, Athena Costanza, Anthony Mirabito, Kaitlin Farley, Katherine Riffle

University Union – Havasupai C Room

8:30 AM - 8:55 AM – Oral Presentation
Unified Sumo Robot D
CEFNS, Mechanical Engineering
Calvin Schnorbus, Amber Juare, Hussain Alwateeb, Calvin Schnorbus

9:45 AM – Oral Presentation
Honeywell Endurance Valve Test
CEFNS, Mechanical Engineering
Geordie Macdonald, Lance Gomez

University Union – Kaibab Room

8:30 AM - 8:55 AM – Oral Presentation
Pilgrim Mine Site Waste Evaluation
CEFNS, Civil Engineering, Construction Management, & Environmental Engineering
Megan Stevens

9:45 AM – Oral Presentation
Sinclair Wash Stream Restoration Feasibility Study
CEFNS, Civil Engineering, Construction Management, & Environmental Engineering
Mariana Alhassani, Abdullah Alisalm, Abdullah Alisalm, Ahmad Alinhash, Ahmad Alinhash

9:50 AM - 10:15 AM – Oral Presentation
Honeywell Powder Amplifier
CEFNS, Mechanical Engineering

10:15 AM - 10:40 AM – Oral Presentation
Honeywell Sumo Robotic Rocket Separation System
CEFNS, Mechanical Engineering
Naveen Doshi, Shilaa Bharath, Muhammad Ali, Benton Keppler

10:40 AM - 11:05 AM – Oral Presentation
Secondary Ion Mass Spectrometry (SIMS)
CEFNS, Mechanical Engineering
Isaiah Cons, Sharna Beahm, Riley Ducey, Ben Hardesty

11:05 AM - 11:30 AM – Oral Presentation
Honeywell Sumo Endurance Test
CEFNS, Mechanical Engineering
Geordie Macdonald, Lance Gomez

11:30 AM - 12:00 PM – Oral Presentation
Honeywell Structural Test
CEFNS, Mechanical Engineering
Geordie Macdonald, Lance Gomez
University Union – Oak Creek Room

8:30 AM - 8:55 AM – Oral Presentation
Robo Games: Sumo and Bartending Robot
CEFNS, Mechanical Engineering
Gunnar Molony, Andrew Farnam, Christian Dooley, Zheng Liu

8:55 AM - 9:20 AM – Oral Presentation
Kinetrax, a Wearable Device for Recording Kinematics in a Community Setting
CEFNS, School of Informatics, Computing, & Cyber Systems
Christopher Whitney, Anthony Black, Cherie Parsons, Grant Swenson, Jack Jenkins

9:20 AM - 9:45 AM – Oral Presentation
Go-Baby-Go Universal Controller
CEFNS, Mechanical Engineering
J. Clare Willis, Lea Trice, Luke Lockard, Taylor Tackett, Cotter Hooker, Alex Thomas

9:50 AM - 10:15 AM – Oral Presentation
Steering Wheel Not Included
CEFNS, Mechanical Engineering
Ernes Distajo, Samuel Williams, Abdullah Alajmi, Abdurrahman Almutairi, Mohammad Aljuaidi

10:15 AM - 10:40 AM – Oral Presentation
GoBabyGo B (Universal Control)
CEFNS, Mechanical Engineering
Mohamed Mohammad Alothai, Eid Alothai, Salman Aldouseri

10:40 AM - 11:05 AM – Oral Presentation
In Home Gravity Harness
CEFNS, Mechanical Engineering
Hasan Farman, Khaled Alosaimi, Noah Oliver, Eileen Baker, Armando Garcia

University Union – Sycamore Room

8:30 AM - 8:55 AM – Oral Presentation
Line Following and Sumo Competition Robotics Design
CEFNS, School of Informatics, Computing, and Cyber Systems
Alyssa Thompson, Omar Marshed, Tyler Mulholland, Hashem Aldashiti

8:55 AM - 9:20 AM – Oral Presentation
Smart White Board Marker for Next Generation Classrooms
CEFNS, School of Informatics, Computing, and Cyber Systems
Leah Collins, Ali Alavadi, Khaled Alrabah, Abdullah Al-Jemaz

9:20 AM - 9:45 AM – Oral Presentation
Virtual Reality Assisted Data Analysis
CEFNS, School of Informatics, Computing, and Cyber Systems
John Miscevich, Liam Burke

9:50 AM - 10:15 AM – Oral Presentation
JavaScript Interpreter for PIC32 Microcontroller
CEFNS, School of Informatics, Computing, and Cyber Systems
Trent Boice, Jonathan Miller, Hope Byjoe

10:15 AM - 10:40 AM – Oral Presentation
Improved Efficiency Using Digital Control for an Electrical Grid Converter
CEFNS, School of Informatics, Computing, and Cyber Systems
Christopher Leffler, Ryan Lee, Christian Endsley, Omar Almuhammadi, Kaylub Hemphill, Anthony Sagg

10:40 AM - 11:05 AM – Oral Presentation
Smart Solar Generator
CEFNS, School of Informatics, Computing, and Cyber Systems
Jesse Saylor, Andrew Winegarner, Frank Pocino, Michael Moser

University Union – Walnut AB Room

8:30 AM - 8:55 AM – Oral Presentation
Automated Website Testing
CEFNS, School of Informatics, Computing, and Cyber Systems
Max Wason, John Sadie, Peter Haschke, Jason Le

8:55 AM - 9:20 AM – Oral Presentation
Remote Telescope Activity Monitor
CEFNS, School of Informatics, Computing, and Cyber Systems
Gage Cottrell, Alexander Sears, Chris French, Justin Kincaid

9:20 AM - 9:45 AM – Oral Presentation
High Performance Computing Cluster Visualization Tool
CEFNS, School of Informatics, Computing, and Cyber Systems
Michael Gilbert, Brandon Allen, Don Speer, Tanner Stevens, Andrew Stebenne

9:50 AM - 10:15 AM – Oral Presentation
NAZ Animal Welfare Task Force Educational Pet Adoption Tool
CEFNS, School of Informatics, Computing, and Cyber Systems
Marjorie Hahn, Frankie Berry, Steven Gruenewald, Riley Shelton, Matthew Siewierski

10:15 AM - 10:40 AM – Oral Presentation
The Virtual Office Door
CEFNS, School of Informatics, Computing, and Cyber Systems
Tyler Tollefson, Nicolas Melillo, Mitchell Hewitt, James Hauser, David Snow

10:40 AM - 11:05 AM – Oral Presentation
FlagFriends Group Matching Application
CEFNS, School of Informatics, Computing, and Cyber Systems
Brandon Garling, Matt Nielsen, Clarissa Calderon, Mohammad Alsubhi, Xiangzhi Cao
Skydome Floor: Posters (9 AM – 11 AM)

CAL – English

Real Life Rhetorical Situations
Elizabeth Anderson, Mary Holmes
Display board [52A]

Interdisciplinary Research of Discourse
Javin Singer, Nicole Escamilla Guardiola, Sarah Begovac, Sabrina Leal
Display board [52C]

Films within Films: Cinematic Reflexivity
Over Time
Liam Clauss, Rebecca Gordon
Display board [53A]

CAL – Global Languages and Cultures

Le Biculturalisme au Canada: Une Analyse Comparative du Québec et l’Alberta
Gavin Furrey
Display board [53C]

CAL – History

Hiroshima: Art and Reconciliation
Jordan LaMont
Display board [54A]

CAL – Philosophy

BioSemiotics: Meaning, Purpose and Communication in the Natural World
Miles Scull
Display board [53C]

CAL – School of Art

The Rodriguez’s Vacation Home
Kael Willey
Display board [54D]

The Gatsby Experience
Melissa Amstutz
Display board [55C]

The Future of Gastrointestinal Health Care
April Beard
Display board [56A]

Improving the U.S. Infant Mortality Rate with Natural Labor
Taylor Bowyer
Display board [56C]

Modern Burlesque
Nicolle Christman
Display board [57A]

The Orpheum: Small Venue Expansion Project
Cullen Coker
Display board [57C]

Sustainable Elementary School
Edin Garcia
Display board [58A]

A Sustainable Community Model
Michelle Laney
Display board [58C]

Living Community Pet Center
Aubrey Mollett
Display board [59A]

Historic Hostel and New Restaurant
Hailey Peterson
Display board [59C]

Hostel Remodel
Kennedy Kile
Display board [CAL-ID Easel]

CAL – Theatre

Show-ception — Building a Show within a Show Using Open Sound Control
Tristen Kocher, Joshua Prescott-Smith, Rebekah Ryan
Display board [55B]

CEFNS – Biological Sciences

Identifying Potential Vaccine Targets for Protection Against Burkholderia pseudomallei Infection Using Proteome Exploration
Mimi Mbegbu, Maxx Harvey
Display board [31A]

Plant Pollination Strategies Reveal Ecological Changes along an Elevation Gradient
Bradley Thrower, Alexander Henrie
Display board [31C]

Developing a Reliable Clinical Test for a Burkholderia pseudomallei Infection: Evaluation of Bacterial Antigens Using Serum from Patient Blood Samples
Courtney Seavey, Erik Settles, Austin Shannon, Mitch Keener, Kyle Headley, Jinhee Yi, Mark Mayo
Display board [32A]

Sex Differences in Resistance to Oxidative Stress
Lindsay Klooster, Tinna Traustadottir, Aaron Done, Savannah Berry, Ethan Ostrom
Display board [32C]
Easing Veteran Reintegration
One Paw at a Time
Gabrielle Orsini
Display board [33A]

A Common Pesticide, Butachlor Does Not Affect the Percentage of Global DNA Methylation in R. marina and F. vittigera
Calsey Richardson, Molly Shuman-Goodier
Display board [33C]

It's Just a Flesh Wound! Scaling of Puncture Force in Flatfishes
Joseph Perez, Michael Minicozzi, Alice Gibb, John Kimball, Ashley C
Display board [34A]

The Effect of Acute Alcohol Exposure on RAW 264.7 Macrophages Infected with Burkholderia thailandensis
Autumn Dove, Fernando Monroy
Display board [34C]

Discovery of Antigenic Biomarkers in Burkholderia pseudomallei for Rapid Diagnosis of Melioidosis
Maxx Harvey, Jinhee Yi, Mimi Mbegbu, Rachel Meyer, Lauren Pristo, Karen Hernandez, Erik Settles
Display board [35A]

Site-Specific Evaluation of Body Shape Response to Contamination in a Model Fish Species, Gambusia affinis
Chloe Greenhalgh-Adam, Rex Bergamini, Catherine Propper
Display board [35C]

Screening Ticks Intercepted on Mexican Cattle at the Texas Border for Cattle Fever Pathogens (Anaplasma marginale and Babesia spp.) and DNA Mutations
Rebekah E. Turner, Nathan E. Stone, H. Joel Hutcheson, Pia U. Olafson, Greta Buckmeier, Donald B. Thomas, Glen A. Scoles
Display board [36A]

Easing Veteran Reintegration
One Paw at a Time
Gabrielle Orsini
Display board [33A]

A Common Pesticide, Butachlor Does Not Affect the Percentage of Global DNA Methylation in R. marina and F. vittigera
Calsey Richardson, Molly Shuman-Goodier
Display board [33C]

It's Just a Flesh Wound! Scaling of Puncture Force in Flatfishes
Joseph Perez, Michael Minicozzi, Alice Gibb, John Kimball, Ashley C
Display board [34A]

The Effect of Acute Alcohol Exposure on RAW 264.7 Macrophages Infected with Burkholderia thailandensis
Autumn Dove, Fernando Monroy
Display board [34C]

Discovery of Antigenic Biomarkers in Burkholderia pseudomallei for Rapid Diagnosis of Melioidosis
Maxx Harvey, Jinhee Yi, Mimi Mbegbu, Rachel Meyer, Lauren Pristo, Karen Hernandez, Erik Settles
Display board [35A]

Site-Specific Evaluation of Body Shape Response to Contamination in a Model Fish Species, Gambusia affinis
Chloe Greenhalgh-Adam, Rex Bergamini, Catherine Propper
Display board [35C]

Screening Ticks Intercepted on Mexican Cattle at the Texas Border for Cattle Fever Pathogens (Anaplasma marginale and Babesia spp.) and DNA Mutations
Rebekah E. Turner, Nathan E. Stone, H. Joel Hutcheson, Pia U. Olafson, Greta Buckmeier, Donald B. Thomas, Glen A. Scoles
Display board [36A]
CEFNS – Civil Engineering, Construction Management, and Environmental Engineering

**Solar Disinfection of Domestic Greywater for Landscape and Edible Plant Use**
Anna Gorman, Alarick Reiboldt
Display board [10A]

**The Effects of Ponderosa Pine Tree Deforestation Concerning Snow Water Resources on the Ground**
Kasie Carleton, Christian Soutus, Cydney Matthews, Erin Pflueger, Melissa Jacquez
Display board [10C]

**CEFNS – Mathematics and Statistics**

**Semilinear Elliptic Boundary Value Problems on a Variable Domain**
Jeffrey Covington
Display board [26A]

**Expanded Star Reduction Graphs for Coxeter Groups of Types A and B**
Brittany Carr, Nur Emalina Bidari
Display board [26C]

**Cubic Residue Matrices**
Ryan Wood, Pauline Gonzalez
Display board [27A]

**CEFNS – Mechanical Engineering**

**Manufacturing Marvel**
Andrew Atkinson, Nicholas Dvorsky, Christopher Atkinson, Zaid Alzaid, Hamad Alshamlan
Display board [12C]

**Innovative Modeling of Diseased Vessels for Use in Endovascular Device Development**
Connor Gonzalez, William Bartholome, Kayla Goodrich, Anne Marie Holter, William Merritt, Amy Swartz
Display board [16A]

**Mobile In-Vitro Vessel Cast System**
Bradley Backus, Kyle Davis, David Despars, Chris Prodan
Display board [16B]

**Design of a Simple Test Fixture for a Powered Foot-Ankle Prosthesis**
Isaac Romero
Display board [1C]

**Thoracic Aorta Aneurysm Model**
Dominic Smith, Tanner Moll, Max Denhart, Michael Courville, William Reilly, Colin Strang, Darryl Hoffman
Display board [20B]

**The Wonder Factory**
Yongseok Park, Juan Shields, Ali Alkhaiyat, David Rankin
Display board [2C]

**Hozhoni Button**
Faleh Alajmi, Abdullah Alajmi, Majid Alenezi, Mutlaq Alajmi
Display board [3A]

**Aortic Aneurysm Vessel Model**
Lance Clothey, Trevor Crowe, Matthew Denike, Brandon Starks, Eric Adol
Display board [4B]

**Go-Baby-Go Team C**
Eric Trieu, Alwaleed Alhamra, Asrar Alkhhabbaz, Fawaz Almutairi, Sultan Almutairi
Display board [5A]

**SRP Fluids Analysis**
Thomas Hill, Clayton Surratt, Brianna Moore, Galen Geisinger, Abdullateef Alhumaidan, Abdulaziz Alanzi
Display board [5C]

**CNC Table for Routing Team A**
Jessica Collins, Jason Troxler, Micael Ljungberg, Bader Alfadhli, Uday Kadhum, Sara Hamadah
Display board [8C]

**Human Powered Vehicle**
Brooke Vails, Sergio Fajardo Jr., Zachary Goettl, Harley Gardner, Derrick Lemons, Stewart Lockhart
Display board [9C]

**SAE Micro Aero Design Competition**
Josh Gomez, Michael Medulla, John Cowan, Mohammad Qasem, Yaqoub Almounes
Display board [9D]

**CEFNS – Physics and Astronomy**

**Presence of Water on Near Earth Objects**
Raven Larson
Display board [24A]

**Modeling the Non-Euclidean Geometry of Flat Spacetime Using Projective Euclidean Surfaces**
Étude O’Neel-Judy
Display board [27C]

**Uranium, Radon, and Radiation Outreach**
Athena Talk
Display board [24C]

**Coevolution of Supermassive Black Holes and Their Host Galaxies**
Josephine Schindler
Display board [27D]
### CEFNS – Physics and Astronomy

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reclamation of Human Urine as a Fertilizer in an Off-Earth Colony</td>
<td>Josue Juarez</td>
<td>[28B]</td>
</tr>
<tr>
<td>Deformation Analysis of Advanced Materials Using Digital Holography</td>
<td>Olivia Thomas</td>
<td>[28D]</td>
</tr>
</tbody>
</table>

### CEFNS – School of Earth Sciences and Environmental Sustainability

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Flagstaff, AZ: Water Conservation Committee</td>
<td>Samuel Woodrich, Renata Vazquez, Dylan Ray, James Yurkovich</td>
<td>[17A]</td>
</tr>
<tr>
<td>Monitoring the Wickiup Creek: Understanding the Driving Processes of Erosion at the Wickiup Creek Watershed</td>
<td>Leah Manak, Sienna Chapman, Nathaniel Bransky, Jaime Cauthen, Peter Herron</td>
<td>[17C]</td>
</tr>
<tr>
<td>Invasive Species Management on the Colorado Plateau</td>
<td>Christopher Norris, Anabeth Avila Arenas, Elizabeth Bradley, Brittany Oxford</td>
<td>[18A]</td>
</tr>
<tr>
<td>Long Term Effects of Uranium Mining in Grand Canyon</td>
<td>Brooke Dalton, Trenton Anderson, Cody Folk, Kevin Merritt</td>
<td>[18C]</td>
</tr>
<tr>
<td>Determining the Disruption of the Little Colorado River by Past Eruptions of the San Francisco Volcanic Field</td>
<td>Amanda Ketting-Oliver</td>
<td>[19A]</td>
</tr>
<tr>
<td>Eruption Dynamics of Havre Volcano and Correlation of Particle Fragmentation with MFCI Process</td>
<td>Velveth Perez</td>
<td>[19C]</td>
</tr>
</tbody>
</table>

### CEFNS – School of Forestry

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison of Silicate Minerals from Unusual and Compositionally Extreme Igneous Rocks</td>
<td>Clotilde Sliva</td>
<td>[20A]</td>
</tr>
<tr>
<td>Central Arizona Project-Solar Installation Proposal: Securing a Sustainable Future through 'Capping the CAP'</td>
<td>Grayson Guenther, Dylan Morrison, Dylan Simone, Erica Peebles, Kevin Pugh</td>
<td>[21A]</td>
</tr>
<tr>
<td>Green Fund Projects</td>
<td>Lydia Smart</td>
<td>[21C]</td>
</tr>
<tr>
<td>Seismic Anisotropy of the Colorado Plateau</td>
<td>Trevor Pacion</td>
<td>[22A]</td>
</tr>
<tr>
<td>Ring Stacking and Hydrogen Bonds are Correlated with Aggregation and Structure of a Proposed Precursor of Modern Nucleotides.</td>
<td>Kevin Gochenour</td>
<td>[22C]</td>
</tr>
<tr>
<td>AZ Milkweeds for Monarchs</td>
<td>Emily Haworth</td>
<td>[23A]</td>
</tr>
</tbody>
</table>

### CEFNS – School of Informatics, Computing, and Cyber Systems

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximizing Cyanobacteria Filament Depth for Biocrusts Cultivation</td>
<td>Michael Morton, Kristina Young, Matthew Bowker</td>
<td>[14A]</td>
</tr>
<tr>
<td>WebApp for Teaching Authentic Spanish Language</td>
<td>Keith Saunders, Ashley Green, Andreas Salazar, Joshua Sommers, Nigel Sultan</td>
<td>[12A]</td>
</tr>
<tr>
<td>Orchard, an Automated Branching and State Management Tool for Big Data Analysis Pipelines</td>
<td>Christian Buskirk, Chris Blazer, Curtis Rose, Peter Bellagh, Jorden Kreps</td>
<td>[15C]</td>
</tr>
<tr>
<td>Reproducible Human Aneurysm Model</td>
<td>Clint Morris, Keegan Labanz, Jeremy Anderson, Khaled Alotaibi</td>
<td>[4C]</td>
</tr>
<tr>
<td>WibTeX: Reference Management System</td>
<td>Charles Duso, Jarid Bredemeier, Hayden Aupperle</td>
<td>[6A]</td>
</tr>
<tr>
<td>Improved Access to Kaguya Hyperspectral Image Data</td>
<td>Kelvin Rodriguez, Zowie Haugaard, Daniel Ohn, Christopher Philabaum, Makayla Shepherd</td>
<td>[6C]</td>
</tr>
<tr>
<td>Data Visualization on Enterprise Storage</td>
<td>Armondo Thomas, Joshua Melton, Alejandro Varela, Jack Barrett, David Miller</td>
<td>[7A]</td>
</tr>
</tbody>
</table>

### COE – Educational Psychology

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Relationship between Student Attributions for Academic Probation and Academic Success</td>
<td>Nicole Morrison, Rebecca Campbell, Paul Deasy, Sarah Abercrombie</td>
<td>[48B]</td>
</tr>
<tr>
<td>HHS – Communication Sciences and Disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **The Demographic Information of Patients Diagnosed with Concussions/Mild Traumatic Brain Injuries in Flagstaff, Arizona**  
Elora Palmer, Rebecca Faymon  
Display board [61B]  |
| **The Struggle: Effects of Second Language Acquisition on Young Students**  
Kayli Chambers  
Display board [61C]  |
| **Childhood Literacy and Communication**  
Caitlin Fagan  
Display board [61D]  |

<table>
<thead>
<tr>
<th>HHS – Dental Hygiene</th>
</tr>
</thead>
</table>
| **Reduction of Plaque and Gingivitis: Sonicare vs. Oral B Braun**  
Andrea Rosas  
Display board [62A]  |
| **Caries Treatment with Silver Diamine Fluoride**  
Nikol Nez  
Display board [62B]  |
| **Teeth Whitening Efficacy of Over-the-Counter 6% Hydrogen Peroxide Whitestrips Compared to At-Home 10% Carbamide Peroxide Gel Trays**  
Savannah Hill  
Display board [62C]  |
| **38% Silver Diamine Fluoride Effect on Caries Arrestment**  
Jessy Karchner  
Display board [62D]  |
| **Gluma® Compared to a Placebo in the Treatment of Dentin Hypersensitivity**  
Cassandra Ping  
Display board [63A]  |
| **Water Flossers Compared to Traditional Floss in Effectiveness of Plaque Removal**  
Bethany Haines, Bethany Haines  
Display board [63B]  |
| **Oil Pulling and Oral Health**  
Madeline Ransom  
Display board [63C]  |

<table>
<thead>
<tr>
<th>HHS – Health Sciences</th>
</tr>
</thead>
</table>
| **The Physiological Effects of Hydrocarbon and Noise on the Central Auditory Nervous System**  
Christi Williams  
Display board [68A]  |
| **Prenatal Care Awareness**  
Darien Fuller, Rene Oropeza, Katalina Olea, Shardonae Nua, Leonariya Charley  
Display board [69A]  |
| **Promoting Productive Life Skills in Summit High School Students through Nutrition and Soft-Skills Development**  
Nathan Stephens-Jackson, Emma McVeigh, Latifah Thompson, Mae Dallal, Jenny Gormley  
Display board [69B]  |
| **Public Health in Exam Rooms**  
Jonica Wilde, Rachel Linker, Kimberly Gwynn, Demerie Raymond, Hannah Jones  
Display board [69C]  |
| **Lifestyles Intervention for High Risk Middle School Students**  
Joshua Gates, Amy Gelatt, Kayla Hayes, Madeline Lyon  
Display board [69D]  |
HHS – Health Sciences

Yoga for the Future
Helene McOwen, Natalie Jaime, Hannah Nance
Display board [70A]

Evaluation of a Diabetes Support Group at North Country HealthCare
Ruby Meraz, Corina Ojeda, Damaris Molina, Natalie Sullivan
Display board [70B]

Beating Diabetes
Katherine Castro, Kathryn Fischer, Jaimelyn Paule
Display board [70C]

Hunger-Free Alliance Summer Program
Hally Manser, Bailey Lee, Jamie McDonald, Flor Rizo, Brianna Williams
Display board [71D]

Best Practice for Recovery Following Concussions: Questions Still Unanswered
Tori Bacher, Jessica Chavez
Display board [70D]

Using Echocardiography to Contrast the Difference in Stroke Volume between a Type II Diabetic and Non-Diabetic Heart during Exercise
Lyle Becenti, Chris Baldi, Genevieve Wilson
Display board [61A]

HHS – School of Nursing

Intensified Caregiver Workshop for Northern Arizona
Meridith Mattingly
Display board [71A]

Assertive Community Treatment for the Seriously Mentally Ill Patient
Thomas Bianciotto
Display board [71B]

Decreasing Pressure Ulcers with Improved Skin Assessments and Repositioning
Grace Kretschmar, Joseph Norton, Claire Spoelman
Display board [71C]

HONORS – Honors College

Eating on the Wild Side
Brittney Esser, Macy Jaeger, Paige Lighthipe, Emma Moreno, Heather Lobrigo
Display board [49A]

The Negative Implications of Human Manipulation on Agriculture: GMO’s and Pesticides
Madison Martz, Aspen Jack, Daryn Erickson, Elizabeth Brambert, Amber McGuire
Display board [49C]

The Cultural Significance of Peyote in Native American Tribes
Keizer Tumbagahan, Maddie Duarte, Jack Calderone, Ricardo Cordova
Display board [50A]

Blending Gender Lines: The New Makeup Trend
Gabriella Woydyla, Bailey Erwin, Miquela Goodson
Display board [50C]

Home Cooking vs. The Screen
Brittney Bibeault, Bethanie Stott, Bethany Johnston
Display board [51A]

An Interdisciplinary Approach to Scientific Translation and Communication or Why We Need Popular Science Journalists
Taylor Hartman
Display board [HONORS Easel]

Controversial Plants
Caroline Callaway, Richard Hamilton, Kyle Ghaby
Display board [51C]

SBS – Anthropology

The Stigma of Femininity in Black Males
Jeffery Mercado
Display board [104C]

Tales of the Closet: the importance of Stories for LGBTQ+ Community Members
Benjamin Miller
Display board [105A]

The Role of Ritual in the Jewish Community
America Freeman
Display board [108A]

Impacts of the Immigrant Travel on American Muslims Experiences
Nathan Grubb
Display board [108C]

Alcoholics Anonymous Group Study
Carter Kunkle
Display board [109A]

The Sociological Factors Surrounding the Voting Habits of College Students
Kayleigh Payne
Display board [109C]

The Subculture of Travelers in the Southwest
Ramsay Shannon
Display board [110A]

Developing Community Marketing and Distribution Strategies to Aid New and Established Farmers in Flagstaff
Christopher Singer
Display board [110C]

Funerary Practices of Arizona
Erin Turner
Display board [111A]

A Study of Language Use and Ritual in Religious Community
Clare Wallum
Display board [111C]
### SBS – Anthropology

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Language of the Internet</td>
<td>Sarah Stafford</td>
<td>[112A]</td>
</tr>
<tr>
<td>Native American Art and the Cultural Expression</td>
<td>Joseph Cromwell</td>
<td>[112C]</td>
</tr>
<tr>
<td>Casino Culture: A Study on the Life of a Gamble</td>
<td>Mason Roberts</td>
<td>[SBS-ANT Easel]</td>
</tr>
<tr>
<td>Taphonomic Tomb Raider: Understanding the Diagenesis of an Elite Tomb at the Ancient Maya Site of Xunantunich, Belize</td>
<td>Gavin Wisner, Katie Tappan, Dylan Wilson</td>
<td>[116B]</td>
</tr>
<tr>
<td>How Religion Shapes a Community</td>
<td>Monica Becker</td>
<td>[116C]</td>
</tr>
<tr>
<td>Weaning Effects on the Diet of the Children at the Prehistoric Site of Cerro Jazmin, Oaxaca, Mexico</td>
<td>Barbara Arriaga Espinoza, Patricia Aguinaga, Alexis Volta, Omar Gomez, Taylor Lambrigger</td>
<td>[116D]</td>
</tr>
</tbody>
</table>

### SBS – Applied Indigenous Studies

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researching Native American Children from a Strengths Perspective</td>
<td>Karen Getto</td>
<td>[127A]</td>
</tr>
</tbody>
</table>

### SBS – Communication

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disability Studies in College Courses</td>
<td>Jessica Sproull, Tyla Friemoth</td>
<td>[127D]</td>
</tr>
<tr>
<td>Communication Apprehension in College Majors</td>
<td>Ranessa Hurrell, Domenic Napue, Madison Webster</td>
<td>[129D]</td>
</tr>
<tr>
<td>What Makes People Laugh?</td>
<td>Briar Tately, John O’Shea</td>
<td>[130A]</td>
</tr>
<tr>
<td>A Critical Analysis of the Use of Humor in The Daily Show</td>
<td>Holly Overgsten, Tyler Mirkovich, Cynthia Yap, Blayne Hoe</td>
<td>[130B]</td>
</tr>
<tr>
<td>Memeitics</td>
<td>Dallas Diaz, Molly Weikart, Helen Idowu, Candice Cleland</td>
<td>[130C]</td>
</tr>
<tr>
<td>The Causes and Effects of Negative Social Media Comments</td>
<td>Conner Cassens, Eleanor Kerbleski, Ashley Olver, Rose Nolan</td>
<td>[130D]</td>
</tr>
</tbody>
</table>

### SBS – Criminology and Criminal Justice

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opinions of the Death Penalty</td>
<td>Taylor Axlund, Marcelena Olea, Zachery Strange, Cole Benson</td>
<td>[117C]</td>
</tr>
<tr>
<td>Perceptions of Consent</td>
<td>Tasauna Brown, Lauren Scobee, Karolina Pieja, Stephanie Sapp</td>
<td>[118A]</td>
</tr>
<tr>
<td>Student Stalking Experiences</td>
<td>Jacquelyn Cook, Ethan Novak, Scott Schrank, Camryn Dryden, Tatiana Kurach</td>
<td>[118C]</td>
</tr>
<tr>
<td>Effects of Religiosity on Police Perceptions</td>
<td>Sara Griffin, Jacob Hernandez, Jason Hunsaker, Cassandra Coyle</td>
<td>[119A]</td>
</tr>
<tr>
<td>Attitudes towards Guns Shaped by Adolescent Experiences</td>
<td>Zachary Haglin, Breanna Krasovich, Shayla Servis, Thomas Chance</td>
<td>[119C]</td>
</tr>
<tr>
<td>Parenting Methods Impact on Police Perception</td>
<td>Dominic Dominguez, Caleb Sanchez, Ravin Caliva, Anthony Noonan, Emerick Martinez</td>
<td>[120A]</td>
</tr>
<tr>
<td>Opinions of Capital Punishment on a College Campus</td>
<td>Brianna Averett, William Wetherell, Glynnis Everett, Nick Dilettoso</td>
<td>[120C]</td>
</tr>
<tr>
<td>Gun Perception and Media</td>
<td>Nicholas Chu, Fernando Minjarez, Valentine Doria, Vanessa Angel</td>
<td>[121A]</td>
</tr>
<tr>
<td>Here for the Party</td>
<td>Madelin DeVar, Alyena Colbrook, Natalie Snyder, Allison Beauchamp, Alexis Webber</td>
<td>[121C]</td>
</tr>
<tr>
<td>Social Media Use in Connection with Alcohol and Marijuana Use</td>
<td>Steven Flis, Megan White, Alex Erickson, Donald Mastriona</td>
<td>[122A]</td>
</tr>
<tr>
<td>Effects of Binge Drinking among College Students and Greek Life</td>
<td>Jacob Mentzer, Brian Guy, Noel Noriega, Nick Tanquary</td>
<td>[122C]</td>
</tr>
<tr>
<td>The Relationship of Financial Strain and Social Attachment to Dating Violence</td>
<td>Madeline Prunty, Leigh Leininger, Marina McGarry, Lola Shembab, Rylie Grizzle</td>
<td>[123A]</td>
</tr>
<tr>
<td>Parental and Child Drug Use</td>
<td>Fritzen Ramsey, John Crews, Marina Emerson, Tyler Elam</td>
<td>[123C]</td>
</tr>
<tr>
<td>Changing the World through Education</td>
<td>Kaitlyn Welk-Robbins, Austin Cibik, Rachel Bracken, Liana Paquin</td>
<td>[123D]</td>
</tr>
<tr>
<td>High Functioning Anxiety on College Campuses</td>
<td>Mariydan Roberson-Rocha, Jacqueie Bolden, Robert Stewart, Alexis Covey</td>
<td>[124A]</td>
</tr>
<tr>
<td>Discrimination on a College Campus</td>
<td>Victoria Weissinger, Dieon Parker, Nicholas Nasca, Grayson Liggett</td>
<td>[124C]</td>
</tr>
<tr>
<td>SBS – Criminology and Criminal Justice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Public Perceptions of the U.S. Military</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eric Williams, Jacob Lopez, Ruth Dominguez, Eric Williams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display board [125A]</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Music and Aggression</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alora Zellhuber, Shomari Bitsuie, Erika Diaz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display board [125C]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SBS – Politics and International Affairs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Laws and Policies Regarding Felony Charges</strong></td>
</tr>
<tr>
<td>Samantha Aragon</td>
</tr>
<tr>
<td>Display board [91C]</td>
</tr>
<tr>
<td><strong>Building Social Capital through Multicultural Policies: Analysis of the Hyper-Diversity of Montreal</strong></td>
</tr>
<tr>
<td>Gavin Furrey</td>
</tr>
<tr>
<td>Display board [92A]</td>
</tr>
<tr>
<td><strong>The Effect of the Private Prison Industry and Increased Criminalization of Undocumented Workers on the Food Industry</strong></td>
</tr>
<tr>
<td>Rebecca Weiss</td>
</tr>
<tr>
<td>Display board [92C]</td>
</tr>
<tr>
<td><strong>Social Movements</strong></td>
</tr>
<tr>
<td>Simone Green, Alexa Salazar, Julian Kanter, Hallie Theriault, Christopher Fields</td>
</tr>
<tr>
<td>Display board [93A]</td>
</tr>
<tr>
<td><strong>Political Participation – Undergraduate NAU Students</strong></td>
</tr>
<tr>
<td>Grayson Guenther, Jessica Borders, Noah Creek, Madeline Waddell</td>
</tr>
<tr>
<td>Display board [93C]</td>
</tr>
<tr>
<td><strong>Political Attitudes</strong></td>
</tr>
<tr>
<td>Lauren L’Ecuyer, Nick Dellisanti, Hannah Noelle Cook, Patrick Garvey, Hollie-Dee Hodgson</td>
</tr>
<tr>
<td>Display board [94A]</td>
</tr>
<tr>
<td><strong>Attitudes towards Political Correctness on NAU Campus</strong></td>
</tr>
<tr>
<td>Cole Miller, Jessica Olas, Maitland Lonquist, Elizabeth A Hansen, Cole Miller, Jasmine Chamblin</td>
</tr>
<tr>
<td>Display board [94C]</td>
</tr>
<tr>
<td><strong>Wahhabism and Saudi Arabia</strong></td>
</tr>
<tr>
<td>Rashed Alabhou</td>
</tr>
<tr>
<td>Display board [95A]</td>
</tr>
<tr>
<td><strong>The Evolution of Private Military Contractors to Private Military Companies</strong></td>
</tr>
<tr>
<td>John Bower</td>
</tr>
<tr>
<td>Display board [95C]</td>
</tr>
<tr>
<td><strong>Environmental Security: Thinking about the Future</strong></td>
</tr>
<tr>
<td>Cameron Rood</td>
</tr>
<tr>
<td>Display board [96A]</td>
</tr>
<tr>
<td><strong>Changing the Culture of Concussion Reporting: An Inductive Approach for Concussion Reporting Strategies</strong></td>
</tr>
<tr>
<td>Krystal Koehler, Keragan Cavolo, Courtney Lanzi, Robin Sommer, Taylor Lane, Patrick Doyle</td>
</tr>
<tr>
<td>Display board [101C]</td>
</tr>
<tr>
<td><strong>Adaptive Memory: Boundaries and Influences of the Survival Advantage</strong></td>
</tr>
<tr>
<td>Bradley Dishong, Michael Alban, Elizabeth Fitzekam, Kayla South-Beck, Celeste Stratton, Austin Guida</td>
</tr>
<tr>
<td>Display board [102A]</td>
</tr>
<tr>
<td><strong>Culture and Happiness</strong></td>
</tr>
<tr>
<td>Mackenzie Bryson, Berenice Carballo</td>
</tr>
<tr>
<td>Display board [102C]</td>
</tr>
<tr>
<td><strong>Empathic Accuracy and Electroencephalographic Differences between Self and Other</strong></td>
</tr>
<tr>
<td>Nathan Cruz, Dylan Barbera, Christopher Woodruff, Anthoni Goodman, Brett Velez, A. Sanchez, Nathan Cruz</td>
</tr>
<tr>
<td>Display board [103A]</td>
</tr>
<tr>
<td><strong>The Impact of Sexual Harassment on Eating Disorders</strong></td>
</tr>
<tr>
<td>Perla Palomares, Cassandra Mort, Sydnee Stogner, Sydney Vallin</td>
</tr>
<tr>
<td>Display board [103C]</td>
</tr>
<tr>
<td><strong>The Potential Role of Problem Finding in Mathematics Education</strong></td>
</tr>
<tr>
<td>Dianna Johnson</td>
</tr>
<tr>
<td>Display board [104A]</td>
</tr>
<tr>
<td><strong>Trait Disgust Sensitivity as a Predictor for Overall Greater Unpleasant Rating</strong></td>
</tr>
<tr>
<td>Leah Norris</td>
</tr>
<tr>
<td>Display board [96C]</td>
</tr>
<tr>
<td><strong>Working Memory Symmetry Span Tasks and Phonological Similarity Effects</strong></td>
</tr>
<tr>
<td>Kelsey Landstrom, Nicole Bies-Hernandez</td>
</tr>
<tr>
<td>Display board [96D]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SBS – Psychological Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Are You Smarter than a Capstone Student? Assessment of Critical Thinking Skills in Psychology Classes</strong></td>
</tr>
<tr>
<td>Chris Cade, Vinnie Cullotta, Hannah Lillie, Nora Dunbar</td>
</tr>
<tr>
<td>Display board [100A]</td>
</tr>
<tr>
<td><strong>Atitudes about Food</strong></td>
</tr>
<tr>
<td>Brianna Hughes, Ann Futterman Collier</td>
</tr>
<tr>
<td>Display board [100C]</td>
</tr>
<tr>
<td><strong>A Study of Hypnotically-Suggested Peripheral Vasomotor Control</strong></td>
</tr>
<tr>
<td>Mark Gauthier-Braham</td>
</tr>
<tr>
<td>Display board [101A]</td>
</tr>
<tr>
<td><strong>Art-Making in Undergraduate Abnormal Psychology Classes</strong></td>
</tr>
<tr>
<td>Danielle Misiak, Ann Collier</td>
</tr>
<tr>
<td>Display board [97A]</td>
</tr>
<tr>
<td><strong>Impact of Quiet Ego Contemplation on Stress &amp; Well-Being: Does Virtual Reality Make a Difference?</strong></td>
</tr>
<tr>
<td>Robin Sommer, Keragan Cavolo, Noel Schad</td>
</tr>
<tr>
<td>Display board [97C]</td>
</tr>
<tr>
<td><strong>Anxiety, Daily Dysfunction, and Sleep Disturbance in Undergraduate Students</strong></td>
</tr>
<tr>
<td>Haley Duncan, Anna Robertson, Allie Jessen, Lauren Ellis, Ashley Duncan, Savannah Jackson</td>
</tr>
<tr>
<td>Display board [98A]</td>
</tr>
<tr>
<td><strong>Impact of Physical Activity on Diet Behavior</strong></td>
</tr>
<tr>
<td>Savanna Jackson, Allie Jessen, Anna Robertson, Ashley Stanley, Lauren Ellis, Haley Duncan</td>
</tr>
<tr>
<td>Display board [98C]</td>
</tr>
<tr>
<td><strong>Let’s Keep It Casual: Comparing Friends with Benefits Relationships to Platonic Friendships</strong></td>
</tr>
<tr>
<td>Alexandra Tyra, Andrew Haynes, Melikis Demir</td>
</tr>
<tr>
<td>Display board [99A]</td>
</tr>
<tr>
<td><strong>Analysis of Possible Effects of Race and Gender on Motivations to Attend College</strong></td>
</tr>
<tr>
<td>Amanda Wolcott, Anthony Camacho, Jacob Coutts, Dana Donohue</td>
</tr>
<tr>
<td>Display board [99C]</td>
</tr>
<tr>
<td><strong>Survival Processing versus Transfer Appropriate Processing</strong></td>
</tr>
<tr>
<td>Austin Guida, Bradley Dishong, Celeste Stratton, Kayla South-Beck, Elizabeth Fitzekam</td>
</tr>
<tr>
<td>Display board [SBS-PSY Easel]</td>
</tr>
<tr>
<td>Title</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>End Homelessness: In What Ways Are Veterans at Risk of Homelessness, and What Mental Health Needs Are Currently Unmet among Veterans Here in Flagstaff</td>
</tr>
<tr>
<td>Family Violence</td>
</tr>
<tr>
<td>Stamp of Approval: Perceptions of Tattoos</td>
</tr>
<tr>
<td>Empathy Levels among Those with and without Siblings</td>
</tr>
<tr>
<td>Awareness of School-Aged Children with Hyper-Active Behavior</td>
</tr>
<tr>
<td>Stressed Out at NAU</td>
</tr>
<tr>
<td>Arizona Drug Crime Rates and Smart Decarceration</td>
</tr>
<tr>
<td>Benefits of Technology in Social Work Practice</td>
</tr>
<tr>
<td>End Homelessness</td>
</tr>
<tr>
<td>Impact of Family Violence</td>
</tr>
<tr>
<td>Drawing the Line: Child Discipline vs. Abuse</td>
</tr>
<tr>
<td>The Social Perceptions of Homeless Individuals Re-Entering Society</td>
</tr>
<tr>
<td>Eating Habits and Income</td>
</tr>
<tr>
<td>Is America Racist?</td>
</tr>
<tr>
<td>The Importance of Establishing Disability Studies as a Diversity Course</td>
</tr>
<tr>
<td>Supporting the LGBTQ community in Flagstaff</td>
</tr>
<tr>
<td>(Sex) Tourism is Also Colonizing the Global South</td>
</tr>
<tr>
<td>Implications of Historical Trauma on Sexuality, Gender, and Race</td>
</tr>
<tr>
<td>Dancehall: A Lens of Analysis of Caribbean Female Sexuality</td>
</tr>
<tr>
<td>An Exploration of the Negative Relationship between Mental Health and Lesbian, Gay Bisexual, Transgender, and Queer Youth</td>
</tr>
<tr>
<td>An Exploration of the Negative Relationship between Mental Health and Lesbian, Gay Bisexual, Transgender, and Queer Youth</td>
</tr>
</tbody>
</table>
30 | POSTER LISTINGS: MORNING SESSION

SBS – Women’s and Gender Studies

**Black Subjectivities in Bloom: the Prosumption of Afro-German Discourse After the 1980s**
Stevie Gunter
Display board [74B]

**No Pride in Visibility: Stonewall, Marriage Equality and Orlando**
Jessica Hidalgo, Daniel Vanrachack
Display board [74D]

**The Role of Sexuality and Islamophobia in Swedish Nationalist Political Rhetoric**
Connor Huenneke
Display board [75B]

**The Economic Collapse of Argentina: Gender, Sexuality and Neoliberal Agendas**
Kahla Lauinger
Display board [75D]

**Recovering Black British Feminism: the Legacy of Politically Black Feminist Organizing in the 1980s and the Exclusion of Black Lesbian Women**
Sue Lemos
Display board [76B]

**The Perfect Man: An Exploration of Onnabe’s Access to Power and Agency within the Host Club Scene**
Mollie McElligott
Display board [76D]

**Islam, Sexuality and the Global North**
Nina Morales
Display board [77B]

**Transnational Tourism in the Caribbean: Sites of Recolonization and Imperialism**
Meredith Prentice
Display board [77D]

**Ni Aquí Ni Allá: An Analysis of Transgender Migrants in the United States and Their Disidentification, Disconnection, and Disassociation**
Celeste Tabares
Display board [78B]

**Sex Workers in Early American History**
Marie Tomisato
Display board [78D]

**Will Making Sex Work Legal Create a Safer Environment for Sex Workers?**
Adaline Walter, Adaline Walter
Display board [79B]

**Naked: Exposed or Empowered**
Hollie White
Display board [79D]

---

**Luncheon for CEFNS Presenters, Faculty Mentors, and Judges**
Keynote Speaker: Martin Casado

**“Creating a Tech Startup; What I Wish They Would Have Told Me”**

Martin Casado, PhD
General Partner
Andreessen Horowitz

Friday, April 28, 2017
11:30 AM – 1 PM
du Bois Ballroom

---

**LUNCH**

**Skydome Stage B: Honors Convocation & Awards Ceremony**

11:45 AM – 1:00 PM
## AFTERNOON SESSION

### Skydome CAL Floor

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Figures and Their Relationship to Light</strong>&lt;br&gt;CAL, School of Art&lt;br&gt;Hailee Sattley</td>
<td>2 PM - 4 PM</td>
<td>Exhibit</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Independent Study Live Painting</strong>&lt;br&gt;CAL, School of Art&lt;br&gt;Markie Scheidegger</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Independent Study Live Painting</strong>&lt;br&gt;CAL, School of Art&lt;br&gt;Hana Lipke</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Throwing Pottery on a Potter’s Wheel</strong>&lt;br&gt;CAL, School of Art&lt;br&gt;Connor Slunaker, Sara Larosa, Elijah Pilkington, Matthew Wheeler, Mathew Carpenter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Skydome CAL Table

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meet The Tunnels</strong>&lt;br&gt;CAL, English&lt;br&gt;Karen Renner</td>
<td>2 PM - 4 PM</td>
<td>Exhibit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Skydome CIE Table

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summer Study Abroad in Paris and Barcelona</strong>&lt;br&gt;CIE, School of Art&lt;br&gt;Mckaylee Lemon</td>
<td>2 PM - 4 PM</td>
<td>Exhibit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Skydome FCB Table

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tasting the World</strong>&lt;br&gt;FCB, Hotel Restaurant Management&lt;br&gt;Elise Fraher, Jessica Dimas, Kerry Anderson</td>
<td>2 PM - 4 PM</td>
<td>Exhibit</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>From Scratch to Table</strong>&lt;br&gt;FCB, Hotel Restaurant Management&lt;br&gt;Christian Balderas, Christian Salem, Josh Daniel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Skydome SICCS Table

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quantum Key Distribution: A BB84 Implementation</strong>&lt;br&gt;CEFNS, School of Informatics, Computing, &amp; Cyber Systems&lt;br&gt;Leah Collins, Brayden Villa, Bradley Racey, Enrich Kronberger</td>
<td>2 PM - 4 PM</td>
<td>Exhibit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

## Skydome Roundtable 1 (R1)

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30 PM - 2:55 PM</td>
<td>Skydome Roundtable 1 (R1)</td>
<td>Roundtable Discussion</td>
<td>Housing in Flagstaff</td>
<td>SBS, School of Communication&lt;br&gt;Josie Weiland</td>
</tr>
</tbody>
</table>

---

## Skydome Stage A

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 PM - 1:55 PM</td>
<td>Skydome Stage A</td>
<td>Oral Presentation</td>
<td>Mindfulness and Physical and Mental Health</td>
<td>HONORS, Honors College&lt;br&gt;Maddie Cripe, Dominic Barrueto, Kendall Chapman, Jacob Mitchell, Skylar Weber, Erin Langmead</td>
</tr>
</tbody>
</table>

---

## Skydome Stage B

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30 PM - 1:45 PM</td>
<td>Skydome Stage B</td>
<td>Oral Presentation via Skype</td>
<td>Discrimination against the Marginalized: Assessing the Influences of Various Characteristics</td>
<td>SBS, Undergraduate Studies&lt;br&gt;Emma Rivera</td>
</tr>
<tr>
<td>2 PM - 2:17 PM</td>
<td>Skydome Stage B</td>
<td>Film Exhibit</td>
<td>Art of the People</td>
<td>SBS, Anthropology&lt;br&gt;Jalyn Gagnon, Kiril Kirkov</td>
</tr>
</tbody>
</table>

---

## Skydome Roundtable 1 (R1)

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 PM - 3:55 PM</td>
<td>Skydome Roundtable 1 (R1)</td>
<td>Oral Presentation</td>
<td>Mindful and Pro-Social Teaching and Learning</td>
<td>HONORS, Honors College&lt;br&gt;Lisa Chu, Amanda McDonald, Nikki Patane, Heidi Shepard, Bethany Durham, Esme Erdynast</td>
</tr>
</tbody>
</table>

---

## Skydome Stage B

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:20 PM - 2:37 PM</td>
<td>Skydome Stage B</td>
<td>Oral Presentation</td>
<td>BioSemiotics: Meaning, Purpose and Communication in the Natural World</td>
<td>CAL, Philosophy&lt;br&gt;Miles Scull</td>
</tr>
<tr>
<td>2:40 PM - 2:57 PM</td>
<td>Skydome Stage B</td>
<td>Oral Presentation</td>
<td>Angels, Dolls, and Playthings: Charlotte Brontë’s War on Repression</td>
<td>CAL, English&lt;br&gt;Tyler Clark</td>
</tr>
</tbody>
</table>
Skydome Stage C

Dystopian Video Games & Virtual Reality

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 PM</td>
<td>Just Press X: Understanding</td>
<td>Alexander Hatch, Montgomery Glaser, Kyle Savery, Joshua Johnson</td>
</tr>
<tr>
<td>1:20 PM</td>
<td>Virtual Reality: Actuality or Illusion</td>
<td>Patricia Lester, Desiree Enriquez, Julia Harris, Andrew Acosta</td>
</tr>
<tr>
<td>1:40 PM</td>
<td>Finding More than This: The Virtual Realities of Global Warming</td>
<td>Makena Booker, MacKenzie Goodrow, Ashley Harlan</td>
</tr>
</tbody>
</table>

Aliens & Monsters

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 PM</td>
<td>Critical Alien Theory: Xenophobia and Racism in Alien Films</td>
<td>Gabriella Johnson, Madeline Hubly, Sergina Maignan</td>
</tr>
<tr>
<td>2:20 PM</td>
<td>Frankenstein: The Details Are in the Monster</td>
<td>Alicia Chavez, Andrew Servis, Zach Bell, Ian Milletto</td>
</tr>
<tr>
<td>3 PM</td>
<td>The Evolution of Teen Dystopias</td>
<td>Layne Elder, Chelsea Hintgen, Sierra Bard, Shannon Connor</td>
</tr>
<tr>
<td>3:20 PM</td>
<td>The Source of the Dark Side: Authoritarian Regimes in Star Wars</td>
<td>Holly McEnaney, Ethan Vieane</td>
</tr>
</tbody>
</table>

Skydome Stage D

Sexualization of Female Bodybuilding and Female Modeling

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 PM</td>
<td>Sexualization of Female Bodybuilding and Female Modeling</td>
<td>Joshua Kielman, Hanna Joralmon</td>
</tr>
<tr>
<td>2:20 PM</td>
<td>Gender and Sexuality of People with Intellectual and Developmental Disabilities</td>
<td>Devon Swanson, Kaley Schafer</td>
</tr>
<tr>
<td>2:40 PM</td>
<td>The Ins and Outs of Intersexuality: a Help Website</td>
<td>Brooke Cayo, Mackenzie Gargano, Anna Harris</td>
</tr>
</tbody>
</table>

Traditional Courtship & Sexual Deviants in the 18th Century

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 PM</td>
<td>18th Century Courting 101</td>
<td>Kelli Williams, Hunter Daniel, Joshua Baxter, Kai Lah Esona</td>
</tr>
<tr>
<td>3:20 PM</td>
<td>French Kissing: Sexual Deviance in 18th c. France and Britain</td>
<td>Sean Buechel, Kathrynn Meyers, Haley Duncan</td>
</tr>
<tr>
<td>3:40 PM</td>
<td>Hamilton: The Original American Hipster</td>
<td>Sarah Henley, Haley Kimble, Cynthia Ortiz, Kris Schindele</td>
</tr>
</tbody>
</table>

University Union – Havasupai AB Room

Capstone Project - The Wonder Factory

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 PM</td>
<td>Capstone Project - The Wonder Factory</td>
<td>Tim Walters, Aaron Ake, Ahmad Alowais, Mohammed Aldossari, Mohammed Alqhahtani</td>
</tr>
<tr>
<td>2:25 PM</td>
<td>The Wonder Factory</td>
<td>Yongseok Park, Juan Shields, Ali Alkhaiyat, David Rankin</td>
</tr>
<tr>
<td>2:50 PM</td>
<td>Hozhoni Button</td>
<td>Faleh Alajmi, Abdullah Alajmi, Majid Alenezi, Mutlaq Alajmi</td>
</tr>
</tbody>
</table>

University Union – Havasupai C Room

Human Powered Vehicle

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 PM</td>
<td>Human Powered Vehicle</td>
<td>Brooke Vails, Sergio Fajardo Jr., Zachary Goettl, Harley Gardner, Derrick Lemons, Stewart Lockhart</td>
</tr>
<tr>
<td>2:25 PM</td>
<td>SAE Micro Aero Design Competition</td>
<td>Josh Gomez, Michael Medulla, John Cowan, Mohammad Qasem, Yaqoub Almounes</td>
</tr>
</tbody>
</table>

Modified Bicycle Motion

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 PM</td>
<td>Modified Bicycle Motion</td>
<td>Eric Trieu, Alwaleed Alhamra, Asrar Alkhabbaz, Fawaz Almutairi, Sultan Almutairi</td>
</tr>
<tr>
<td>3:45 PM</td>
<td>Go Baby Go Team C</td>
<td>Shahar Estkanani, Yossef Aliraqam, Yossef Alenezi, Saleh Almasari, Husse Alajmi</td>
</tr>
</tbody>
</table>

CNC Table for Routing Team A

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:50 PM</td>
<td>CNC Table for Routing Team A</td>
<td>Jessica Collins, Jason Troxler, Micael Jungberg, Bader Alfadhi, Uday Kadhum, Sara Hamadah</td>
</tr>
<tr>
<td>3:45 PM</td>
<td>Manufacturing Marvel</td>
<td>Andrew Atkinson, Nicholas Dvorsky, Christopher Atkinson, Zaid Alzaid, Hamad Alshamian</td>
</tr>
</tbody>
</table>
## University Union – Havasupai C Room

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter(s)</th>
<th>Title/Abstract</th>
</tr>
</thead>
</table>
| 3:45 PM - 4:10 PM | Mobile In-Vitro Vessel Cast System  
CEFNS, Mechanical Engineering  
Bradley Backus, Kyle Davis, David Despars, Chris Prodan | Innovative Modeling of Diseased Vessels for Use in Endovascular Device Development  
CEFNS, Mechanical Engineering  
Connor Gonzalez, William Bartholome, Kayla Goodrich, Anne Marie Holter, William Merritt, Amy Swartz |
| 4:10 PM - 4:35 PM | Oral Presentation  
Christopher Forgach, Maryam Albanna  
Maylee Kevorkian, David Handy, CEFNS, Mechanical Engineering | Characteristic Time Test Automation  
CEFNS, Mechanical Engineering  
William Wilson, Eric Adolf  
Brandon Starks, Eric Adolf |
| 2:50 PM - 3:15 PM | Oral Presentation  
Wonder Factory Maze Solving Robot  
CEFNS, School of Informatics, Computing, and Cyber Systems  
Ariana Garcia, Brennen Boudreaux, Paeton Keller, Matthew Robertson, Megan Ross | Ultra-Light Solar Aircraft  
CEFNS, Mechanical Engineering  
Joshua Nobis, Gabriel Vega, Ivan Morales, Aria McCardell, Jesse Rheingold, Sydney Goodman |

## University Union – Kaibab Room

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter(s)</th>
<th>Title/Abstract</th>
</tr>
</thead>
</table>
| 2 PM - 2:25 PM | Adobe Brick Suitability  
in Coconino County  
CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Nick Westphal, Eva Rowe | The Use of Carbonated Cement Kiln Dust as a Soil Stabilizing Amendment  
CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Tung Do, Abdullah Alqattan, Mohammad Alhulalia, Mohammad Altaraki |
| 2:25 PM - 2:50 PM | Oral Presentation  
Carbonated Cement Kiln Dust (CCKD) as a Partial Cement Substitute  
CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Mohamed Jait, Felicia Curry, Aide Robbies, Ali Altameemi | Arizona Magma Mine Preliminary Assessment and Site Inspection  
CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Jessica Szaro, David Finley, Josue Juarez |
| 2:50 PM - 3:15 PM | Oral Presentation  
Findlay Toyota OHV Park  
CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
William Gil, Trandon Struck, Abdulmalik Alajlan, Miranda Aakre | Big Beam and Robin: PCI Big Beam  
CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Qusai Alghalbi, Kacy Aoki, Mohammed Alradhi, Rick Wilson |
| 3:20 PM - 3:45 PM | Oral Presentation  
The Use of Carbonated Cement Kiln Dust as a Soil Stabilizing Amendment  
CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Tung Do, Abdullah Alqattan, Mohammad Alhulalia, Mohammad Altaraki | Reproducible Human Aneurysm Model  
CEFNS, School of Informatics, Computing, and Cyber Systems  
Clint Morris, Keegan Labanz, Jeremy Anderson, Khaled Aloabi |
| 2:25 PM - 2:50 PM | Oral Presentation  
Aortic Aneurysm Vessel Model  
CEFNS, Mechanical Engineering  
Lance Clothey, Trevor Crowe, Matthew Denike, Brandon Starks, Eric Adolf | Thoracic Aorta Aneurysm Model  
CEFNS, Mechanical Engineering  
Dominic Smith, Tanner Moll, Michael Munoz, Douglass Begay |

## University Union – Sycamore Room

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter(s)</th>
<th>Title/Abstract</th>
</tr>
</thead>
</table>
| 2 PM - 2:25 PM | Oral Presentation  
SRP Fluids Analysis  
CEFNS, Mechanical Engineering  
Thomas Hill, Clayton Surratt, Brianna Moore, Galen Geislinger, Abdullah Alhumaidan, Abdulaziz Alanzi | Improved Access to Kaguya Hyperspectral Image Data  
CEFNS, School of Informatics, Computing, and Cyber Systems  
Kelvin Rodriguez, Zowie Haugaard, Daniel Ohn, Christopher Philabaum, Makayla Shepherd |
| 3:45 PM - 4:10 PM | Oral Presentation  
Collegiate Wind Competition  
CEFNS, Mechanical Engineering  
Melissa Hoover, Joshua Danny, Chase Donnell, Jesus Bravo, Brent McFarlane, Rafeal Vera | Wonder Factory Maze Solving Robot  
CEFNS, School of Informatics, Computing, and Cyber Systems  
Ariana Garcia, Brennen Boudreaux, Paeton Keller, Matthew Robertson, Megan Ross |
| 4:10 PM - 4:35 PM | Oral Presentation  
Low-Power Wind Turbine Boost Converter  
CEFNS, School of Informatics, Computing, and Cyber Systems  
Mary Koehler, Victor Rinaldi, Jails Min, Yukun Qie | Thoracic Aorta Aneurysm Model  
CEFNS, Mechanical Engineering  
Dominic Smith, Tanner Moll, Michael Munoz, Douglass Begay |

## University Union - Walnut AB Room

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter(s)</th>
<th>Title/Abstract</th>
</tr>
</thead>
</table>
| 2 PM - 2:25 PM | Oral Presentation  
TaylorMade-Adidas Golf Company Characteristic Time Test Automation  
CEFNS, Mechanical Engineering  
Maylee Kervorkian, David Handy, Christopher Forgach, Maryam Albanna | Improved Access to Kaguya Hyperspectral Image Data  
CEFNS, School of Informatics, Computing, and Cyber Systems  
Kelvin Rodriguez, Zowie Haugaard, Daniel Ohn, Christopher Philabaum, Makayla Shepherd |
| 2:25 PM - 2:50 PM | Oral Presentation  
Solitude Design Vesta Drying and Heating Bag  
CEFNS, Mechanical Engineering  
Christopher Ivie, Avery Baker, Julianne Benson | Collegiate Wind Competition  
CEFNS, Mechanical Engineering  
Melissa Hoover, Joshua Danny, Chase Donnell, Jesus Bravo, Brent McFarlane, Rafeal Vera |
| 2:50 PM - 3:15 PM | Oral Presentation  
Ultra-Light Solar Aircraft  
CEFNS, Mechanical Engineering  
Joshua Nobis, Gabriel Vega, Ivan Morales, Aria McCardell, Jesse Rheingold, Sydney Goodman | Low-Power Wind Turbine Boost Converter  
CEFNS, School of Informatics, Computing, and Cyber Systems  
Mary Koehler, Victor Rinaldi, Jails Min, Yukun Qie |

Search for presenters, titles, and abstracts at the event kiosks or online at nau.edu/symposium
### University Union - Walnut AB Room

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:50 PM</td>
<td>Oral Presentation</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>Oral Presentation</td>
</tr>
<tr>
<td>3:15 PM</td>
<td>Oral Presentation</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Oral Presentation</td>
</tr>
</tbody>
</table>

#### Data Visualization on Enterprise Storage
CEFNS, School of Informatics, Computing, and Cyber Systems
Armando Thomas, Joshua Melton, Alejandro Varela, Jack Barrett, David Miller

#### WibTeX: Reference Management System
CEFNS, School of Informatics, Computing, and Cyber Systems
Charles Duso, Jarid Bredemeier, Hayden Aupperle

### Skydome Floor: Posters (2 PM – 4 PM)

#### CAL – English

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characterization of Linguistic Gender in 1970 American Fiction</td>
<td>Kaitlin Olson</td>
<td>[52B]</td>
</tr>
<tr>
<td>Does Length of Speech Time Affect Listeners’ Perception?</td>
<td>Leigh Kimble</td>
<td>[52D]</td>
</tr>
</tbody>
</table>

#### CAL – Global Languages and Cultures

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>El Uso de la Metáfora Como Instrumento Persuasivo en el Discurso Político</td>
<td>Shirley Springer</td>
<td>[53B]</td>
</tr>
<tr>
<td>Sistemas de Aplicación de la Ley</td>
<td>Montana Edgar</td>
<td>[53D]</td>
</tr>
</tbody>
</table>

#### CAL – Philosophy

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philebus 28a-30d and 55d-67d: Commentary on the Grammar and Vocabulary of Plato on God and the Good.</td>
<td>Hayden Niehus</td>
<td>[54B]</td>
</tr>
<tr>
<td>Philebus 31a-55b: Commentary on Grammar and Vocabulary of Plato on the Forms of Pleasure</td>
<td>Brianna Zgurich, George Rudebusch</td>
<td>[54C]</td>
</tr>
</tbody>
</table>

#### CAL – School of Art

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Display board</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Four-Legged Seasons</td>
<td>Haley Battung</td>
<td>[55D]</td>
</tr>
<tr>
<td>Defying Gravity</td>
<td>Victoria Bordelon</td>
<td>[56B]</td>
</tr>
<tr>
<td>Whistle Stop Café: Rehabilitating a Historic Building</td>
<td>Kathryn Brower</td>
<td>[56D]</td>
</tr>
<tr>
<td>Meadowgrove Farms: A Younglife Camp</td>
<td>Julia Cieslak</td>
<td>[57B]</td>
</tr>
<tr>
<td>Ski Haus Ski and Snowboard Shop Relocation and Renovation</td>
<td>Emilee Coultrap</td>
<td>[57C]</td>
</tr>
<tr>
<td>Arizona Snowbowl Remodel and Expansion</td>
<td>Nicolette Kay</td>
<td>[58B]</td>
</tr>
<tr>
<td>TV and Film Studio Take on Edgy Sustainable Design</td>
<td>Camille Manalili</td>
<td>[58D]</td>
</tr>
<tr>
<td>Modern Meets Authentic Mexican</td>
<td>Ilse Ornelas</td>
<td>[59B]</td>
</tr>
</tbody>
</table>
CAL – School of Art

V’POSH Los Angeles Corporate Fashion Headquarters
Jamie Whyle
Display board [59D]

NAU South Campus Library Proposal
Rachel Fulcher
Display board [CAL-ID Easel]

Rockhouse Playschool Daycare Remodel
Shanley Infranca
Display board [CAL-ID Easel]

CAL – Theatre

Creating the Modern Mythic Figure: Abraham Lincoln in Suzan-Lori Parks’ The America Play and Topdog/Underdog
Hector Ramirez
Display board [55A]

CEFNS - Biological Sciences

Nutrition and the Healing of Fractures
Madison Gerber
Display board [31B]

Temporal Dynamics of C. tuberculostearicum-Induced Sinusitis
Shari Kyman, Irene Zhang
Display board [31D]

Variation in Intensity of Infection by Echinostoma metacercaria in Bullfrog Tadpoles from Four Northern Arizona Water Treatments
Tiffany Tran
Display board [32B]

Do Lymph Nodes from Hunted Elk and Deer Make Informative Targets for Assessing Wildlife Disease Prevalence?
Isaiah Selff, Carrington Knox-Hilson, Anne Justice-Allen, Esther Rubin, David Wagner, Dawn Birdsell
Display board [32D]

Arsenic Exposure Health Effects in Western Mosquitofish, Gambusia affinis
Kalai Kollus, Riley Smith, Catherine Propper
Display board [33B]

Identification of Antigens from B. pseudomallei for Diagnostic Assay Development Using Experimentally Challenged Rhesus Macaques
Kyle Headley, Erik Settles, Courtney Seavey, Austin Shannon
Display board [33D]

Are Clostridium difficile Infections Only Spread in the Hospital? Reservoirs of C. difficile in Flagstaff, AZ
Amalee Nunnally, Nathan Stone, Heidie Hornstra-O’Neill, Jason Saul, Carmel Plude, Jacob Vinocur, David Wagner
Display board [34B]

Reducing the Average Shelter Length of Stay for Geriatric Canines
Emily Bowen
Display board [34D]

Do Body Shape Affect Jump Performance in Killifishes?
Ashlee Bussey, Michael Minicozzi, Alice Gibb
Display board [35D]

Improving Melioidosis Treatment: Detecting Antibiotic Resistant Mechanisms in Burkholderia pseudomallei
Sierra Jaramillo, Carina Hall, Adina Doyle, Josie Delisle, Jim Schupp, Jason Sahl, Vanessa Theobald
Display board [36B]

Investigating a Human Plague Case in Madagascar’s Capital after 17 Years of No Reported Cases
Heather Centner, Carina Hall, Dawn Birdsell, Minoarisoa Rajerison, Kekely Voahangy, Soanandrasana Rahelinirina, Maherisoa Rasitorsorahina
Display board [36D]

Selfing within the Preferentially Outcrossing Leech, Helobdella modesta (Hirudinida: Glossiphoniidae).
Cassidy Klovanshi, Shay Young, James Boothroyd
Display board [37B]

Seasonal Trends in Larrea Tridentata Leaf Starch
Linnea Gear
Display board [38B]

Detection of Streptococcus gallolyticus and Closely Related Species in Precursor Colorectal Cancer Clinical Samples
Cherae Bilagody, Monica Yellowhair, Mark Linhart, Sonora Olivas, Emily Kaufman, Heidi Hornstra-Oneill, Greg Caporaso
Display board [38D]

How Climate Conditions Affect Bee Communities along Elevation Gradients
Arcelia Isaia-Gastelum, Jeremy Scuderi
Display board [39B]

Cytotoxic Effects of Essential Oils on Bacterial Biofilms
Agneszka Szumka, Austin J. Garcia
Display board [39D]

Ionic Liquids Sterilize and Prevent Biofilm Formation in Skin Wound Healing Devices
Tatum Bardsley, Maxwell Zimmerman, Andrew Koppisch, Nathan Nieto, Robert Kellar
Display board [40B]

Electrospray Aligned Fibers That Mimic White Matter Tracts in the Brain
Chloe Ng, Martha Fowler, Robert Kellar
Display board [40D]

Characterization of Glandular Trichome Exudate on Yellow Monkeyflower (Mimulus guttatus).
Evan Mee, Liza Holeski
Display board [41B]

Interactions between Nitrogen Fixing Bacteria and Switchgrass for Sustainable Biofuel Production
Ryan Lanciaone, Daniel Revillini, Nancy Johnson
Display board [41D]
<table>
<thead>
<tr>
<th>CEFNS - Biological Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plant and Pollinator Interactions between Forest and Meadow Habitat Types along the C. Hart Merriam Elevation Gradient</strong></td>
</tr>
<tr>
<td>Britanny Oxford</td>
</tr>
<tr>
<td>Display board [42B]</td>
</tr>
<tr>
<td><strong>Molecular Epidemiology of Cryptosporidiosis in León, Spain, during the Year 2015</strong></td>
</tr>
<tr>
<td>Daniella LaPlante, Maria Benito, Maria Antonia Remacha, Maria Teresa Fernandez, Encarna Rubio, Joanna Cielszyk, Benning Tieke</td>
</tr>
<tr>
<td>Display board [42D]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CEFNS - Civil Engineering, Construction Management, and Environmental Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Presence of Coliform in Oak Creek Canyon</strong></td>
</tr>
<tr>
<td>Kylie Hemmele, Zachary Singer, Kenny Kreslake</td>
</tr>
<tr>
<td>Display board [10B]</td>
</tr>
<tr>
<td><strong>Impacts of Snowmelt Runoff on Water Quality</strong></td>
</tr>
<tr>
<td>Daniel’le DeVoss, Jason MacDonald, Kylie Dykstra, Artem Lezhniuk</td>
</tr>
<tr>
<td>Display board [10D]</td>
</tr>
<tr>
<td><strong>CRKL Engineering</strong></td>
</tr>
<tr>
<td>Camille White, Robert Hoppe, Elizabeth Tague, Kyle Weiss</td>
</tr>
<tr>
<td>Display board [11B]</td>
</tr>
<tr>
<td><strong>Numerical Verification of Large-Scale Concrete Deep Beams</strong></td>
</tr>
<tr>
<td>Yijie Gao, Robin Tuchscherer</td>
</tr>
<tr>
<td>Display board [11D]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CEFNS - Mathematics and Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Game of Chance Inspired by Othello</strong></td>
</tr>
<tr>
<td>Alexandria Medeck</td>
</tr>
<tr>
<td>Display board [26B]</td>
</tr>
<tr>
<td><strong>Infinite Trees of Primitive Pythagorean Quadruples</strong></td>
</tr>
<tr>
<td>Marcela Gutierrez, Courtney Schmitt</td>
</tr>
<tr>
<td>Display board [26D]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CEFNS - Mechanical Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Honeywell Endurance Valve Test</strong></td>
</tr>
<tr>
<td>Bianka Carnacho, Dustin Young, Cameron Schlatter, Garrett Murphy, Georgie Macdonald, Lance Gomez</td>
</tr>
<tr>
<td>Display board [12B]</td>
</tr>
<tr>
<td><strong>Steering Wheel Not Included</strong></td>
</tr>
<tr>
<td>rnes Distajo, Samuel Williams, Abdullah Alajmi, Abdulrahman Almutairi, Mohammad Aljuaidi</td>
</tr>
<tr>
<td>Display board [13A]</td>
</tr>
<tr>
<td><strong>Unified Sumo Robot D</strong></td>
</tr>
<tr>
<td>Rene Diyarza, David Feetterer, Jose Villegas, Yousef Alghareeb</td>
</tr>
<tr>
<td>Display board [13D]</td>
</tr>
<tr>
<td><strong>Hozhoni Cleaning Crew</strong></td>
</tr>
<tr>
<td>Hasan Alkhafeer, Fahad Alameeni, Amber Juare, Hussain Alwateeb, Calvin Schnorbus</td>
</tr>
<tr>
<td>Display board [1B]</td>
</tr>
<tr>
<td><strong>Sumo Bot Team B</strong></td>
</tr>
<tr>
<td>Roman Lopez, Abdulwahhab Alhabashi, Abdullah Alshammarl, Sulaiman Alhabashi</td>
</tr>
<tr>
<td>Display board [1D]</td>
</tr>
<tr>
<td><strong>Design for Disability - Hozhoni Art A</strong></td>
</tr>
<tr>
<td>Ahmad Alotaib, Madison Douglass, Mohammad Alotaibi, Haitham Almohammedsaleh, Waleed Ahmad</td>
</tr>
<tr>
<td>Display board [2B]</td>
</tr>
<tr>
<td><strong>Hozhoni Garden Device</strong></td>
</tr>
<tr>
<td>Ahmad Akhezzi, Mike Marner, Saad Alajmi, mobarak Aligena, Khaled Alanezi</td>
</tr>
<tr>
<td>Display board [2D]</td>
</tr>
<tr>
<td><strong>In Home Gravity Harness</strong></td>
</tr>
<tr>
<td>Hasan Farman, Khaled Alosaimi, Noah Oliver, Eileen Baker, Armando Garcia</td>
</tr>
<tr>
<td>Display board [3B]</td>
</tr>
<tr>
<td><strong>Hozhoni Art Team B</strong></td>
</tr>
<tr>
<td>Yongzhen Li, Jarrah Albahati, Rakan Alhayraf, Aly Alharbi, Abdulrahman Almarri</td>
</tr>
<tr>
<td>Display board [3C]</td>
</tr>
<tr>
<td><strong>NAU Sumo Bot Competition Team A</strong></td>
</tr>
<tr>
<td>Graham Rose, Hunter Lane, Sean Sussman, Jordan Ziegler</td>
</tr>
<tr>
<td>Display board [3D]</td>
</tr>
<tr>
<td><strong>Remote ECG Monitoring Kit to Predict Patient-Specific Hearth Abnormalities</strong></td>
</tr>
<tr>
<td>Kathryn Carpenter, Jiaming Chen</td>
</tr>
<tr>
<td>Display board [4A]</td>
</tr>
<tr>
<td><strong>Secondary Ion Mass Spectrometry (SIMS)</strong></td>
</tr>
<tr>
<td>Isaiah Cons, Sharna Beahm, Riley Ducey, Ben Hardesty</td>
</tr>
<tr>
<td>Display board [4D]</td>
</tr>
<tr>
<td><strong>Honeywell Powder Amplifier</strong></td>
</tr>
<tr>
<td>Nicole Mitich, Isaac Romero, Jacob Setzer, Savana Bezdieck, Luke Plumb</td>
</tr>
<tr>
<td>Display board [5B]</td>
</tr>
<tr>
<td><strong>Go-Baby-Go Universal Controller</strong></td>
</tr>
<tr>
<td>J. Clare Willis, Leia Trice, Luke Lockard, Taylor Tacket, Colter Hooker, Alex Thomas</td>
</tr>
<tr>
<td>Display board [5D]</td>
</tr>
<tr>
<td><strong>Orbital ATK Rocket Separation System</strong></td>
</tr>
<tr>
<td>Sage Pasternakci, Amanda Crawford, Christian Johnson, Roberto Gonzalez, Garrett Wright</td>
</tr>
<tr>
<td>Display board [8A]</td>
</tr>
<tr>
<td><strong>Robo Games: Sumo and Bartending Robot</strong></td>
</tr>
<tr>
<td>Gunnar Molony, Andrew Farnam, Christian Dooley, Zheng Liu</td>
</tr>
<tr>
<td>Display board [8B]</td>
</tr>
</tbody>
</table>
CEFNS - Mechanical Engineering

Orbital ATK Low Shock Payload Separation System
Dylan McAdams, Craig Choate, John Buskirk, Neal Murphy, Brett Larzalere
Display board [8B]

GoBabyGo Team B (Universal Control)
Mohammad Alotaibi, Eid Alotaibi, Salman Aldousein
Display board [9B]

CEFNS - Physics and Astronomy

Flagstaff RObotic Survey Telescope (FROST) Software Development
Michael Rynders
Display board [23D]

Orbital ATK Low Shock Payload Separation System
Dylan McAdams, Craig Choate, John Buskirk, Neal Murphy, Brett Larzalere
Display board [8B]

A Midsummer Night’s Dream: Thermal Inertia of Oberon and Titania from Q-Band Observations of Eclipses
Rashawn Briscoe
Display board [24B]

Comparison of Structure from Motion to LiDAR Data for Geomorphic Change Detection
Nathaniel Bransky
Display board [24D]

Turbulent Gas Motion in Interacting Galaxy Systems
Connor Auge
Display board [27B]

Hydrothermal Alteration Analysis from the Flynn Creek Impact Crater
Haley Leonard
Display board [28A]

Numerically Simulating Gradient Alloy Materials
Robert Castellanos
Display board [28C]

CEFNS - School of Earth Sciences and Environmental Sustainability

Releasing Water into the Rio de Flag
Lane Stevens, Kristian Cordell, Ian Ooley
Display board [17B]

Invasive Species Informational Pamphlet and Lesson Plan
Micah Mossman, Christopher Dehoff, Arcelia Isaas-Gastelum, Austin Rueda, Dallen Ward
Display board [17D]

Sustainable Living Initiative
Meaghan Hager-Garman, Lauren Peters, Michael Vaughn
Display board [18B]

Understanding the Expanding Population of Flagstaff, Arizona
Michael Anthony, Steven Groves, Nicholas Horvatich
Display board [18D]

Understanding the Effects of Talc Mineralization on Bio Signature Preservation in Stromatolites Carbonates
Adam Hoffmann
Display board [19B]

The Benefit of Bat Houses on Rangelands and Agricultural Spaces
Bruno Calderon Rivas, Amanda Ulmer, Alexis Arriola
Display board [19D]

Chemical Signatures and Implications for the Provenance of the Green River Basin, Wyoming
Kiley Sheehan
Display board [20D]

Communicating Forest Restoration Projects on the Observatory Mesa
Alyse Crutcher, Gabriela Glavan, Makenna Hopwood, Jackson Salazar, Hannah Russell
Display board [21B]

Explosive Hazards of Scoria Cones and Chemistry of Magma Xenocrysts, Red Mountain, AZ
Daniel Van Gundy, Nancy Riggs, Lane Stevens
Display board [21D]

CEFNS - School of Forestry

The Future of Southwestern White Pine
Patrick White
Display board [14B]

Effect of Restoration Treatments and Forest Type on Soil Microarthropod Communities in Valles Caldera National Preserve
Channing Laturno, Kara Gibson, Anita Antoninka, Nancy Johnson
Display board [14D]

CEFNS - School of Informatics, Computing, and Cyber Systems

Prototyping a Dynamic Lift System for Assisted Mobility
Dustin Branges
Display board [13B]

Virtual Reality Assisted Data Analysis
John Miscevich, Liam Burke
Display board [7C]

Improved Efficiency Using Digital Control for an Electrical Grid Converter
Christopher Leffler, Ryan Lee, Christian Endsley, Omar Almuharrami, Kaylub Hempfl, Anthony Sagg
Display board [7D]

FlagFriends Group Matching Application
Brandon Garling, Matt Nielsen, Clarissa Calderon, Mohammad Alsobhi, Xiangzi Cao
Display board [15A]
**CEFNS - School of Informatics, Computing, and Cyber Systems**

Automated Website Testing  
Max Wason, John Sadie, Peter Haschke, Jason Le  
Display board [15B]

Remote Telescope Activity Monitor  
Gage Cottrell, Alexander Sears, Chris French, Justin Kincaid  
Display board [6B]

NAZ Animal Welfare Task Force  
Educational Pet Adoption Tool  
Marjorie Hahn, Frankie Berry, Steven Gruenewald, Riley Shelton, Matthew Siewierski  
Display board [15D]

High Performance Computing Cluster Visualization Tool  
Michael Gilbert, Brandon Allen, Don Speer, Tanner Stevens, Andrew Stebenne  
Display board [6D]

The Virtual Office Door  
Tyler Tollefson, Nicolas Melillo, Mitchell Hewitt, James Hauser, David Snow  
Display board [20C]

KineTrax, a Wearable Device for Recording Kinematics in a Community Setting  
Christopher Whitney, Anthony Black, Cherie Parsons, Grant Swenson, Jack Jenkins  
Display board [7B]

**CIE - Center for International Education**

Animal House: An Analysis of the Faunal Remains of an Elite Tomb at the Ancient Maya Site of Xunantunich, Belize  
Katie Tappan, Gavin Winston, Dylan Wilson  
Display board [60A]

Using Echocardiography to Contrast the Difference in Stroke Volume between a Type II Diabetic and Non-Diabetic Heart during Exercise  
Lyle Becenti, Chris Baldi, Genevieve Wilson  
Display board [80B]

VO2max Change after HIIT Exercise in Abdominal Surgical Patients  
Nicole Beiley, Chris Baldi, Genevieve Wilson  
Display board [80D]

Understanding Maori Health Identities  
Cameri Taylor, Shalene Yazzie  
Display board [60C]

Every Layer is an Event: Place-Based Research in Santorini, Greece  
Jenna Chaffeur, Erin Kaplan  
Display board [60D]

**COE - Educational Leadership**

Perceptions of Teacher Autonomy in Locally Managed, Start-Up Charter Schools: A Qualitative Approach  
Brandon VanBibber  
Display board [48A]

**COE - Educational Specialties**

Student Engagement and Lesson Plan Revisions  
Mariah-Janice Easley  
Display board [48C]

**FCB - Business Economics**

Voting Rights  
Carlos Rascon, Samuel Owens-Hess  
Display board [44A]

Education  
Erica Bronner, Matthew Mazon, Gabriel Vega  
Display board [44B]

Minimum Wage  
James Gerdes, Jackson Reynolds, John Herrero  
Display board [44C]

The Public Choice Aspects of the Privatization of the Prison System  
Richard Robertson, Mitchell Abernathy, Xinzhu Chen, Jerred Edwards  
Display board [44D]

Public Choice Analysis of Political Structures  
Samuel Rondou, Zachary Ewing, Tristan Soriano, Brett Anibas  
Display board [45A]

Federal Policy Reform  
Brenna Lenihan, Jonathan Hoffman-Sanchez, Michael Mullen, Vince Ricco  
Display board [45B]

**FCB - Marketing**

Plastic Pollution in the Ocean  
Erick Campos, Jack Katz  
Display board [45C]

Marketing for Society – Anti-Hazing  
Kyle Culler, Georganna Foos, Nick Valenzuela  
Display board [45D]

Drinking & Driving among College Students  
Jack Giovinazzo, Justin Allen  
Display board [46A]

The Importance of Art Education  
Samantha Kvarda, Jonathan Mills, Clarissa Ducie  
Display board [47A]

Promoting Arts Education in Schools  
Clarissa Ducie, Jonathan Mills, Samantha Kvarda  
Display board [46C]

Starting the Conversation  
Felice Jiron, Brenna Campbell  
Display board [46D]

FCB - Marketing
**FCB - Marketing**

**Freeing Svay Pak**  
Elora Laier, Jacob Matheson, James Kendle  
Display board [47B]

**Oak Creek Watershed Council - Client Marketing Plan**  
Aitong Jiang, Marc Cooper, Kyle Hivon, James Kendle, Daniela Calderon, Xuewei Zhao  
Display board [47C]

**HONORS – Honors College**

**Punishments in 18th Century England**  
Scottie Bayles, Lydia Clarke, Kylie Warner, Elizabeth Noone  
Display board [51D]

**Children with Deafness: Sign Language versus Oral Upbringing**  
Olivia Burross  
Display board [50D]

**The 18th Century Court System’s Prejudice against Class**  
Lydia Clark, Scottie Bayles, Elizabeth Noone, Kylie Warner  
Display board [51B]

**Where’s the Feminism in Public Health Practice?: Evaluating a Health Education Program through a Feminist Lens**  
Emma McVeigh  
Display board [HONORS Easel]

**Power, Politics and Inequality: An Examination of Water Resource Management in Colombia**  
Philip Rody  
Display board [49B]

**Are Brain Measures of Empathy Affected by Perceptions of an Other’s Criminal Status?**  
Tyanna Billy  
Display board [113B]

**The Prehistory of Death and the Afterlife in Southeast Asia**  
Louisa Tribiana  
Display board [108D]

**The Prehistory of Death and the Afterlife**  
Arnolde van Osch  
Display board [109B]

**The Prehistory of Death and the Afterlife**  
Reyna Santiago  
Display board [113D]

**Helping Past and Present Veterans in our Community**  
Tia Mitchell, Alexandria O’Hara, Sonya John  
Display board [113C]

**The Prehistory of Death and the Afterlife**  
Katelyn Willsey  
Display board [109D]

**The Prehistory of Art in Europe**  
Mary Harrington  
Display board [112B]

**No More Deaths: Increasing Awareness and Funds**  
Barbara Arriaga Espinoza, Kelly Sloan  
Display board [112D]

**The Prehistory of the Domestication of Plants**  
Hannah Romero  
Display board [107D]

**Cultural Resource Management Collaboration Capstone**  
Kelsey Gruntorad, Shawn Dennehy, Wendel Navenma, Greg Allen  
Display board [115A]

**Native Americans and Diabetes**  
Charlene Black  
Display board [115B]

**The Common Language: An Anthropological Investigation of the Flagstaff Craft Beer Industry**  
Sierra Serna, Philip Rody, Amanda Warda  
Display board [115C]
**SBS - Anthropology**

**Exploitation of the Undocumented:**
*The Systematic Trivialization of Immigrant Rights*
Vanessa Savel
Display board [115D]

**Anthropology and Flagstaff Music**
Greg Henderson
Display board [116A]

**The Prehistory of Food/Nutrition in South America**
Chandler Leo
Display board [117A]

**The Way of Life**
Aidan Perea
Display board [117B]

**SBS - Applied Indigenous Studies**

**The Untouched Mind: Indigenous Knowledge and PTSD**
Elmer Jackson
Display board [126A]

**Violence against Native American Women**
Kiyanie Haungooah
Display board [126B]

**Understanding Health Disparities Using Indigenous Research methodologies**
Helene McOwen
Display board [126C]

**Language Barriers in Research and Surveys**
Leonariya Charley
Display board [126D]

**Indian Health Service + Rez Dogs = Happy I.H.S. Clients**
Adrian Hedding
Display board [127B]

**Promote Indigenous Youth Empowerment by Community-Based Nation Re-Building**
Tyanna Billy
Display board [127C]

**SBS - Civic Engagement**

**Internship at Habitat for Humanity of Northern Arizona**
Haley VanAllen
Display board [81A]

**Environmental Advocacy Intern with Friends of Flagstaff’s Future**
John Meyer
Display board [81B]

**Market of Dreams – LONGEVITY PROJECT**
Paige LaBreche
Display board [81C]

**Civic Engagement Minor Capstone: Internship**
MarleyMae Webster
Display board [81D]

**Alcohol Consumption and its Effect on Sexual Assault**
Daniel Barela, Nalleli Perez, Derek Kaiser, Orianna Hernandez
Display board [117D]

**Secret Slavery**
Ambree Borg, Mackenzie Magill, Claire Filler, Abigail Hillman
Display board [118B]

**Hyper Masculinity and its Relationship with Domestic Violence**
Nicholas Clayton, Evan Cawthon, Matt O’Dwyer, Alfredo Rodriguez
Display board [118D]

**Texting and Driving as a Public Health Issue**
Luke Million, Jacqueline Padilla, Ruby Martinez Arjona, Jazzmine Ecker
Display board [119B]

**Partnering with Child Help**
Sarah Rivituso, Lorena Lechuga-Gutierrez, Max Gomez
Display board [119D]

**Domestic Violence: Why?**
Samantha Becerra
Display board [120D]

**Perceptions of Wrongful Conviction**
Caylie Hilgart, Amanda Alonso, Wade Coull, Jared Fries, LaKisha Wheat
Display board [121B]

**So You Think You’re Unbiased?**
Camille Le Delli, Paris Johnson, Haley Timar, Hanna Jacobs, Sasha Elbeck
Display board [121D]

**Sexual Violence on College Campuses**
Whitney Nowlen, Kaitlin Donnelly, Marissa Gallagher, Montana Edgar
Display board [122B]
The Elements of Hip-hop: How Hip-hop Is More than Just Music
Kaitlyn Welk-Robbins, Victoria Friedli, Adam Moreno, Jordan Myers, Cristian Rivera
Display board [80B]

Hidden Figures within Hip Hop
Shyann Carter-Wade, Rodrigo Bello, Lissette Flores, Tiffany Brown, Gabe Villareal, Bekka Alvarado
Display board [80C]

Generation Hip Hop
Celeste Tabares, Rafael Lopez, Robert Vaiza, Jackson Hukari, Alanna Grady
Display board [80D]

Acceptance and Commitment Therapy for Chronic and Persistent Pain: A Systematic Literature Review
Adisen Hennessey, Sarah Jones
Display board [100B]

Family-Focused Treatment for Bipolar Disorder in Children
Savannah Jackson, Leah Norris
Display board [100D]

Cognitive Behavioral Therapy for Depression in Adults: A Systematic Literature Review
Kauaikekai Lara, Daniel Reza, Alena Martinez
Display board [101B]

A Systematic Literature Review of Dialectical Behavior Therapy on Borderline Personality Disorder in Adulthood
Joseph Mendoza, Taylor English
Display board [101D]

Virtual Reality Exposure Therapy for Social Anxiety Disorder: A Systematic Literature Review
Itzel Ramirez, Shaundeen Sixkiller, Amber Chrisman
Display board [102B]

The Impact of Parent-Child Interaction Therapy on Oppositional Defiant Disorder: A Systematic Literature Review
Sahar Shakoori, Jalen Prayer
Display board [102D]

Systematic Literature Review of the Coping Cat Practice
Mackenzie Staies-Ziemann, Marc Lizcano, Stephany Malatasta
Display board [103B]

Motivational Interviewing for Child Substance Abuse: A Systematic Literature Review
Kaitlyn Stumme, Kaitlyn Stumme, Emerson Friedrich-Gullberg
Display board [103D]

The Impact of Maudsley Family Therapy for Anorexia Nervosa: A Systematic Literature Review
Melanie Townsend, Alexandra Carillo
Display board [104B]

A Systematic Literature Review of Cognitive Behavioral Therapy for Attention Deficit Hyperactivity Disorder in Adults
Anastasia White, Gabrielle Marson
Display board [104D]

Impact of Prosocial Lyrics among Different Genres on Empathetic Responses
Cassandra Flynn, Lauren Kotrba, Adelin Duraps, Olivia Hankins
Display board [82B]

The Relationship between Parenting Styles and Depression
Nicole Morrison, Paloma Rochin, Hailey Heldt, Alison Gregg
Display board [82D]

The Effect of Parenting Styles on Self-Esteem
Morgan Sweeney, Brooke Nelson, Nicole Hallett, Chandler Leo
Display board [83B]

Academic Locus of Control and Academic Anxiety
Melinda Irvin, John Mendoza, Hailee Schlip, Noel Schad
Display board [83D]

Unsolicited Sexual Advances In Person versus Online and Self Esteem
Lina Dunbar, Emily Jerdonek, Kendall Weber, Jordynne Black
Display board [84B]

Facial Recognition Accuracy as Affected by the Other-Race Effect
M Jessica Griego, Kendall Galat, Cynthia Ortiz, Marisa Carroll
Display board [84D]

Cha(RA)cter: Define Yourself
Breanna Hernandez, Jennifer Squires, Juliana Hill, Kaitlyn Verfuerth, Jasmine Cahill
Display board [85B]

Psychedelics, Mindfulness, and Optimism
Nicole Lucas, Mindy Feldman, Madison Schear, Aaron Fleming
Display board [85D]

The Effect of Gender and Nicotine Consumption on Self-Esteem
Taylor Scott, Karla R. Lopez, Matthew Schall, Katie Saline
Display board [86B]

Cosmetic Use among College Women
Rosa Batista, Bryanna Cazares, Kaley Greenman, Miquela Goodson, Katelyn Kjesbo
Display board [86D]

Exploring the Relationship between Social Rejection and School Shootings
Fernanda Wolburg Martinez, Colton Rippey, Amber Killgore
Display board [87B]

Do You Really Know You?
Carly Fiel, Shyla Butcher-Silife
Display board [87D]

The Effect of Attractiveness on Perceived Criminality
Kaitlyn Fohs, Jessica Lintel, Hannah Meenan, Blane Hernandez
Display board [88B]

Color and Perceived Attractiveness
Brenna James, Spencer Murphy, Samantha Kerley, Krissy Wolf
Display board [88D]

Nature and Mindfulness
Blake Piper, Lauren Ellis, Christiane Harris, Martin Cummings
Display board [89B]

Self-Compassion and Test Anxiety
Brittany Weese, Tristan Bern, Anna Harris, Josie Sheets
Display board [89D]

Emotions and Opinions about Social Issues
Amber Lanzer, Tyler Griner, Katherine Barton, Jaden Pawlak
Display board [90B]
Do LGBT+ Students Experience More Stress on College Campuses?  
Haley Duncan, Samantha Davis, Phillip Guzman  
Display board [90D]

Is Instagram Associated with Mood Change?  
Christina Mastrosimone, Anthony Aldape, Carly Down, Jennifer Sexton  
Display board [94D]

Engagement Levels and Memory within the Classroom  
Alexis Hardy, Maren Greve, Caitlyn Seymour, Mackenzie Morgan-Morton  
Display board [91B]

Emotional Impact of Online Memes  
Katherine Radics, Michelle Firchow, Danielle Camarillo, Alexis Kaczmarowski  
Display board [95B]

Self-Compassion in Romantic Relationships  
Ashley Emans, Madelyne Churchill, Kyria Jack, Dayana Villarreal  
Display board [91D]

Perceptions of Rape of College Campuses  
Ally Winterrowd, Lauren Geneviro, Breena New, Michael Goodell  
Display board [96B]

Stress and Time Management: A Lover’s Quarrel  
Tanner Glen, Jennifer Westermann, Rodrigo Bello, Arlena Gannon  
Display board [92B]

Music and First Impressions  
Alexandria Aguayo, Jordan Chandler, Megan White, Anna DeMatteo  
Display board [92D]

The Effects of Elicited Disgust on Moral Judgement  
Amber Jones, Kainan Jarrette, Maria Espinoza  
Display board [93B]

Cognitive Behavioral Therapy for Generalized Anxiety Disorder: A Systematic Literature Review  
Molly Bjerk, Yennifer Robles  
Display board [97B]

The Correlation between Physical Health and Self-Esteem  
Paulina Joniec, Chris Hockenberry, Makenna McAllister, Sydnee Hausberger  
Display board [93D]

Cognitive Behavioral Therapy for Schizophrenia: A Systematic Literature Review  
Madison Bohan, Makenzie Wilkins  
Display board [98B]

Childhood Experiences and Personality  
Autumn Lousautanau, Elliot Yount, Katrina Dobson, Lorenzo Celis  
Display board [94B]

A Systematic Literature Review of Behavioral Therapy versus Serotonin Inhibitors on Obsessive Compulsive Disorder  
Luis Castro, Alissa Apter-Prodger  
Display board [98D]

Behavioral Therapy/Behavioral Activation Therapy for Major Depressive Disorder: A Systematic Literature Review  
Samantha DeWolf, Lorena Lechuga Gutierrez  
Display board [99B]

The Impact of Cognitive Processing Therapy on Posttraumatic Stress Disorder: A Systematic Literature Review  
Makayla Gray, Israel Urbina-Muniz  
Display board [99D]

Nigeria’s Radicalized Islamist Terrorist Group: Boko Haram  
Kelsey Landstrom  
Display board [83C]

How Do Mainstream Media Outlets Shape Public Opinion on Environmental Issues?  
Sarah Spainhower  
Display board [72A]

Mindfulness and Adolescent Stress  
Aspen Lewis  
Display board [72C]

Do Video Games Alter People’s Behavior?  
Hugo Arzola  
Display board [73A]

Using Exercise as a Treatment for Bipolar Disorder.  
Derek Bean  
Display board [73C]

Colony Collapse Disorder  
Lucas Faircloth  
Display board [74A]

Decoding the Book of Genesis through the Use of Equidistant Letter Sequences, Gematria and Search Visualizer  
Karen Getto  
Display board [74C]

Sustainable Agriculture and Obesity: Can We Solve More than the Environmental Crisis with Local Food Systems?  
Emma Geurts  
Display board [75A]

Rehabilitation for Human Trafficking Victims  
Regine Gibson  
Display board [75C]

Cognitive Behavioral Therapy for Schizophrenia: A Systematic Literature Review  
Madison Bohan, Makenzie Wilkins  
Display board [98B]

The Cause & Effect of Shoe Pricing  
Isaiah Kennedy  
Display board [76C]

The Influence of Gender Roles on Horror Cinema  
Emma Kukulski  
Display board [77A]

What are the Causes Leading to the Violence & Crime in Chicago?  
Jaleni Neely  
Display board [77C]
### Accessibility Information

**Walkup Skydome**
- Parking: Lot P66 (SE of the building) is the closest.
- Entrance: Accessible entrance E side of building.
- Elevator: Yes, two, one on the SW side and one on the N side.
- Restrooms: on Concourse level and field level, both all gender and single stall.

**du Bois Center**
- Parking: Lot P45 (S of the building) is the closest.
- Entrance: Accessible entrance SW side of building.
- Elevator: Yes, center of building.
- Restrooms: on first floor and basement.

**University Union**
- Parking: Lot P16A (S of the building) is the closest accessible parking.
- Entrance: The accessible entrance is the main entrance located on the west side of the building.
- Elevator: Yes, located to the east of the main entrance just before the path of travel slopes down.
- Restrooms: Due to construction, the only bathrooms are the two all-gender restrooms on the first floor near Student Life and the Inclusion and Multicultural Services center. There are additional restrooms on the first floor near the Hot Spot as well.
Thank You

We wish to thank the faculty, staff, graduate students, judges, volunteers, moderators, and student ambassadors, without whom this event would not have been possible.

A special thanks goes to the Organizing Committee, especially Becky Butcher, MaryLynn Quaratori, Bryan Sherwood, and Rob Morrison, and to all the faculty mentors, individuals, companies, organizations, and grant programs that assisted students in the completion of their internships or their research, creative, and design projects.

2017 Judges

We gratefully acknowledge the following faculty, staff, alumni, and friends who volunteered to judge for CEFNS, HHS, and SBS. Thanks, also, to the volunteers who signed up after the program print deadline and could not be acknowledged.

College of Engineering, Forestry, and Natural Sciences Judges

David Able
Fatemeh Afghah
Chuck Albrecht
Ali Ali
Ana Araya-Anchetta
Stephanie Arcusa
Kayla Arendt
Danielle Avbrey
Molly Bechtel
Stasia Begley
Paul Begovac
Rebecca Best
Thomas Bethune
Dawn Birdsall
Terence Blows
Brian Blue
Helen Botthwell
Joelene Bowers
Sandra Brown
Hannah Budnoff
Bertrand Cambou
John Cardani
Archie Carreon
Darron Clark
Jill Cocking
Amy Cohlen
John Compton
Kathleen Conak
Mitta D’Arcol
Kevin Daly
Marie Daly
Pradeep Dass
Todd Davis
Yann-Olivier De Joynancourt De Charnes
Barbaros Demircan
JB DeVitt
Danielle Dillon
Michael Downey
Phil Dudas
Haley Duleavay
Samrat Dutta
Dana Ernst
Ana Paula Fabio Carvalho
Pena Stoga
Daniel Foley
Bruce Fox
Joshua Froum
Aubrey Funke
Alicia Garner
Richard Gerkin
Patrick Goodman
Barbara Goodrich
Nelle Gopaal
Henry Grover
Carina Hall
Heidi Hansen
Bill Heibel
Anthony Hessel
Alexandra Heyert
Richard Hofstetter
Marisol Holder
Liza Holeski
Allison Holmes
Heide Hornstra O’Neill
Henry Hooper
Kathy Howe
Jari Ingram
Victor Jimenez Jr
Renée Jordan
Katie Kaori
Monika Kandil
Kara Keltt
Grace Kelland
Cindy Klingberg
Daniel Klingberg
Benjamin Koch
Mike Konitzer
Samantha Kruse
Paul Kulinski
Rebecca Laszcz
Troy Lorents
Mark Major
Elizabeth Mallett
Linda Mangelsdorf
Timothy Mangelsdorf
Melissa Mark
Porter Marter
Rebecca Mau
Marguerite Mauritz
David McCann
Molly McCormick
Brennan McCullough
John McKever
Gary McNaughton
Rachel Meyer
Cedar Milazzo
Carissa Miyano
Lloyd Mogensten
Ehren Moller
Ryan Moreno
Nathaniel Mull
Karim Nassar
Gregory Nelson
Jeff Nevold
Dylan Nicholls
Fedeye Oweis
Bret Pasch
Stephen Pirman
Narendran Rajasekaran
Paymon Rasoli
Abolfazl Rae
Michael Remke
Trish Rensink
Ardhana Roberts
Danielle Ross
Jeff Ross
Michael Roter
Elizabeth Rothwell
Rachel Rubin
Jason Saul
Daniel Sanchez
Marie Sather
Katherine Sementilli
Philip Sementilli
Matthew Shander
Austin Shannon
John Sherber
Molly Shuman-Goodier
Lisa Skinner
Alma Solis
Abraham Springer
Clarissa Starbuck
Karen Steinbronn
Ella Stephens
Nathan Stone
James Swift
Uzma Taher
Robert Thanes
David Trilling
Victoria Vakarchuk
Archana Varadarajan
Jennifer Wade
Rebecca Wagner
Jonah Walsh
Jack Wells
Fathe White
Brooke Whitworth
Kristin Wiggins
Kyle Winfree
Tim Wojieluckiv
Brett Woods
Stephanie Yard

College of Health and Human Services Judges

Victoria Acevedo
Christina Angela
Mooonan-Pennington
Jennifer Armfield
Tim Behrens
Rachel Billowitz
Laura Bounds
Sara Callahan
Sally Dashier
Dorothy Dunn
Glenn Edgerton
Steve Palmer
Sonya Pederson
Vicki Penn
Priscilla Sanderson
Amy Smith
Kate Watkins

College of Social and Behavioral Sciences Judges

Steven Barger
Jamie Bowie
Christina Burke
Anne Collier
Lynne Corbin
Tom Filsinger
Heidi Wayment

Search for presenters, titles, and abstracts at the event kiosks or online at nau.edu/symposium
The **Kaibab Room** is located on the first floor in the Fieldhouse next to the University Union, which is accessible via the Student Union Gallery, then down to first floor.
2017 SPONSORS

Dr. Paul C. Begovac and Mrs. Susan Begovac
Begovac Experiment Fund

Center for International Education
Global Learning Initiative

College of Arts and Letters

College of Education

College of Engineering, Forestry, and Natural Sciences

College of Health and Human Services

College of Social and Behavioral Sciences

Dr. Henry Hooper
Freeport-McMoRan

Honors College
Information Technology Services

J. Lawrence Walkup Skydome
Office of the President
Office of the Provost

Office for Undergraduate Research & Creative Activity
Office of the Vice President for Research

Marketing and Strategic Communications

The W. A. Franke College of Business