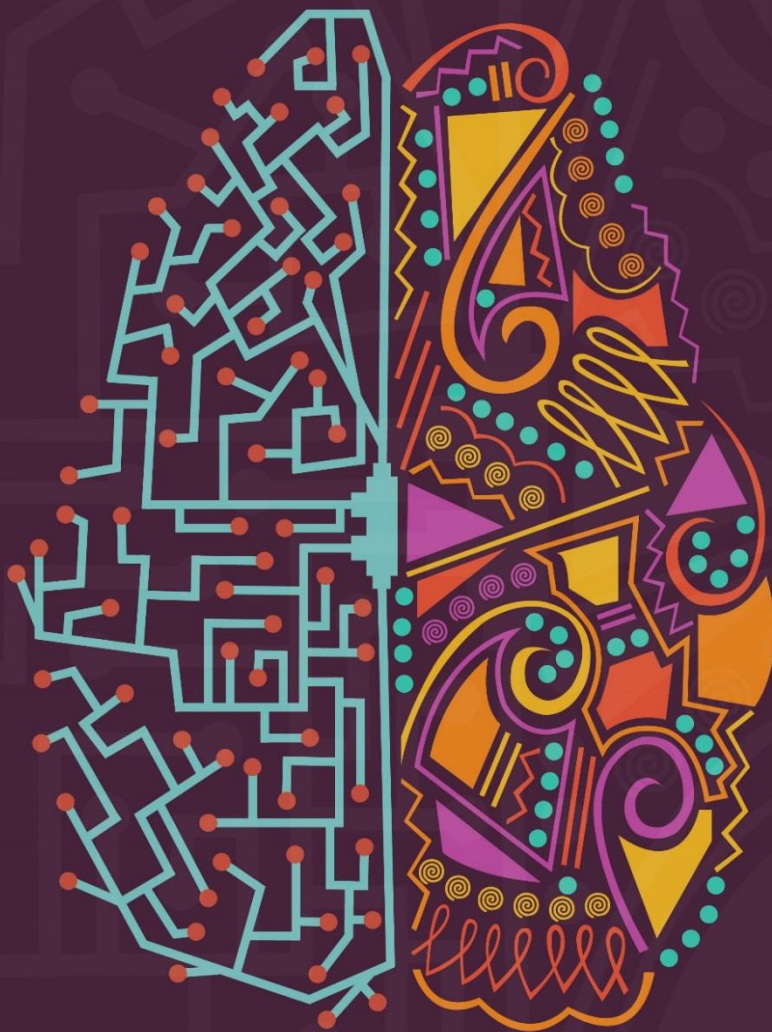


21st Annual Student Research & Creativity Expo



**POSTERS
PRESENTATIONS
DISPLAYS
PERFORMANCES**

**Thursday, May 2, 2019 12:00 p.m. - 4:30 p.m.
Williams Center, Fredonia, New York**

12 Noon Buffet Lunch and Keynote Address
Williams Center Room S204

Dr. Scott Ferguson, Associate Professor, Department of Biology
"From DNA to Doctors: The CURE for the Common Course"


FREDONIA
STATE UNIVERSITY OF NEW YORK



OK FOR POSTING — MARKETING AND COMMUNICATIONS

Student Research and Creativity Exposition Committee:

Ziya Arnavut, Computer and Information Sciences

Paul Benson, Office of Sponsored Programs

Gentain Buzi, Computer and Information Sciences

Allan Cardenas, Chemistry and Biochemistry

Jack Croxton, Director Office of Student Creative Activity and Research

Xin Fan, History

Heather Han, Student Representative

Michael Jabot, Curriculum and Instruction

Jaehee Kwon, Curriculum and Instruction

Robyn Reger, Provost's Office and School of Business

Robert Rogers, Mathematical Sciences

Carol Smith, Communication

Courtney Wigdahl-Perry, Biology

Peter Tucker, Visual Arts and New Media

Ivani Vassoler-Froelich, Politics and International Affairs

Emily Zane, Communication Disorders and Sciences

The following individuals and offices are acknowledged for their many contributions:

Teresa Brown, Provost and Vice President for Academic Affairs

Kevin Cloos, Mark Delcamp, and Facilities Services

Justin Jakubowicz and Michael Gerholdt, ITS

Mark Suida and Lisa Noody, Campus Life

Tracy Horth, College of Liberal Arts and Sciences

Information Technology Technicians

Faculty Student Association

“Congratulations to the students and mentors whose work is featured in the 2019 Student Research and Creativity Exposition! As you can see from the program and from interactions with the many students who are involved in today’s program, Fredonia offers opportunities for authentic scholarly and creative work across a range of disciplines, and this year we are featuring work that models community engagement as well. Our campus has the most important resources for accomplishing this kind of work: talented, curious students and faculty with the creativity, expertise, and commitment to guide those students in their projects. Regardless of what’s next after graduation—advanced studies or professional work in their fields—Fredonia students have the research, performance, and presentation skills to succeed.”



Sincerely,

Virginia Horvath, Ph.D.
President

Congratulations to the students and faculty mentors who are participating in the 2019 Research and Creative Activity Exposition. The annual Research and Creative Activity Exposition reflects the university’s commitment to undergraduate research as a high-priority activity for both faculty and students. The National Council of Undergraduate Research has identified several characteristics of excellence in undergraduate research on university campuses, including scholarly faculty who are committed to mentoring students in their field, broad participation from faculty and students across disciplines, accessible opportunities for undergraduates, and integration with other engaging high-impact opportunities such as community engagement. I am very pleased to see Fredonia possesses the essential characteristics of excellence in undergraduate research, scholarship and creative activity. Thank you to the faculty and staff who make these transformative learning experiences possible for our students, and congratulations to our students for their good work on display today.



Sincerely,

Teresa M. Brown, Ph.D.
Provost and Vice President for Academic Affairs

One of my favorite poets, E.E. Cummings, is quoted as saying “Once we believe in ourselves, we can risk curiosity, wonder, spontaneous delight, or any experience that reveals the human spirit”. The act of creating—creating research, creating art, creating scholarly work—is one of the most highly regarded in any college or university. The time and effort, the engagement, and the commitment that it takes to “create” should be applauded and congratulated.

At the OSCAR Expo, we witness the educational collaboration that has been forged between Fredonia students and faculty, and we are invited to experience, first hand, the human spirit that exists on our campus.

Judith Horowitz, Ph.D.

Associate Provost for Graduate Studies, Sponsored Research, and Faculty Development



“The mission of the Office of Student Research and Creative Activity is to promote and support student scholarly activity and creative work across the Fredonia campus. Such an endeavor is integral to the teaching and learning experience. It provides an opportunity for students to become closely affiliated with a faculty mentor and to develop skills and knowledge that will benefit them significantly in the future. Clearly, both students and faculty gain from such activity, and therefore it is important that the institution make a concerted effort to promote such collaborations.

I am very pleased by the level of participation in this year’s Research and Creative Activity Exposition and I am truly impressed by the quality of our students’ work. They should indeed be proud of their considerable accomplishments. For many of them this is the capstone experience of their academic careers. Furthermore, I would like to commend all of the faculty mentors for the time and energy that they have devoted to supervising these projects. Thanks to everyone who has contributed to this special day of celebration.”

Sincerely,

Jack Croxton, Ph.D.

Director of the Office of Student Creative Activity and Research

Sculptor Louise Nevelson said it best:

“If students are in a studio together they can communicate.... One has a spark and puts it down on paper, and something happens in the class. So the environment is important. And the multiplicity of energy and consciousness is important.” Congratulations to all participants and their mentors for giving us the sparks

Ralph J. Blasting, Ph.D.

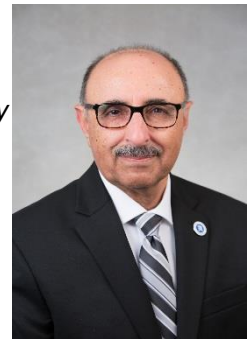
Dean, College of Visual and Performing Arts



The wide range and high quality of the scholarly and creative activity presented at the annual Student Research and Creativity Expo is a true reflection of the university's mission to “enrich the world through scholarship, artistic expression, community engagement, and entrepreneurship.” Congratulations to both students and their faculty mentors for a job well done.

Moj Seyedian, Ph.D.

Interim Dean, School of Business





“Student research and creative endeavors are a critical component of the intellectual vitality of our university. These activities of critical inquiry are the authentic application of what is learned from textbooks, reference materials, and the classroom. These application projects also provide a rich opportunity for faculty and students to collaborate as active partners in applied scholarship. The Student Research and Creativity Exposition provides our campus learning community with an event to showcase and celebrate the quality of academic engagement of our students. Congratulations to all who have participated in this most excellent event!”

Sincerely,

Christine Givner, Ph.D.
Dean, College of Education

On behalf of the faculty and staff of the College of Liberal Arts & Sciences, I congratulate the students participating in the 21st Annual Student Research and Creativity Exposition. This program contains an impressive list of projects. In many cases, the work represents the culmination of study and/or practice; in others, it is a point along a continuum of development with additional, related projects to come. Regardless of the exact nature of these projects, each highlights hard work, innovation, insight, etc.

This collection of student effort demonstrates the degree to which Fredonia embraces the teacher-scholar model. Here at Fredonia, learning is a collaborative process requiring close interactions between students, faculty, staff, and, quite often, the surrounding community. In fact, the College of Liberal Arts & Sciences prides itself on the creation of a community of scholars where the usual lines of demarcation between teacher and student, campus and community, and art and science are blurred.



J. Andy Karafa, Ph.D.
Dean, College of Liberal Arts and Sciences

Thursday, May 2, 2019
Williams Center
12:00 p.m. to 4:30 p.m.

REMARKS AND KEYNOTE SPEAKER
Room S204AB

12:15 p.m.

Dr. Virginia Horvath, President

Dr. Teresa Brown, Provost and Vice President for Academic Affairs

Dr. Jack Croxton, Director of the Office of Student Creative Activity and Research

Presentation to recipients of the 1st Annual Donald Nasca Undergraduate Research Award

- Leah Anderson
- Alyson Baumann
- Mary Deebes
- Brianna Maldonado
- Alexis Mele

Introduction of the Keynote Speaker:

Dr. Scott Ferguson

“From DNA to Doctors: The CURE for the Common Course”

Dr. Scott Ferguson is an Associate Professor of Biology at The State University of New York at Fredonia. He earned a B.S. in Molecular Biology from Westminster College, a Ph.D. in Cell and Molecular Biology with a focus on Genetics and Gene Regulation from the Perelman School of Medicine at the University of Pennsylvania, and performed postdoctoral research on Developmental Genetics at Princeton University. At Fredonia he coordinates the Molecular Genetics major and teaches courses in Genetics and Molecular Biology. His research interests center around the control of protein translation as it relates to developmental biology and the molecular basis of cancer. He was the 2012 recipient of a \$250,000 Research in Undergraduate Institutions (RUI) National Science Foundation (NSF) grant to support this work. In 2017 he received the Fredonia President's Award for Teaching and Learning. This was in recognition of the Course-based Undergraduate Research Experience (CURE) model that he has implemented in the laboratory courses that he teaches at Fredonia. Dr. Ferguson's approach to laboratory courses is that they should provide an authentic experience for students based on their professor's research program. Practicing "real science" in this way has prepared his students for placement in world-class graduate programs across the country.

Most exhibits will be available for viewing throughout the day – students are scheduled to be present to answer questions at the indicated times.

POSTERS AND OTHER PRESENTATIONS

Multi-purpose Room

1:00 p.m. to 1:30 p.m.

Lesson with Potential from Teachers with Potential

Sydney Bajdas, Allison Buskey, Mary DiCioccio, Roberto Gonzalez, Victoria Johns, Megan Little, Kevin Morali, Emily Moyer, Megan Ott, Sarah Wood, Alexis Wydysh

(note: these posters will be on display with no formal presentation)

Make It Take It

Katherine Adinolfi, Genevieve Audino, Brianna Elliott, Madison Evans, Karah Herman
Jennifer Kershner, Shannon Ketzak, Meghan Roberts, Emma Romell, Kalee Schreiber
Katherine Yudin

(note: these posters will be on display with no formal presentation)

Synthesis and Characterization of Nitrosamine: A Redox Switchable HNO/NO Donor

Alexander Green, Chemistry

Melodic Intonation Therapy and Left-Hand Rhythm Tapping: Therapy For Aphasic Patients

Nicole Dubill, Comm. Disorders and Sciences

North Carolina Broadcasting Diversity Fellowships

Monica Manney, Communication - Journalism

ICPC ACM Computing Competition 2018

Seth Weidman, Computer Science

Co-Presenters: Robert Moore, Dakota Wicker, Michael Conti, Ariana Burns, Sammie Huang

Analysis of PAHs Levels During High and Low Traffic Periods on Fredonia's Campus

Samuel Johnson, Geochemistry

Co-Presenters: Justin Dunlap

Delta Chi Volunteering In the Community

Sean Bedford, Industrial Management

Co-Presenters: Richard Little, Jeffry Hernandez

Bullying in Schools

Amanda Zablonki, Mathematics

CO2 Emissions Trend Analysis

Megan Di Laura, Mathematics

High School Environment

Kaitlin Patt, Mathematics

Determination of ITAF Presence in Cap Independent Translation Through a Eukaryotic Viral IRES in E. coli

Morgan Steele, Molecular Genetics

Identification of Genes That Regulate gurken Translation in Drosophila melanogaster

Hailey Gould, Molecular Genetics

Co-Presenters: Sarah Carey

Perceptions of an Altruistic Act: Sacrifice, Motive, and Impact

Juyeon Han, Music Therapy

The Effects of Room Lighting on People's Cognition

Nicholas Certo, Psychology BS

Co-Presenters: Jaime Birkmeyer

The Audio Engineering Society Convention

Nicole Bien, Sound Recording Technology

Co-Presenters: Michael Earle, Jaden Zhang, Jeremy Jonczyk, Ellen Li, Andrew Stoehr, Samantha Hernandez, Ashley Linton

Milton Goes to Work

Alexis Mele, Vis Arts New Med: Anim & Illus

1:30 p.m. to 2:00 p.m.

Characterization of gurken IRES activity in transgenic Drosophila melanogaster

Laurel Finson, Biology

St. Columbans on the Lake Retirement Home Internship

Angela Paradiso, Comm. Disorders and Sciences

HOPE Chautauqua Internship

Waverly Lancer, Communication - Comm Studies

GPA Calculator

Aubrie Murray, Computer Information Systems

Airport Scheduler

Daniel Holton, Computer Science

Co-Presenters: Sarah Yi, Andrew Kaus

Real-Time Flight Data Analysis and Charting

Jessie Smith, Computer Science

Co-Presenters: Joshua Rogala; Jacob Davison

Banding Together: Unionizing in the Antebellum Era

Rebekah Denz, History

The Prevalence of the Penny Press

Luke Burger, History

Observation of live fish elevates mood and improves relaxation, but does not improve math task performance

Taylor Reed, Psychology
Co-Presenters: April Whiting

The Antebellum Artisan: Changes in the Lives of Northern U.S. Printers

Jacob Feltham, Social Studies-Adolescence Ed

The Behavioral Responses of *Acheta domesticus* to the calling, courtship, and aggression songs

Kelly Hanner, Biology

How Children with Autism Spectrum Disorder Use Referential Language in Conversation

Katherine R. Cronin
Co-Presenters: Samantha Edinger

"Face South!" - Examining Spatial Language Use in Children with Autism Spectrum Disorder

Francesca Branciforte,
Co-Presenters: Sarah Morgan

2:00 p.m. to 2:30 p.m.

Electronic Cigarettes - What's the bottom line?

Sydney Younger, Biology

Life Expectancy USA vs. Canada

Kyle Jelinski, Business Admin - Marketing

Alpha Phi Omega Chi Pi Chapter- Volunteering in Our Community

Emily Staniszewski, Childhood Inclusive Education
Co-Presenters: Elizabeth Rosario, Lucas Butchko, Maci Cosmore, Amanda McDonough, Todd Boberg

Study of Soarian Clinical Software

Mohammed Khan, Computer Science

Midwife to Physician: The Role of Gender in the Practice of Childbirth

Madeleine Floccare, History

Moral Reform, Prostitution, and Religion in Antebellum America

Mikaela Wilson, History

Telescope Camera Linearity

Kassidy Howard, Physics

Parents' Perceptions of Wordless Picture Books

Nicole Battaglia, Psychology

My Experience Interning with WNY United

Francesca Branciforte, Speech-Language Pathology

9th Annual SUNYWide Film Festival at SUNY Oswego

Susan Kehl, Vis Arts New Med: Film/Video
Co-Presenters: Nicholas Skopinsky

The Effects Fighting has on Dominant and Submissive Males' Courting Calls in *Acheta domesticus*
Amelia Thorp, Molecular Genetics

2:30 p.m. to 3:00 p.m.

Do Goals Alone Determine the Stanley Cup Champion
Michael Walker, Business Admin - Finance

The NHL's Greatest Goal Scorer
James Morgan, Business Admin – Management

Tock OS on IoT Hail Board
Nicholas Serafin, Computer Science
Co-Presenters: Jacob Spaiches

Everyday is a Battle; Female Slave Resistance in the Antebellum Period
Kiera Perkins, History

The Antebellum Period and Formation of the Urban South
Jonah Adeson, History

Analysis of Bacterial Communities at TimberFish
Tyler Gross, Molecular Genetics

Calibration of On-Campus Telescope and Error Variations
Alyssa Warrior, Physics

SUNY Model European Union Conference 2019
Paul Christidis, Political Science

An Intersectional Analysis of the Asylum Movement
Michelle Merrill, Social Studies-Adolescence Ed

The Gold Rush and the Development of the American West
Sebastian Guerra, Social Studies-Adolescence Ed

Animation/Illustration Club Attends MoCCA Arts Festival
Anais Cantres, Vis Arts New Med: Anim & Illus
Co-Presenters: Melissa Neuburger, Dana McCormick, Zelda Velasquez, Sabrina Joseph, Hayley Mant, Amber Wolf, Olivia Dursi, Andrea Morrell, Diana Maria Encarnacion

Two Continents Moved
Cameron Flynn, Social Studies-Adolescence Ed

3:00 p.m. to 3:30 p.m.

Water around the world

Luke Lockwood, Business Admin - Finance

State Violence and the Growth of the 19th Century American Market Economy

Tyler VanOcker, History

The Iron Horse of the Antebellum

Jaret Belschwinder, History

Women's Rights Movement before Seneca Falls

Hannah Dompkowski, History

Self Calibration of Isolated Star Formation

Kyle Mascara, Physics

SUNY Fredonia's Student Sexual Health Brochure

Tianna Laird, Psychology

Exploring the Current Model of Autism in Mouse: Third Trimester Exposure to Valproic Acid

Alberto Gonzalez, Psychology BS

Co-Presenters: Michael Pancirer, Jaime Birkmeyer, James Walters

Comparisons of the Know-Nothing Parties During the Antebellum Period of the United States

Rohan Smith, Social Studies-Adolescence Ed

Kappa Sigma: Volunteering in the Community

Cameron Flynn, Social Studies-Adolescence Ed

Co-Presenters: Benjamin McKelvey, Dionysis Bouziotis

The Effects of Traumatic Brain Injury on Word Retrieval in Individuals with High and Low Cognitive Reserve

Alessandra Peters, Speech-Language Pathology

Volunteering at St Columban's on the Lake Retirement Home

Anais Cantres, Vis Arts New Med: Anim & Illus

3:30 p.m. to 4:00 p.m.

Using Burke's Pentad to Analyze the Stonewall Riots

Mason Stabell, Communication - Public Rel

BlueAthlete

Inderdeep Bajwa, Computer Science

DRIS - Sankey Visualization

Inderdeep Bajwa, Computer Science

EnablArm - The Arm that Learns From Itself

Inderdeep Bajwa, Computer Science

The Antebellum Cherokee or $CWY\text{A } D\beta\Omega$: Cultural Appropriation, American Imperialism, or Societal Diffusion?

Dallas Zebrowski, History

Prostitution in Antebellum America

Haley Carmon, History

Rental property effects on nearby home values in Dunkirk

Paul Somerfeldt, History

Women's Education in the Antebellum Era

Stephanie Fraser, History

Does Demand Effect Impact Self-Report Measures on Aggression and Mindfulness?

Juyeon Han, Music Therapy

Co-Presenters: Elayna Kinney, Michael Pancirer

Cognitive Predictors of the Sunk-Cost Fallacy

Kara Freise, Psychology

Exploring Perceptions of Feminist Community Events as a Predictor of Rape Myth Acceptance

Kara Freise, Psychology

Take Back the Night: Examining Perceptions and Experiences of Feminist Community Events

Kara Freise, Psychology

The Big Five and Women's Beliefs of Sexual Assault

Caitlin DiBattista, Psychology

Co-Presenters: Jennifer King

Advertising and Attitudes

Joseph DeChiaro, Psychology BS

Co-Presenters: Tianna Laird; Logan Kelley

Hegemonic Masculinity and Broad Sexual History in Correlation to Sexual Aggression

Olivia Moore, Psychology BS

Co-Presenters: Cara Preziosi, Ann Coughlin, Diedre Bush

4:00 p.m. to 4:30 p.m.

Regents Redux: An Item Analysis and Historical Review of New York State Euclidean Geometry Regents Examinations

Christopher Kelley

The Effect of Unfamiliar Context on Students' Ability to Solve Percent Word Problems

Sarah McCann

The Role and Impacts of 'Cheat Sheets' in a College Precalculus Course

Valerie Andryshak

The State of Earth's Oceans: A Rhetorical Analysis of "Sewage Surfer"

Katherine Sepulveda, Communication - Comm Studies

A Data Science Perspective on Global Terrorism

William Snell, Mathematics

Projects and Geometric Constructions: A Study of High School Geometry Students and the Effective Nature of Projects

Emily Marsh, Mathematics - 7-12 - Cond

SUNY MEU

Joshua Ranney, Political Science

Pain Tolerance Threshold Influenced by Social Self-Focus in Relation to Social Anxiety

Jessica Pizarro, Psychology

Co-Presenters: Olivia Moore, Ann Coughlin

Public Health Internship Expo

Chelsea O'Dea, Psychology BS

The Changing of Journalistic Styles in the Antebellum U.S

Haley Menze, Social Studies-Adolescence Ed

Fredonia Enactus

Emily Schepisi, Social Work

Co-Presenters: Lindsey Clark, Hope Zielinski

Public Health Intership

Melissa Poppenberg, Social Work

Public Health Internship

Halle Platten, Sociology

Relay For Life - Colleges Against Cancer

Lindsey Anderson, Speech-Language Pathology

ORAL PRESENTATIONS

2:00 p.m. to 2:30 p.m.

Room G103B

Public Health Internship

Kodie Hoyt, English

LIVE PERFORMANCES

MUSIC

4:00 p.m. to 4:30 p.m.

Room S204AB

“Side Effect” Performed by Black Bombay

Luigi Montanero, Geraldo Celeste, Noah Hulbirt, Adam Sikorski

I believe life is one long soundtrack. The world is a huge album and every living individual provides a unique song to the overall composition. The early years in one’s life is the intro to their song. Their struggles and hardships represent the verses. A verse usually sets the tone to a song, just as the experiences that one goes through helps them define who they are. However, rainy days don’t last forever. Just as a verse leads into a chorus, rainy days usually lead to sunny days. The good days and one’s accomplishments represent the chorus to their song. A chorus is usually the highlight in a song, just as the good days and the accomplishments one achieves are the highlights in their life. Finally, one’s last few days represent the outro. The world is an album. Life is a song. Just like an album, when one song ends, another begins. Music has always been an important part of my life. I’ve never been good at expressing my thoughts or emotions. As a result, I tend to bottle up my feelings which leads to confusion and being in denial about how I feel. However, music has provided me with a platform to let out everything that has been kept inside. The process of songwriting and sharing with other for their constructive criticism has allowed me to become more open and confident with my art. My goal for my independent study is making an album that’ll take listeners on trip through my journey in college. The album features collaboration with fellow students here at Fredonia because who else better to work with on an album about my college life than the people who have been a part of my journey. By working with others, I hope to provide them with the same help and support that music given me.

DANCE

3:00 p.m. to 3:30 p.m.

Merrins Dance Theatre, 258 Rockefeller Arts Center

Searching Within

Joshua Ambrose, Manatsu Tanaka; Vanessa Raffaele; Ayami Ijichi; Julianne Wagner; Molly Anglum; Pedro Araujo; Virginia Raffaele

This piece is a dance work about mental illness that I presented for my senior capstone. We brought this piece to SUNY Brockport to be adjudicated at ACDA.

VOLUNTEER AND COMMUNITY SERVICES PRESENTATIONS

The Volunteer and Community Services Program is a part of campus life which provides volunteer opportunities for students to help build sustainable and meaningful partnerships in the community. This program assists students with real world experience while enriching the lives of others and enhancing their academic experience. In addition, the office provides advisement and resources to faculty and staff. The program is dedicated to promoting volunteerism and service learning experiences in and outside the classroom. Students will showcase their volunteer and community service projects/experiences on posters or slideshow demonstration of pictures.

Delta Chi Volunteering In the Community

Sean Bedford, Industrial Management
Co-Presenters: Richard Little, Jeffry Hernandez

Alpha Phi Omega Chi Pi Chapter- Volunteering in Our Community

Emily Staniszewski, Childhood Inclusive Education
Co-Presenters: Elizabeth Rosario, Lucas Butchko, Maci Cosmore, Amanda McDonough, Todd Boberg

Kappa Sigma: Volunteering in the Community

Cameron Flynn, Social Studies-Adolescence Ed
Co-Presenters: Benjamin McKelvey, Dionysis Bouziotis

Volunteering at St Columban's on the Lake Retirement Home

Anais Cantres, Vis Arts New Med: Anim & Illus

Relay For Life - Colleges Against Cancer

Lindsey Anderson, Speech-Language Pathology

ABSTRACTS

(Alphabetical by presenter's last name)

Relay For Life - Colleges Against Cancer

Lindsey Anderson, Speech-Language Pathology
Mentor: Joyce Smith

This is the largest event on the Fredonia campus. For the past 13 years Fredonia has been hosting a Relay For Life and each year the event grows larger and has more community service opportunities. Relay For Life is a 12 hour event for the American Cancer Society that spanned from 3pm to 3am. During the night there are events like Zumba, local bands performing, and campus groups that showcase their work at Relay For Life. These events keep everyone awake and engaged throughout the night to reach the twelve hour event goal. This year we had over 500 participants and raised well over \$15,000 dollars.

Poster / Display Presentation 4:00-4:30 PM

The Antebellum Period and Formation of the Urban South

Jonah Adeson, History

Mentor: Mary Sievens

My research project is on the movement of middle class businessmen and other prominent groups to urbanize the Southern United States during the Antebellum era. It focuses on a number on the success and failures during the mid 19th century including the causes for both results.

Poster / Display Presentation 2:30-3:00 PM

The Role and Impacts of 'Cheat Sheets' in a College Precalculus Course

Valerie Andryshak

Mentor: Teodora Cox; Keary Howard

This study examines the impacts of pre-prepared notes (cheat sheets) regarding the time it takes to complete an assessment, study habits, student attitudes towards math tests, test anxiety, and academic achievement. It is hypothesized that college students will benefit from the use of cheat sheets on assessments when it comes to academic achievement, test anxiety, student attitude towards tests, and time taken to complete test. Also, it is hypothesized that college students who construct cheat sheets of better quality will outperform college students who construct cheat sheets that are insufficient. Furthermore, it is hypothesized that college students will spend more time studying for an assessment when they are allowed to use a cheat sheet compared to students who cannot use a cheat sheet.

Poster / Display Presentation 4:00-4:30 PM

BlueAthlete

Inderdeep Bajwa

Mentor: Junaid Zubairi

BlueAthlete is an app that the strength and conditioning coach at Fredonia Athletics. This app will be used by all student athletes at Fredonia and essentially will help the fitness center transition to an electronic system to track progress with strength training and cardio workouts.

Poster / Display Presentation 3:30-4:00 PM

DRIS - Sankey Visualization

Inderdeep Bajwa, Computer Science

Mentor: Junaid Zubairi

DRIS, or Drawing Really Interesting Sankey, is featured rich application that's dedicated to generate highly functional and powerful visualization chart. The application generates powerful scientific visualizations (mainly variations of Sankey's visualization chart) to provide highly usable conclusions.

Poster / Display Presentation 3:30-4:00 PM

EnablArm - The Arm that Learns From Itself

Inderdeep Bajwa, Computer Science

Mentor: Gurmukh Singh

EnablArm is a prosthetic hand that is built on light weight 3D printing filament. Utilizing the ability of Myo wearable gesture control device, we're able to get an input from the arm in order to replicate

movement in the prosthetic arm. With the combination of advanced Machine Learning algorithms and proper tools, it can be trained to do almost any task that an average human can perform, by just using simple wearable gadgets and Machine Learning algorithms.

Poster / Display Presentation 3:30-4:00 PM

Parents' Perceptions of Wordless Picture Books

Nicole Battaglia, Psychology
Mentor: Andrea Zevenbergen

Twenty-five parent-child dyads were videotaped sharing a wordless picture book. The children ranged in age from 3 to 5 years. After the shared book session, the parent was interviewed about the experience, and this interview was then transcribed verbatim. The first four questions of the interview related to the present study, which investigated parents' perceptions of reading a wordless picture book versus a picture book with words. For this qualitative analysis, the Constant Comparison Method is being used. Themes in the data will be derived and discussed. Through this method of investigation, parents' perceptions of reading wordless picture books versus books with words will be better understood.

Poster / Display Presentation 2:00-2:30 PM

Delta Chi Volunteering In the Community

Sean Bedford, Richard Little; Jeffry Hernandez
Mentor: Joyce Smith

The Delta Chi Fraternity's mission is Friendship, Character, Justice, Education, and above all Community Service. This year Delta Chi has participated in a variety of volunteer and Community Service activities in the local community. These activities include the following: assisted with serving meals and clean up at The Friendly Kitchen; providing recreational activities to seniors at St. Colombian's Retirement Home; we assisted in the setup in Fredonia's Mini Maker Fair; raking leaves for local residents in the Fredonia community for the Fall Sweep Raking Project. This has not only impacted our brothers within the Fraternity but the community as well.

Poster / Display Presentation 1:00-1:30 PM

The Iron Horse of the Antebellum

Jaret Belschwinder, History
Mentor: Mary Sievens

The typical narrative a public school history student receives during the Antebellum unit when it comes to railroads is that the north had more of them opposed to the south. Then, when it came time for the Civil War, the North's victory was secured by use of said railroads. The greater narrative being that railroads were a tool that helped a nation win at war. Once the two sides concede however, history no longer seems to care about these railroads. Especially when it comes to the Antebellum South. What I want to accomplish with this presentation is to dispatch a better understanding of the southern climate of "internal improvements." Were people in the South for or against development of the railroad? What kind of ideas did southerners have when it came to railroads, and did they differ from those of the North? And when instituted, what direct purposes did these railroads serve?

Poster / Display Presentation 3:00-3:30 PM

The Audio Engineering Society Convention

Nicole Bien, Michael Earle; Jaden Zhang; Jeremy Jonczyk; Ellen Li; Andrew Stoehr; Samantha Hernandez; Ashley Linton
Mentor: Bernd Gottinger

Sound recording technology majors and members of the Tonmeister Association took a trip to NYC in October 2018 to attend the annual Audio Engineering Society (AES) convention. In addition to the convention, the students attended a summit at the Sound Lounge studio, where they had the opportunity to meet with and learn from successful Fredonia SRT Alumni. The trip as a whole was a valuable experience in networking with professionals and gaining exposure to new technology and gear used in the audio world. As a result of the trip, many students begin to explore new areas of the field and use their new connections to earn summer internships and jobs in the future.

Poster / Display Presentation 1:00-1:30:00 PM

My Experience Interning with WNY United

Francesca Branciforte, Speech-Language Pathology
Mentor: Melissa Lyon

To conclude my Public Health coursework, I interned with an organization called Western New York United Against Drug & Alcohol Abuse, Inc. (WNY United). I selected this specific internship with hopes that I'd continue to gain experience working closely with children, for one day I will become a speech-language pathologist. WNY United is a local agency whose mission is to educate young people about substance abuse. WNY United partners with multiple school districts in Erie County to provide prevention services to students of all ages. Over the past semester, I have worked as a Prevention Specialist Intern at A.J. Schmidt Elementary School in Angola, NY. I taught an evidence-based curriculum called "Too Good for Violence" to 3 Kindergarten classes and 3 First Grade classes. This curriculum focuses on developing social skills that effectively resolve conflict and avoid violence. Interning with WNY United demonstrated the wide scope of the public health field.

Poster / Display Presentation 2:00-2:30 PM

"Face South!"- Examining Spatial Language Use in Children with Autism Spectrum Disorder

Francesca Branciforte, Sarah Morgan
Mentor: Emily Zane

Background: Some individuals with autism spectrum disorder (ASD) make "pronoun reversal" errors (confusions between you and I). People have argued that this is due to problems in shifting their perspective from themselves to others (Hobson & Meyer, 2005.) If so, individuals with ASD should also struggle with other perspective-shifting language, like prepositions (left and right), since these terms depend on the perspective of the person speaking/listening. Research Question: Our study explores how children with ASD use spatial language to describe the position of objects to an interlocutor sitting opposite them. Hypothesis: We predict children with ASD will make more errors than typically developing (TD) children, and will specifically confuse their own perspective (e.g., their left) with that of the listener. Methodology: Participants. Participants were 17 children with ASD and 16 TD children. The groups did not significantly differ in age (M ASD= 13.8, M TD=13.9), language scores (CELF-4, M ASD= 107, M TD=108), or IQ (M ASD=110, M TD=110); the groups were statistically equivalent in sex (ASD=12 males; TD=11 males). Procedure. Each participant sat beside a barrier with a researcher (R1) on the opposite side; they could not see one another. In front of the participant was a doll surrounded by four cards, each with a different black shape on it. Participant is made aware of that R1 is sitting surrounded by the same shapes as the doll, in an identical configuration. Participant is shown one of the four shapes on a computer screen and is asked to use language to get R1 to choose the same

shape. Participants provide verbal directions to R1 (e.g., "Choose the shape to your left") to communicate which shape to select. This happens 64 times. Current State: Results are to be determined, as we are currently transcribing the recordings from our study.

Poster / Display Presentation 1:30-2:00 PM

The Prevalence of the Penny Press

Luke Burger, History
Mentor: Mary Sievens

The developments in the press during the antebellum period diverged away from the previous century's elite political and business oriented media. The penny press allowed for cheaper publications and thus a greater flow of information throughout the country and its expanding territories. The most significant consequences, the public's relationship with the press, and precisely how it evolved during the period will all be addressed. The primary focus is intended to be specifically on the factors that enabled change during this time. The diversification of interests allowed to be represented by new groups appears to be the primary factor in the penny press' development and spread. These specialized papers are significant to the period as they reflect the expansion of political rights and offered a means to pursue more right for different groups. Additional literature covers the history of the period and trends followed by newspapers.

Poster / Display Presentation 1:30-2:00 PM

Animation/Illustration Club Attends MoCCA Arts Festival

Anais Cantres, Melissa Neuburger; Dana McCormick; Zelda Velasquez; Sabrina Joseph; Hayley Mant; Amber Wolf; Olivia Dursi; Andrea Morrell; Diana Maria Encarnacion
Mentor: Jill Johnston

The Society of Illustrators is hosting the Museum of Cartoon, Comics, and Animation festival on April 5 to 7, 2019. This event is Manhattan's largest independent comics, cartoon and animation festival, where there is over 7,000 attendees from across New York each year. The event features over 400 exhibiting artists displaying their work, award-winning guests of honor speak about their careers and artistic processes and other featured artists conducting workshops, lectures and film screenings. The Animation and Illustration Club at Fredonia traveled to the Metropolitan West in New York City. Students from the club exhibited their work, attended screenings, met with other artists and presented themselves with job opportunities in New York City. The event expanded students opportunities by making friends with other artists and possible employers all over New York. We hope to encourage other artists at Fredonia and provide career resources to our students and club members.

Poster / Display Presentation 2:30-3:00 PM

Volunteering at St Columban's on the Lake Retirement Home

Anais Cantres, Vis Arts New Med: Anim & Illus
Mentor: Alberto Rey; Joyce Smith

This volunteer project involves teaching basic drawing and painting skills to the senior residents at St. Columban's on the Lake Retirement Home. This project enhances quality of life which emphasizes the following: creativity; social interaction; building positive relationships; as well as providing intellectual stimulation. Through my volunteer experience I have been able to give back to the community and broaden my concern for others making a difference in the lives of others. Finally, this experience inspired my Give Back series for Drawing/Painting III.

Poster / Display Presentation 3:00-3:30 PM

Prostitution in Antebellum America

Haley Carmon, History
Mentor: Mary Sievens

This is a presentation of prostitution in early 19th century America. Focusing on the economics and social implications of prostitution, especially during the Antebellum period of American history. Women during this time who became prostitutes, defied the social norms in terms of money and independence; despite being a high risk job and looked down upon in “proper” society.

Poster / Display Presentation 3:30-4:00 PM

The Effects of Room Lighting on People’s Cognition

Nicholas Certo, Psychology BS, Jaime Birkmeyer
Mentor: Joseph McFall

Past educational research has shown the connection between varying correlated color temperatures (CCT), their effects on concentration, as well as comfort. With the advancement of technology, LED bulbs provide the ability to change the color of lighting outside of the typically used Kelvin range. The study was a mixed design with five levels of the independent variable. The levels were orange, blue, purple, green, and white tinted light. The researchers examined the impact that different colored classroom lighting had on students’ comfort and concentration. No directional hypotheses were conceived prior to the start of the experiment, the researchers were looking to find areas to explore in future studies and expand the current body of research to include more colors of light. Results will be shared at the conference.

Poster / Display Presentation 1:00-1:30 PM

SUNY Model European Union Conference 2019

Paul Christidis, Political Science
Mentor: Raymond Rushboldt

A presentation of the SUNY Fredonia Model EU Club and their attendance of the SUNY Model European Conference and the details of the event.

Poster / Display Presentation 2:30-3:00 PM

How Children with Autism Spectrum Disorder Use Referential Language in Conversation

Katherine R. Cronin, Samantha Edinger
Mentor: Emily Zane

Background: Children with Autism Spectrum Disorder (ASD) usually have difficulties using referential terms that depend on context, such as pronouns. It has been proposed that these difficulties are rooted in Theory of Mind deficits (Baron-Cohen, Leslie, & Frith, 1985), and/or in understanding the pragmatic constraints on pronouns (Perovic, Modyanova & Wexler, 2012). This includes establishing a “Common Ground” (De Marchena & Eigsti, 2016). Research Question: The purpose of this study is to examine how children with ASD use referential language to share information about an event about which a communication partner has no knowledge. Hypothesis: Children with ASD will use ambiguous terms more often than typically developing children (TD). Methodology: Participants. 17 participants with ASD and 16 TD participants. Groups did not significantly differ in age (M ASD= 13.8, M TD=13.9),

IQ (M ASD=110, M TD=110), or language scores (CELF-4, M ASD= 107, M TD=108). The proportion of males to females in each group is statistically equivalent (ASD=12 males; TD=11 males). Participants watched a video involving two animated lamps -- one large and one small -- and two balls -- one large, beach ball and one small, bouncy ball. A series of events occur in the video where each lamp interacts with each ball in different ways. Participants watched this video alone. Participants were asked to explain what happened in the video to a researcher who had never seen it. The researcher used a script to ask participants questions about the video. Participants' use of referential language, including pronouns (e.g., "it" and "they"), articles ("the lamp" vs. "a lamp"), and descriptive adjectives ("the big lamp", "the beach ball") are coded/analyzed. Current State: The recordings of these sessions are currently being coded for referential language use, and results are to be determined.

Poster / Display Presentation 1:30-2:00 PM

CO2 Emissions Trend Analysis

Megan Di Laura, Mathematics
Mentor: Amber Powell

One of the biggest concerns and responsibilities of our time is to make Earth not only survivable but prosperous for our future generations. The amount of pollution being produced with the drastic rate of burning of fossil fuels is directly related to the impact of global warming. Global warming is defined as a long-term rise in the average temperature of the Earth's climate system. This substantial climate change is being seen all over the world, from melting glaciers, increasing water and land temperatures, species extinction, coral bleaching, and so much more. There's more than a 95 percent probability that human activities over the past 50 years have warmed our planet. An analysis of CO₂ emissions and rising world temperatures was done to grasp how serious this is to the survival of planet Earth. Will we, the human race, be able to reverse some of the effects of global warming?

Poster / Display Presentation 1:00-1:30 PM

The Big Five and Women's Beliefs of Sexual Assault

Caitlin DiBattista, Jennifer King
Mentor: Darrin Rogers

This study will report associations between women's five-factor model (FFM) personality scores and their estimates of men's propensity for sexual assault. Women's estimates of the likelihood of being sexually assaulted by peers will affect their behavior. Accounting for individual differences in these estimates has relevance for sexual assault prevention. We are not aware of research examining predictors of women's estimates of male dangerousness. We hypothesize that neuroticism, agreeableness, and openness, will be associated with women's estimated likelihood of male sexual assault, which will be assessed with the experimental study of sexual aggression (ESSA), a simulation paradigm. ESSA is social situation that participants make yes/no decisions in. Undergraduate female participants will respond as if they were college-age males. Women's FFM personality variables can be assessed as predictors of how much they believe their male peers might assault them. We will be looking at results from undergraduate women from two different universities.

Poster / Display Presentation 3:30-4:00 PM

Advertising and Attitudes

Joseph DeChiaro, Tianna Laird; Logan Kelley
Mentor: Joseph McFall

Images portrayed on social media depicting the "ideal" body are the basis of what many individuals

compare their own body too. The “ideal” female and male bodies are fit and toned. The hypothesis of this study was that viewing stereotypical “attractive” or “unattractive” images modified an individual’s body satisfaction depending on the condition. The conditions of the independent variable were “attractive” and “unattractive” images of humans. Researchers expected that the second rating of the Stunkard Figure scale would either be higher after viewing “unattractive” images or lower after viewing “attractive” images. The control variable conditions were perceived as “attractive” and “unattractive” food images. The dependent variable was the participants’ ratings of their body using the Stunkard Figure Rating scale before and after viewing images. Images were put into the Qualtrics survey software and were randomized for each participant.

Poster / Display Presentation 3:30-4:00 PM

Banding Together: Unionizing in the Antebellum Era

Rebekah Denz, History

Mentor: Mary Sievens

This project takes a deep dive into the first unions during the antebellum era. During this time period in America, factory workers began to band together in order to influence the cultural, economic and political changes in the newly formed country. Although factory workers formed unions to create a better life for themselves, not every union was created for the same reason. This is best seen between the formation of men’s and women’s unions because each was created for different reasons. This project seeks to understand the difference between these two groups and how they reacted or worked with one another.

Poster / Display Presentation 1:30-2:00 PM

Women's Rights Movement before Seneca Falls

Hannah Dompkowski, History

Mentor: Mary Sievens

Women’s Voting Rights Before Seneca Falls My research topic will be the women’s voting rights movement before Seneca Falls during the United States Antebellum era. I would like to find out when the idea of giving women the right to vote began to transform into a movement. I will be focusing on the northern middle class white women who began the movement., and also the roles African American women had. And the role that the Abolitionist movement had in influencing the Women's rights movement. This is a significant topic because it affected 50% of the United States population which is one of many social changes that happened during the Antebellum

Poster / Display Presentation 3:00-3:30 PM

Melodic Intonation Therapy and Left-Hand Rhythm Tapping: Therapy For Aphasic Patients

Nicole Dubill, Comm. Disorders and Sciences

Mentor: McLoddy Kadyamusuma

Objective: This paper sought to investigate if Melodic Intonation Therapy (MIT) coupled with left-hand tapping (LHT) will be successful in improving word finding abilities in people with non-fluent aphasia. This paper also investigated the effects of timeframe post stroke (subacute versus chronic phase) on the outcome of therapy. Lastly, it will look at Functional Magnetic Resonance Imaging (fMRI) studies to find changes in neural activation patterns (Hemisphere Lateralization) post-therapy. Design: This paper was a literature review of many research papers investigating and reporting the effects of MIT and LHT. Papers allocating MIT into other languages, and reports from fMRI imaging will be looked at Findings: Overall this paper found MIT to be most successful, without LHT on (sub)acute people with

non-fluent aphasia. It also found that despite varying degrees of natural language prosody, MIT was successfully generalized to other languages with positive results and provoked right hemisphere activation in the subacute stage.

Poster / Display Presentation 1:00-1:30 PM

The Antebellum Artisan: Changes in the Lives of Northern U.S. Printers

Jacob Feltham, Social Studies-Adolescence Ed

Mentor: Mary Sievens

The antebellum period is a surprisingly complicated and integral period of U.S. history. Perhaps not given as much attention in the secondary classroom, it still tells us an in-depth story of how the economy of the U.S. formed into the capitalist, wage-labor system we see today. During this formation we see social classes rise and fall, disappear and materialize, and most importantly, reinvent themselves but all in unique and differentiated ways. To examine the changes to the U.S.'s society and economic structure we need to dissect a specific class of artisan and create a case study that, without overreaching, encapsulates one experience of an infinite number of American experiences during this time period. For this, I chose the artisan printer and plan to define their experience during the whirlwind of change that was the northern antebellum United States.

Poster / Display Presentation 1:30-2:00 PM

Characterization of gurken IRES activity in transgenic Drosophila melanogaster

Laurel Finson, Biology

Mentor: Scott Ferguson

In *Drosophila melanogaster*, the protein Gurken (Grk) is responsible for developing dorsal/ventral polarity in the developing oocyte. Its expression is needed for the fly to have normal patterning, in humans Gurken's homologue TGF- α is overexpressed in different types of cancer. Translation of grk occurs in a cap-dependent manner in the presence of plentiful nutrients. Gurken is still translated when cap-dependent translation is blocked due to dietary restriction, because grk undergoes cap-independent translation via an internal ribosomal entry site (IRES). To measure IRES activity, the grk 5'UTR has been placed upstream of the firefly luciferase gene. The expression of the firefly luciferase can then be used to quantify translation directed by the grk 5' UTR. To determine where in the 5' UTR of grk the IRES is located, specific 25 base pair mutations were made. After injecting these plasmids into embryos, the transgenic flies can be tested under cap-dependent and cap-independent conditions.

Poster / Display Presentation 1:30-2:00 PM

Midwife to Physician: The Role of Gender in the Practice of Childbirth

Madeleine Floccare, History

Mentor: Mary Sievens

During the antebellum period white women were seen as a secondary citizen next to white men, and female slaves even further down on the social chain. For quite a long time childbirth was left to the midwife, a fellow woman, but that changed after Congress banned the importation of slaves in 1808, forcing the plantation owners to find another solution. There were incentives for enslaved woman to birth more children, and with more children meant that more midwives were needed. This change in American history threw more men into the study of midwifery and eventually male physicians dominated the practice. This research project is dedicated to the role that gender played in the practice of childbirth and the difference between midwives and physicians.

Poster / Display Presentation 2:00-2:30 PM

Kappa Sigma: Volunteering in the Community

Cameron Flynn, Benjamin McKelvey, Dionysis Bouziotis
Mentor: Joyce Smith

Kappa Sigma fraternity individually and collectively works towards the betterment of our campus and community. Our organization has participated in a variety of services this year and will continue to do so. These community service activities include the following: Our group came together in September to engage in a walk to help raise awareness, support, and research for Alzheimer's; Fall beach clean-up at Point Gratiot; Fall Sweep leaf raking project; Assisted with set up and hosting of Fredonia Mini Maker's Fair; Hosted games and activities at Safe Halloween; Assisted Lakeshore Humane Society in finding homes for animals; Helped set up activities and decorate for Relay for Life; Organize and set up activities such as arts & crafts for the Spring Egg Hunt

Poster / Display Presentation 3:00-3:30 PM

Two Continents Moved

Cameron Flynn, Social Studies-Adolescence Ed
Mentor: Mary Sievens

In February of 1848, a paper was published. That paper was the Communist Manifesto by Karl Marx. The event was followed by a continent of revolution led by those following the ideals of pushing against an unregulated free market in pursuit of greater control over one's lives. The revolutions in the German states had failed, though. Those participants had to flee their homes, and for many, the United States was the preferred destination. Due to the fact of many were political refugees, they had brought their revolutionary ideologies over, where they attempted to influence American labor movements against the looming Capitalist industry that had swept over the Antebellum American landscape. This presentation takes a look at their impact in American labor institutions through individual leader's papers, articles, and speeches to fellow German immigrants and American people.

Poster / Display Presentation 2:30-3:00 PM

Women's Education in the Antebellum Era

Stephanie Fraser, History
Mentor: Mary Sievens

I want to explore women's education during the Antebellum period. Specifically, I will look at women's secondary education. While researching this topic I want to learn about what women were required to learn. It would also be interesting to hear from these educators who taught these women. During my research I would like to be able to answer the question of how common it was for women to finish their secondary education, and if class played any role in women receiving education. I would also like to know what women used their education for. As I have recently learned, women who were the wives of priests, were often required to also be well educated in order to help the priests. However, I would like to know what else women could use their education for

Poster / Display Presentation 3:30-4:00 PM

Take Back the Night: Examining Perceptions and Experiences of Feminist Community Events

Kara Freise, Psychology
Mentor: Lisa Denton

Take Back the Night (“TBTN”) is an international event with the mission of ending sexual, relationship, and domestic violence. Such events often occur on college campuses and include marches, rallies and vigils intended as a protest and direct action against rape and other forms of violence. Such events might be a means of addressing rape myths and improving attitudes towards victims of sexual assault. This study examines how these events are perceived and experienced by people who have and have not been sexually assaulted. This study also investigates the potential relationship between perception of such events and beliefs related to sexual violence. This study will also examine the potential relationship between perceiving such events negatively and scores on a measure of rape myth acceptance. Results will help inform current research on the perception and experience of events like TBTN, and may impact the way future events are planned and implemented.

Poster / Display Presentation 3:30-4:00 PM

Cognitive Predictors of the Sunk-Cost Fallacy

Kara Freise, Psychology
Mentor: Joseph McFall

Individuals commit the sunk cost fallacy when they continue to invest resources in an endeavor that is failing. A variety of cognitive and contextual factors can contribute to an individual’s likelihood to commit the sunk cost fallacy. The current study examines whether participants’ likeliness to commit the sunk-cost fallacy in a hypothetical context can be predicted by motivational and self-concept constructs. It is hypothesized that individuals with high fear of negative evaluation, strong need for achievement, high anxiety about failure, and a fixed mindset would be more likely to commit the sunk cost fallacy. The strength of associations between the motivational constructs will be examined, as well as the relationship between these constructs and sunk-cost behavior. Findings expand current understanding of individual and contextual factors that can contribute to susceptibility to committing the sunk-cost fallacy.

Poster / Display Presentation 3:30-4:00 PM

Exploring Perceptions of Feminist Community Events as a Predictor of Rape Myth Acceptance

Kara Freise, Psychology
Mentor: Amber Powell

Feminist counseling examines how the socialization of women affects their identity development, self concept, goals, and emotional well-being. Consciousness-raising feminist community events might encourage women to see their experiences as part of larger socioeconomic and political patterns, with the effect of inspiring collective action. Previous research suggests that there is a relationship between negative perception of such events and beliefs related to sexual violence (rape myth acceptance). The current study will examine whether those perception items are consistent with the researcher’s understanding of latent constructs proposed to be associated with rape myth acceptance. This study will explore the strength of associations between cognitive variables and indicators of acceptance of rape myths, in both individuals that have and have not personally experienced sexual assault. Results will attempt to explain cognitive factors associated with prejudicial, stereotyped and false beliefs about sexual assaults, rapists, and rape victims.

Poster / Display Presentation 3:30-4:00 PM

Exploring the Current Model of Autism in Mouse: Third Trimester Exposure to Valproic Acid

Alberto Gonzalez, Michael Pancirer; Jaime Birkmeyer; James Walters
Mentor: Catherine Creeley

Valproic acid is a commonly prescribed drug for epileptic disorders as well as bipolar disorder. VPA is known to have specific effects to the human embryo during development, these characteristics have become known as fetal valproate syndrome. These negative effects are not exclusive to humans, and have been shown to have a less severe effect on other mammals who have been exposed. We used the neonatal mouse model on timed pregnant mice to examine the effects of valproic acid exposure in the third trimester. Litters of pups were randomly assigned to one of three groups, a control receiving saline, or a second or third group which were injected with differing doses of valproic acid (200 or 400 mg/kg). It was hypothesized that results of such testing would suggest deficits consistent with the autism model in mice exposed to VPA. Results will be shared at the conference.

Poster / Display Presentation 3:00-3:30 PM

Identification of Genes That Regulate gurken Translation in Drosophila melanogaster.

Hailey Gould, Sarah Carey
Mentor: Scott Ferguson

Fly oogenesis in *Drosophila melanogaster* requires Grk/EGFR signaling to ensure proper axis specification and dorsal appendage formation. Grk is affected by the recessive mutation *spn-BBU*, which prevents Grk translation and causes homozygous females containing the mutation to lay ventralized eggs. Mutations created in other genes could cause the *spn-BBU* phenotype to be suppressed and show the wild type phenotype instead. When these suppressor genes are mutated, it allows for Grk to be translated and expressed properly and make wild type eggs. To find suppressor mutations, flies were mutated using CRISPR, which created unique mutations in the flies' genome. Once a balanced stock was created, their eggs were observed and classified as ventralized or wild type. DNA from mutant flies with wild type eggs was sequenced to determine the specific mutations present within the different candidate genes.

Poster / Display Presentation 1:00-1:30 PM

Synthesis and Characterization of Nitrosamine: A Redox Switchable HNO/NO Donor

Alexander Green, Chemistry
Mentor: Allan Jay Cardenas

Our research focuses on capture, storage and interconversion of Nitric oxide and Nitroxyl. Both molecules have pharmaceutical application, we present a metal free approach to this redox switchable novel Nitrosamine.

Poster / Display Presentation 1:00-1:30 PM

Analysis of Bacterial Communities at TimberFish

Tyler Gross, Molecular Genetics
Mentor: W Lee

TimberFish is a startup fish farming company that uses non-agricultural plant materials as well as food processor waste as feed and nutrition sources for the fish. Determining the bacterial profile of the tanks could help provide insight into the technology's effectiveness. The 16S rRNA gene is a useful biomarker and was used in this project as a means for identifying bacteria in a water tank sample. Genomic DNA was isolated from water in one of the tanks. The polymerase chain reaction (PCR) was used to amplify 16S rRNA DNA from the isolated genomic DNA. The 16S PCR products were ligated to a plasmid and transformed into *Escherichia coli*. Recombinant plasmids from the transformation will be isolated and characterized. Unique 16S sequences will be sent out for DNA sequencing. The

sequences can then be analyzed to determine the species of bacteria present in the water tank at TimberFish.

Poster / Display Presentation 2:30-3:00 PM

The Gold Rush and the Development of the American West

Sebastian Guerra, Social Studies-Adolescence Ed

Mentor: Mary Sievens

My project will show how the gold rush of 1849 played a major role in the development of the western frontier. I will show how towns and cities were formed as a result, or lack thereof, of the discovery of gold. I will also show how society was developed and structured in the new territory.

Poster / Display Presentation 2:30-3:00 PM

Perceptions of an Altruistic Act: Sacrifice, Motive, and Impact

Juyeon Han, Music Therapy

Mentor: Jack Croxton

This study examined how certain variables can influence the perceptions of altruism. Participants read a randomly distributed scenario, in which an altruist assisted someone wanting to fly home either to visit a dying mother or simply a friend. The altruist was either a wealthy person or person with very limited income, and was either with a coworker or a potential donor for a political campaign. Perceivers responded most favorably when the altruist made a considerable sacrifice, had no ulterior motive, and the act had a significant impact. The effect of motive was less when sacrifice was substantial and the impact was considerable. This study demonstrates that the motive may not be that important if the behavior has a significant positive impact or if the altruist has made a considerable sacrifice. Regardless of motive, it is important to acknowledge and promote altruism in today's society.

Poster / Display Presentation 1:00-1:30 PM

Does Demand Effect Impact Self-Report Measures on Aggression and Mindfulness?

Juyeon Han, Elayna Kinney; Michael Pancirer

Mentor: Joseph McFall

Demand effect is a problem that many researchers work hard to control. Demand effect occurs when participants become aware of what the researchers are studying, which may result in participants' changes in their responses. Participants will be recruited through SONA systems and social media outreach. Participants will be randomly assigned to two groups. Both groups will be given the same questions about their hobbies. However, the control group will be given randomly ordered questions from both Buss-Perry Aggression Questionnaire and Mindfulness Attention Awareness Scale after the questions about their hobbies whereas the participants in the experiment group will be exposed to titles and the purpose of each measure in the directions. We expect that participants who receive information about the questionnaire will respond to questions in a socially desirable manner low aggression and high mindfulness. Data collection is still in progress, and the results will be shared at the conference.

Poster / Display Presentation 3:30-4:00 PM

The Behavioral Responses of Acheta domesticus to the calling, courtship, and aggression songs

Kelly Hanner, Biology

Mentor: William Brown

Phonotaxis is the attraction, positive, or avoiding, negative, of sound by an organism. The specific organism tested was the *Acheta domesticus*, or the common house cricket. Male *A. domesticus* can produce 3 call types depending on the social situation, I specifically studied the role of the female mate choice in the calls. My hypotheses are the females will have positive phonotaxis for the calling song due to the isolation and inability to see the male, and the males will have positive phonotaxis for the calling and courtship songs as it may be a potential mating opportunity. The crickets were tested in a T-Maze in an anechoic chamber and the individual calls are played back for every cricket. The response was recorded. (The data is still being gathered at the time of the application)

Poster / Display Presentation 1:30-2:00 PM

Airport Scheduler

Daniel Holton, Sarah Yi; Andrew Kaus

Mentor: Junaid Zubairi

Using multi-threading, this program simulates planes taking off and landing at "Buffalo Airport" on a single, shared resource runway. Thus, synchronization and coordination must be utilized so at random time intervals, a "control tower" can handle each plane taking off/landing one at a time. This control tower will be a thread itself, deciding how and when planes land based on factors similar to a processor handling requests in a computer.

Poster / Display Presentation 1:30-2:00 PM

Telescope Camera Linearity

Kassidy Howard, Physics

Mentor: Michael Dunham

Whether it be our own moon or distant stars thousands of light years away, being able to capture an image of any celestial body is a task that requires extreme precision. However, this precision can be lost without careful adjustments. When taking images of celestial bodies, there is a direct correlation between the amount of time the camera collects light and the signal recorded by the camera. This relationship is supposed to be linear but as the pixels approach their saturation levels, the relationship begins to level off and display a non-linear response. The goal of this research project is to find where this relationship becomes non-linear and then establish a pixel-by-pixel linearity correction that can be applied to all science images.

Poster / Display Presentation 2:00-2:30 PM

Public Health Internship

Kodie Hoyt, English

Mentor: Melissa Lyon

My internship was working with the youth of Dunkirk at the Northern Chautauqua Boys and Girls Club of America located on Central Ave. in Dunkirk, NY. There were two Public Health components of the internship that involve hands on participation and classroom lessons incorporated with one another. Children would learn to grow and care for the growing produce with a Garden Tower and hands on activities associated with educating children on nutritional healthy habits. The anticipated outcome of the project includes providing children with the knowledge of alternative farming for fresh produce.

Providing children with the necessary knowledge and resources needed to continue healthy lifestyles.

Oral Presentation 2:00-2:30 PM

Life Expectancy USA vs. Canada

Kyle Jelinski, Business Admin - Marketing
Mentor: Amber Powell

Life expectancy is a qualitative reflection on the quality of life in a country, since individuals can hope to live longer, fuller lives. It is an estimate of an individual's life span is derived from averaging the age of all individuals who die in a particular year. I will be looking at how this affected by 2 aspects of the GDP. Those being GDP growth in dollars and percent of GDP spent on healthcare expenditures because the top causes of death are majority health related. I will be looking at two countries in specific Canada and the United States of America.

Poster / Display Presentation 2:00-2:30 PM

Analysis of PAHs Levels During High and Low Traffic Periods on Fredonia's Campus

Samuel Johnson, Justin Dunlap
Mentor: Michael Milligan

Polycyclic Aromatic Hydrocarbons (PAHs) are a specific group of compounds that occur naturally in crude oil and therefore appear in gasoline. Even with today's advanced engines, incomplete burning of gasoline still occurs. This incomplete burning allows for the release of harmful PAHs to the atmosphere in both its gaseous and particulate phases. In order to capture these PAHs, a Tisch Environmental High-Volume Air Sampler was placed on the roof of the Fredonia Science Center and programmed for numerous 24 hour runs. This air sampler utilizes two different filters; one to capture gaseous phase compounds and another for particulate phases. These runs were executed during the summer of 2018 and the following fall semester. The goal of this study is to compare PAHs concentrations during low-traffic (summer) and high-traffic (fall semester) periods.

Poster / Display Presentation 1:00-1:30 PM

9th Annual SUNYWide Film Festival at SUNY Oswego

Susan Kehl, Nicholas Skopinsky
Mentor: Phillip Hastings

Cinema Alternatives will be talking about their experience and work that was submitted to this year's SUNYWide Film Festival. Last year, Animation and Illustration BFA Matte'a Gurdy received Honorable Mention for her animated short "La Luz." Gurdy is just one of the many past Fredonia winners, not forgetting the many students who were accepted to the festival but did not place. Susan Kehl, a junior Film and Video Arts BFA, has been accepted into this year's festival with her film "Circadia." The festival spans from April 5th to 6th at SUNY Oswego. There we will be meeting other SUNY students who share a common interest in filmmaking. We will show some of the work that was submitted on a monitor at the OSCAR event and will be answering questions that attendees may have about the works shown. We will include a poster detailing our work and will be showing pictures of the event.

Poster / Display Presentation 2:00-2:30 PM

Regents Redux: An Item Analysis and Historical Review of New York State Euclidean Geometry Regents Examinations

Christopher Kelley

Mentor: Teodora Cox; Keary Howard

This longitudinal study explores the history of NYS Geometry Regents Exams from its early administrations to its most recent Common Core version. An item analysis is performed on generational exams to compare content, readability, and length. In addition, a standardized metric is proposed to allow a reliable comparison among exams.

Poster / Display Presentation 4:00-4:30 PM

Study of Soarian Clinical Software

Mohammed Khan, Computer Science

Mentor: Junaid Zubairi

Many of the hospitals use software which is mostly a web based application in which they register and bill the patients and schedule them in timely manner. Information technology needed in healthcare to convenient scheduling and minimal waiting time, software that supports the online scheduling and workflow management can help, patient portals allow patients to fill out paperwork in advance and receive test results at home. Information system plays a big role for all department with support to provide easy access and shared information used high-quality care system. Information Technology also used in health care to store record, analyze, and share patient health information data.

Poster / Display Presentation 2:00-2:30 PM

SUNY Fredonia's Student Sexual Health Brochure

Tianna Laird, Psychology

Mentor: Melissa Lyon

I am a senior Psychology major with a minor in Public Health. My project was to create an informational flyer for sexual health for students currently attending SUNY Fredonia. After undergraduate, I plan to attend graduate school in hopes of working in the medical field. I decided to have a minor in public health because it allows me to work and help others learn crucial information. Making this brochure allowed me to spread information that students may not have been aware of. This helps to keep the college students aware and knowledgeable about their own sexual health.

Poster / Display Presentation 3:00-3:30 PM

HOPE Chautauqua Internship

Waverly Lancer, Communication - Comm Studies

Mentor: Melissa Lyon

As an intern for the Hope Chautauqua Initiative of CASAC, I am performing a number of tasks, as well as shadowing various professionals, all in efforts to strengthen my understanding of public health advocacy. Community engagement skills are a necessity in the field of public health. This internship provides me with insight into health promotion and education strategies at the community level. My degree in Communication Studies allows me to apply persuasion techniques and audience adaptation to social media posts for the coalition. I will also write sections for the local newspapers and HOPE newsletter. Finally, assisting the coalition with various community events will allow me to sharpen my networking capabilities.

Poster / Display Presentation 1:30-2:00 PM

Water around the world

Luke Lockwood, Business Admin - Finance
Mentor: Amber Powell

In this study i take a look at population percentage that have access of water and the life expectancy of each country. I will test to see if there is a relationship between these two factors and if there is a correlation within the results. The data was taken from the world health organization.

Poster / Display Presentation 3:00-3:30 PM

North Carolina Broadcasting Diversity Fellowships

Monica Manney, Communication – Journalism
Mentor: Elmer Ploetz

After traveling to North Carolina for the CBC-UNC Diversity Fellowship and the NABJ NCAT Short course, I have learned how to do broadcasting in a live studio, do live shots in the field and work on an intense deadline. I would like to present my learning to the campus as Broadcast Journalism is not something we have offered on campus.

Poster / Display Presentation 1:00-1:30 PM

Projects and Geometric Constructions: A Study of High School Geometry Students and the Effective Nature of Projects

Emily Marsh, Mathematics - 7-12 - Cond
Mentor: Teodora Cox; Keary Howard

This research study investigates various geometric constructions and the methods in which to assess students' ability to create them. It is hypothesized that high school Geometry students will be able to more effectively demonstrate knowledge and understanding of geometric constructions through a collaborative project versus a traditional quiz. It is anticipated that they will perform, on average, better on the project versus the quiz. In addition, it is expected that pupils will find more enjoyment and fulfillment in the process of working creatively with a partner than with a straightforward and independent approach.

Poster / Display Presentation 4:00-4:30 PM

Self Calibration of Isolated Star Formation

Kyle Mascara, Physics
Mentor: Michael Dunham

Radio interferometry can be used to answer a plethora of astronomical questions. One question is why stars form single systems or fragment into binary and triple systems. Here we use the ALMA array to build a survey of isolated star formation which hasn't been done previously because the ALMA array is the first array to have a resolution good enough. One way to extrapolate the information collected from telescope arrays is to create images and "clean" them. One particular cleaning process called self-calibration can sometimes greatly improve the quality of an image. We are focusing on self-calibration to try and create the best possible images. In this presentation we will showcase the image improvements possible through self-calibration and present preliminary results on the multiplicity of protostars in forming in truly isolated environments.

Poster / Display Presentation 3:00-3:30 PM

The Effect of Unfamiliar Context on Students' Ability to Solve Percent Word Problems

Sarah McCann

Mentor: Teodora Cox; Keary Howard

This research examines students' success with problems involving various percent calculations. These problems consist of isomorphic numeric percent problems, word problems with relevant familiar context, and word problems including unfamiliar context. It is hypothesized that the context of a word problem affects a student's ability to accurately solve the percent problem. Specifically, it is anticipated that unfamiliar context will produce the lowest results when compared to isomorphic problems with either familiar context or numeric representation only.

Poster / Display Presentation 4:00-4:30 PM

Milton Goes to Work

Alexis Mele, Vis Arts New Med: Anim & Illus

Mentor: Jill Johnston

"Milton Goes to Work" is an animated short film. Milton is a frog who gets tired of the rat race... until he decides to take his life into his own hands.

Poster / Display Presentation 1:00-1:30 PM

The Changing of Journalistic Styles in the Antebellum U.S

Haley Menze, Social Studies-Adolescence Ed

Mentor: Mary Sievens

During the Antebellum era challenges to press and their ability to cover corruption came to light. Court cases resulted due to libel laws and people feeling that the press had slandered them when an unflattering article was published. Editors would hold meetings in local settings and discuss having a code of ethics. This was meant to prevent journalists from publishing unfair articles that were only meant to hurt a business or person.

Poster / Display Presentation 4:00-4:30 PM

An Intersectional Analysis of the Asylum Movement

Michelle Merrill, Social Studies-Adolescence Ed

Mentor: Mary Sievens

The asylum movement is known to the general populace for changing how Americans viewed and cared for individuals with disabilities. I am considering this movement from a more intersectional standpoint, and looking more extensively at how the less privileged members of this already vulnerable population were treated. This includes how these individuals were treated differently depending on their other identities (race, gender, or class), and how that differing treatment altered the perception of disabilities in the antebellum United States. I will also be examining whether or not this disparate treatment had an impact on the wider view of individuals with disabilities in the United States -- I believe that it did, and in a negative way.

Poster / Display Presentation 2:30-3:00 PM

Hegemonic Masculinity and Broad Sexual History in Correlation to Sexual Aggression

Olivia Moore, Cara Preziosi; Ann Coughlin; Diedre Bush

Mentor: Darrin Rogers

Hegemonic masculinity is a value system including characteristics such as men's dominance over women, sexual promiscuity, and a variety of attitudes empirically related to sexual aggression. This implies that early and frequent sexual experiences in men might serve as a predictor of sexual aggressiveness. We hypothesized that men with more sexual partners and earlier first sexual experiences would be more likely to commit (virtual) sexual aggression in a simulated social situation. The experimental study of sexual aggression (ESSA) is a computer-based virtual paradigm for studying the influence of various factors on sexual aggression (in this case, towards an intoxicated female college student). Participants will also complete survey-based measures of hegemonic masculinity, including the sexual history variables mentioned above. Results will be presented for 106 undergraduate males from a US Hispanic Serving Institution (97% Hispanic). As data become available, results will also be presented for additional undergraduate males from SUNY Fredonia.

Poster / Display Presentation 3:30-4:00 PM

The NHL's Greatest Goal Scorer

James Morgan, Business Admin – Management

Mentor: Amber Powell

The National Hockey League has many records that may never be broken. Wayne Gretzky currently holds 61 records including one for 'Most Goals'. I will be looking at active player, Alexander Ovechkin, to see if he has a realistic chance to break the Great One's record. Given he stays healthy and plays for as long as Gretzky did, we will find out if he has a realistic chance to reach or even break the record.

Poster / Display Presentation 2:30-3:00 PM

GPA Calculator

Aubrie Murray, Computer Information Systems

Mentor: Junaid Zubairi

We created a GPA calculator for the 4th floor Reed Library Academic use. It is designed to assist students and advisors to check their academic standing.

Poster / Display Presentation 1:30-2:00 PM

Public Health Internship Expo

Chelsea O'Dea, Psychology BS

Mentor: Melissa Lyon

I have been working with Chautauqua County Rural Ministries to educate kids on healthy food/drink choices, and the benefits of choosing healthy foods over unhealthy foods. I also will be going to be educating kids on the benefits of exercise and educate them on cheap/free fun, easy ways to stay active. Rural Ministries and I will be holding a 'create your own wrap night' where I will provide this information to educate them on the research I have been doing and why it is important to be healthy and active, especially to lower childhood obesity rates. Chautauqua county has the 3rd highest childhood obesity rates in the state, making this a prevalent issue that needs to be addressed. This ties into my degree and future plans, as I aspire to become a pediatrician, and am on track to get my BS in psychology with minors in biology and public health.

Poster / Display Presentation 4:00-4:30 PM

St Columbans on the Lake Retirement Home Internship

Angela Paradiso, Comm. Disorders and Sciences

Mentor: Melissa Lyon

This project focused on how public health is intertwined with the retirement community and homes. Many people don't realize how involved public health components are with the elderly and senior populations. I did a 40 hour internship with St Columban's On the Lake retirement home, helping the activity director with getting resident attendance up at activities, along with coming up with new activities. I helped plan the monthly events and the monthly calendar, researching good activities for the elderly population. This poster will show how public health is involved with senior populations and their life, and also how this experience enriched my education and my overall idea of public health. I've made lasting connections with the faculty at my internship, and plan to continue to volunteer throughout the summer and even longer!

Poster / Display Presentation 1:30-2:00 PM

High School Environment

Kaitlin Patt, Mathematics

Mentor: Amber Powell

The type of town you live in makes a huge impact on the type of high school you attend. Your location determines whether the school you go to is a city or rural school, or a public or private school. Does the administrators assessment of the school correlate to the type of school they work at? Or are there other factors that could also play a role in their evaluation? Many different variables were examined statistically to see if any correlations can be found connecting to the administrator's assessment to explore these questions. The data used was collected from <https://nces.ed.gov/surveys/hsls09/>.

Poster / Display Presentation 1:00-1:30 PM

Everyday is a Battle; Female Slave Resistance in the Antebellum Period

Kiera Perkins, History

Mentor: Mary Sievens

Female slaves on Southern plantations had many struggles throughout their life. The most obvious was being a slave and trying to be autonomous. Female slaves had many more struggles they faced such as taking care of their own family and their master's family at the same time, sexual and physical assault at the hands of their masters, and trying to survive everyday. There are many stories of slave rebellions told in classrooms and are common knowledge. While very well known, it is also well known that these violent rebellions were often unsuccessful. However, much more powerful was the everyday things slaves did in order to resist their master's cruelty and overcome their struggles.

Poster / Display Presentation 2:30-3:00 PM

The Effects of Traumatic Brain Injury on Word Retrieval in Individuals with High and Low Cognitive Reserve

Alessandra Peters, Speech-Language Pathology

Mentor: Bridget Russell; McLoddy Kadyamusuma

The purpose of this study is to examine the effects of traumatic brain injury (TBI) on the linguistic task of word retrieval in individuals with high cognitive reserve (CR) versus those with low cognitive

reserve. Each participant was assessed based on the severity of their TBI, cognitive reserve scores, and word retrieval abilities. Results will include a comparison of participants with high and low cognitive reserve based on their word retrieval abilities, post-injury.

Poster / Display Presentation 3:00-3:30 PM

Pain Tolerance Threshold Influenced by Social Self-Focus in Relation to Social Anxiety

Jessica Pizarro, Olivia Moore; Ann Coughlin

Mentor: Joseph McFall

We are constantly being observed and evaluated by those around us may have negative implications for an individual's life. We are investigating whether there is a different sensitivity to acute pain in those with high trait social anxiety compared to those with low-moderate trait social anxiety. The Liebowitz Social Anxiety Scale (LSAS) will classify participant's trait anxiety as low, moderate, or high. The cold pressor test (CPT) will be utilized to measure acute pain threshold (James & Hardardottir, 2002). A randomized half of participants will be under the impression they are being filmed with a camera. This has been shown to elicit social self-focus in order to evoke social anxiety in a lab setting (Durlak, Cardini, Tsakiris, 2014). We hypothesize that those with high scores of social anxiety will demonstrate a higher acute pain tolerance threshold on average compared to those with low-moderate scores, especially when exposed to the camera condition.

Poster / Display Presentation 4:00-4:30 PM

Public Health Internship

Halle Platten, Sociology

Mentor: Melissa Lyon

This semester, I began my internship at Chautauqua Alcohol and Substance Abuse Council. A typical day at the office for me includes grading tests for our "Too Good For Drugs" program. This public health program is designed to teach school aged children healthy life choices including how to say no to drugs, maintaining healthy relationships, etc. Another typical task that I complete is making certificates for students upon completion. I really like these tasks because it shows the progress that the students have made on such important life topics that a typical school day would not teach them. Other things that I have accomplished is creating posters for the upcoming "Talent Show." Also, I have shadowed the Prevention Educators in the classroom setting. This is my favorite thing to do at my internship because I love working with children and seeing them improve their knowledge is very rewarding.

Poster / Display Presentation 4:00-4:30 PM

Public Health Intership

Melissa Poppenberg, Social Work

Mentor: Melissa Lyon

I selected my internship at the WCA home because I would like to be a social worker working with different types of age groups. I came to the conclusion I wanted to create a walking program for the residents. Before creating a walking program for this age group, I felt that it was important to first understand the population. There are residents at the age of about sixty-five and up. This is related to public health by ensuring a safe and healthy exercise activity. With this being said I wanted to ensure the walking program related to the elder population to actually participate in. Pieces of the program include bolded letters, catchy and motivational phrases, bright colors that catch the eye, measurements and even clipart. This program allows for daily exercise and for individuals to take

place in a fun and friendly effort allowing for both physical and mental movements.

Poster / Display Presentation 4:00-4:30 PM

SUNY MEU

Joshual Ranney, Political Science
Mentor: Elmer Ploetz

I went to New York City serving as the editor of the SUNY MEU where I put together a publication that reported on the events of the SUNY Model European Union conference. I wrote a total of eight stories and assembled four publications that were circulated at the conference.

Poster / Display Presentation 4:00-4:30 PM

Observation of live fish elevates mood and improves relaxation, but does not improve math task performance

Taylor Reed, April Whiting
Mentor: Nancy Gee

Introduction Fish and other aquatic species are popular privately-kept pets, classroom pets, and resident animals in offices and assisted living facilities, but little is known about the effects of fish on human arousal, mood states and cognition. Methodology Thirty five participants completed mood, relaxation and math tasks in a completely within subjects randomized control trial while wearing a Heart Rate Variability (HRV) monitor. All participants were asked to watch identically equipped fish tanks for five minutes in each of three conditions: 1) Empty - tank with gravel and décor, 2) Planted - tank with gravel, décor, water and plants, 3) Fish - tank with gravel, décor, water, plants and live fish. Results The results of this study reveal that participants rate their moment to moment mood and relaxation levels higher when the aquarium includes living, swimming fish, relative to an identically equipped aquaria without the fish, or without water, plants and fish.

Poster / Display Presentation 1:30-2:00 PM

Fredonia Enactus

Emily Schepisi, Lindsey Clark; Hope Zielinski
Mentor: Susan McNamara

Enactus is an international club that focuses on impacting communities through social, economic, and environmental means at campuses around the world. At the Fredonia chapter there are many projects and events that have been implemented by the college students to positively impact the community. This is achieved by partnering with community members and organizations that have a common goal, and working with them to find the most effective way to meet the needs of the area. In conclusion, this poster presentation will focus on Fredonia Enactus projects and the outcomes that have resulted from them.

Poster / Display Presentation 4:00-4:30 PM

The State of Earth's Oceans: A Rhetorical Analysis of "Sewage Surfer"

Katherine Sepulveda, Communication - Comm Studies
Mentor: Angela McGowan-Kirsch

Ocean pollution and its negative effects on the environment and wildlife is something that people across the globe are becoming increasingly aware of. Photographers like Justin Hoffman, are creating

pieces like “Sewage Surfer” in order to increase awareness and encourage people to change their habits and take action. “Sewage Surfer” is a candid photograph of an innocent seahorse grasping on to an out-of-context cotton swab in the ocean. The rhetorical meaning of “Sewage Surfer” is explored in this essay through the use of Bitzer’s theory of the rhetorical situation and its three constituents. Through the application of Bitzer’s theory one can reveal an acts rhetorical potential and see how a rhetor can use the theory in order to ultimately persuade their audience successfully. It is shown in this essay that no matter how simple a piece of art is, it can hold powerful influential qualities and make a bold statement.

Poster / Display Presentation 4:00-4:30 PM

Tock OS on IoT Hail Board

Nicholas Serafin, Jacob Spaiches

Mentor: Junaid Zubairi

1. Study the Tock operating system as given at <https://www.tockos.org/documentation/getting-started>. Tock is an embedded operating system designed for running multiple concurrent, mutually distrustful applications on Cortex-M based embedded platforms. Tock’s design centers around protection, both from potentially malicious applications and from device drivers. Tock uses two mechanisms to protect different components of the operating system. First, the kernel and device drivers are written in Rust, a systems programming language that provides compile-time memory safety, type safety and strict aliasing. Tock uses Rust to protect the kernel (e.g. the scheduler and hardware abstraction layer) from platform specific device drivers as well as isolate device drivers from each other. Second, Tock uses memory protection units to isolate applications from each other and the kernel. 2. Then download build and run Tock on Hail IoT board <https://www.tockos.org/blog/2017/introducing-hail/>.

Poster / Display Presentation 2:30-3:00 PM

Real-Time Flight Data Analysis and Charting

Jessie Smith, Joshua Rogala; Jacob Davison

Mentor: Junaid Zubairi

Real-time flight data analysis and charting is our software engineering project that should display real time data gathered during flight, and transmit it to servers on the ground. Software should warn users if any error occurs, or if certain thresholds are met. It will be displayed on a secure website for the clients to view whenever necessary.

Poster / Display Presentation 1:30-2:00 PM

Comparisons of the Know-Nothing Parties During the Antebellum Period of the United States

Rohan Smith, Social Studies-Adolescence Ed

Mentor: Mary Sievens

I would like to examine differences and contrast the various appeals that Northern and Southern Know-Nothing groups made in response to the differences brought on by the market revolution. Previous work discusses these differences, by describing Northern Know-Nothing concerns as issues concerning heavy immigration, anti-Catholicism, church state question in schools, slavery, temperance, disappearing Whig party, and a disorganized Democratic Party. I illustrate this difference using the state of Massachusetts. In the South, the Know- Nothings were more accepting of Catholics because there were less of them, some used immigration as an excuse against national harmony being broken at the time and that immigrants would support the abolition of slavery. I illustrate this using

the state of Louisiana. Exploring portrayals of events within the North and the South and comparing the two would be beneficial to further understanding Know-Nothing arguments for election and policies.

Poster / Display Presentation 3:00-3:30 PM

A Data Science Perspective on Global Terrorism

William Snell, Mathematics

Mentor: H Straight

In this poster presentation, we examine trends of global terrorism. We'll take a look at and visualize the frequency throughout the years, look at maps for various years, see what weapons are used in these attacks.

Poster / Display Presentation 4:00-4:30 PM

Rental property effects on nearby home values in Dunkirk

Paul Somerfeldt, History

Mentor: Amber Powell

The goal of this project is, by looking solely at residential properties, to determine if rental properties have a no effect on local home values. There are many types of residential properties in New York State, and the City of Dunkirk uses several of them. There are single family, two family, three family homes, and then there are apartments. These properties can be owned by individuals (or businesses), non-profit organizations, and the government. Many of the rental properties are owner occupied, which is to say that a homeowner is renting out a room or a floor of the house they are also living in. These owner-occupied houses will be included, but separated out from other rentals. The largest concern by most locals are both the absentee landlords.

Poster / Display Presentation 3:30-4:00 PM

Using Burke's Pentad to Analyze the Stonewall Riots

Mason Stabell, Communication - Public Rel

Mentor: Angela McGowan-Kirsch

The Stonewall Riots were the beginning of the LGBTQ+ movement that happened in the Greenwich Village in New York City in 1969. Here, protests of the community broke out against society and the police force due to unfair circumstances such as discrimination. Bettye Lane is one example of a rhetor who was able to capture this moment on camera. This paper focuses on the rhetorical act of the Stonewall Riots and Lane's photo and how they can be analyzed through Kenneth Burke's rhetorical theory of dramatism, specifically focusing on the pentad. By doing this, readers are able to gain a better understanding of both Burke's theory and the Stonewall Riots. Readers can also learn about ratios and how every part of the pentad is deeply connected to one another and how changing one part of the pentad affects the whole, changing the outcome of the entire act.

Poster / Display Presentation 3:30-4:00 PM

Alpha Phi Omega Chi Pi Chapter- Volunteering in Our Community

Emily Staniszewski, Elizabeth Rosario; Lucas Butchko; Maci Cosmore; Amanda McDonough;

Todd Boberg

Mentor: Joyce Smith

One of Alpha Phi Omega's core principles is volunteering in our community. This year alone we have participated in many community service activities. Operation Winter Rescue is one activity that we did in conjunction with the office of Volunteer and Community Services that benefited the local community. Other community service that we have participated in include the following: - Feeding Fredonia - UNYTS Blood Drive - American Red Cross Blood Drive - Annual Beach Cleanup at Point Gratiot -Volunteering at local animal shelters and rescues -Hurricane Relief Efforts -Buffalo News Kid's Day

Poster / Display Presentation 2:00-2:30 PM

Determination of ITAF Presence in Cap Independent Translation Through a Eukaryotic Viral IRES in E. coli

Morgan Steele, Molecular Genetics
Mentor: Scott Ferguson

Drosophila melanogaster is able to undergo typical cap dependent translation, however, under certain conditions, an alternative translation initiation pathway is utilized for protein synthesis. The element involved in this cap independent translation is termed the internal ribosomal entry site (IRES). Because normal translation in prokaryotes and eukaryotes are fairly conserved, it was important to investigate the mechanism of cap independent translation. No structures analogous to the IRES have been discovered in prokaryotes, however translation is able to be initiated in bacteria by a eukaryotic viral IRES (Colussi et al., 2015). In order for IRES-mediated translation to occur, IRES trans-acting factors, or ITAFs, are necessary. Using this information, we were able to successfully clone eukaryotic UTRs into vectors and transform them into *E. coli*, thus allowing us to investigate the differences between prokaryotic and eukaryotic translation mechanisms and determine if there are ITAFs present that allow for this translation to occur.

Poster / Display Presentation 1:00--1:30 PM

The Effects Fighting has on Dominant and Submissive Males' Courting Calls in Acheta domesticus

Amelia Thorp, Molecular Genetics
Mentor: William Brown

This study aims to demonstrate that dominant and submissive *Acheta domesticus* (*A. domesticus*) males will change their courting call after a fight. It is hypothesized that a dominant, or winning male will change their courting call more than a submissive, or losing male when comparing post-fight calls to pre-fight calls. Males were exposed to females before the fight, and their courting calls were recorded. Males were matched up based on size, and fought for 5 minutes. The dominant and the submissive males were then determined by analyzing recordings of the fight, they were exposed to females, and their courting calls were recorded. The post-fight and pre-fight mating calls were analyzed to determine what change was present in the frequency, amplitude, length and amount of chirps of the courting call. No conclusions or significant data is present yet, as the study just began.

Poster / Display Presentation 2:00-2:30 PM

State Violence and the Growth of the 19th Century American Market Economy

Tyler VanOcker, History
Mentor: Mary Sievens

This research presentation will focus on the relationship between the development of the early American industrialized market economy and the state monopoly on violence. The work will seek to address how the institution of southern plantation farming drove much of the early American

economic development; how the continual westward expansion of white settlements sustained plantation farming as a system; how the process of Indian Removal was a vital step in opening up the western territories; how the institution of slavery provided the power for this engine of economic growth; and how American military actions and policies furthered economic interests, particularly those of southern plantation owners. The hypothesis is that, by enacting military policies and engaging in military actions which benefited economic interests, especially those of southern plantation farmers, the United States government in the early 19th century made the economic prosperity of that era possible and helped bring about the modern industrialized market economy of the United States.

Poster / Display Presentation 3:00-3:30 PM

Do Goals Alone Determine the Stanley Cup Champion

Michael Walker , Business Admin - Finance

Mentor: Amber Powell

Mike Walker Abstract Winning a Stanley Cup is the goal of every team in the NHL. There is a general understanding that the team with the most goal scorers will win the cup. But what really gets a team there? Should a general manager be worried about drafting a goal scorer? Should they focus on defenseman? A number of variables were examined statistically to determine if there is any correlation between the amount of players a team has in the top 30 goal scorers league wide and that teams chances at winning the Stanley Cup. The data used was found at www.ESPN.com.

Poster / Display Presentation 2:30-3:00 PM

Calibration of On-Campus Telescope and Error Variations

Alyssa Warrior, Physics

Mentor: Michael Dunham

Before the data taken, using the telescope, is of scientific value there are a few processes the data has to undergo. Currently each night data is taken using the telescope additional data sets called flats and darks have to be taken as well to calibrate the image. Flats and darks are data sets used to correct for pixel to pixel variations in the detector reasons and zero level respectively. My research has been focused on how much error is presented when the data used to calibrate the image is from a different night, and how widely the data sets vary from night to night. If it's shown that for one night using a previous nights calibration set doesn't present a significant error the next step would be to see if there is a time limit on the calibration data before the error becomes too high and a new set is needed.

Poster / Display Presentation 2:30-3:00 PM

ICPC ACM Computing Competition 2018

Seth Weidman, Robert Moore; Dakota Wicker; Michael Conti; Ariana Burns; Sammie Huang

Mentor: Ziya Arnavut

The teams that went to the ICPC ACM Computing Competition in Clinton, NY share their experience!

Poster / Display Presentation 1:00-1:30 PM

Moral Reform, Prostitution, and Religion in Antebellum America

Mikaela Wilson, History

Mentor: Mary Sievens

As industry expanded and society changed, the traditional structures of life known before the 1820s and 1830s began to deconstruct. Men and women reacted by holding fast to their religious beliefs as a result. For women, religion was one of the only avenues for political involvement that they could occupy and control independently. Additionally, this period in American history is known for its religious fervor because of the Second Great Awakening, revivals, and individuals like Charles Finney. This inspired large masses of middle-class individuals to religious action. As cities began to develop, middle-class individuals utilized this religious belief in order to extricate cities of sin and protect their children from the “pollution” and “whoredom” within. It also functioned as a means of getting rid of those deemed “impure.” As a result, this explains why moral reform took off when it did, and what the motivations of its members were.

Poster / Display Presentation 2:00-2:30 PM

Electronic Cigarettes - What's the bottom line?

Sydney Younger, Biology

Mentor: Melissa Lyon

Sydney Younger is a Biology major with two minors in Public Health and Leadership studies. She completed an outreach project of E-Cigarette awareness across SUNY Fredonia campus for the Chautauqua County Health Department. The CCHD is a community of public health professionals whose main purpose is to protect and promote family health and wellness. CCHD created the Nicotine Annihilation organization to focus on a collaborative way to push back the tobacco epidemic in Chautauqua County. To communicate the awareness across campus Sydney created various resources that would attract college students attention to the crucial information about the dangers of e-cigarettes. The target population was college students as they are at great risk. This project has project has increased Sydney's knowledge to plan, implement ideas and events, gain the appropriate leadership skills to learn about her preferred working style and experience working independently as a team member which will help her future career in the dental field.

Poster / Display Presentation 2:00-2:30 PM

Bullying in Schools

Amanda Zablonki, Mathematics

Mentor: Amber Powell

Bullying is a national concern amongst this generation in a majority of schools. Bullying is seen to have significant effects on students which can lead to a variety of problems on mental health. But how significant is bullying on student morale? Does bullying effect students differently based on their sex, race or ethnicity? Should schools place more emphasis on counseling programs to help raise student morale? These variables were examined statistically to see if any correlations can be found that link bullying to student morale. Analysis was also done to determine if bullying is more prevalent based on sex, race, or ethnicity. The data used was collected from <https://nces.ed.gov/onlinecodebook>.

Poster / Display Presentation 1:00-1:30 PM

The Antebellum Cherokee or ᏍᏏᏉᏚᏂ: Cultural Appropriation, American Imperialism, or Societal Diffusion?

Dallas Zebrowski, History

Mentor: Mary Stevens

Between 1809 and 1821, a Cherokee tribesman named Sequoyah devoted his entire existence to the creation of a codified syllabary, intended to transform an entirely oral communication system into a

literary one. Sequoyah was successful in his endeavor, as the new syllabary was adopted officially in 1825, and became the only non-Latin, Native written code in the antebellum period. However, an important point must be raised due to the timing and historical context of this invention; despite knowing the who, what, when, where, and how, we do not know the why. Why was Sequoyah's dream adopted by the Cherokee Nation, which was an inventive and innovative moment in American history? With this paper, I wish to further evolve our understanding of the Cherokee and their history, Native-United States relations, and add context to the Nation's removal.

Poster / Display Presentation 3:30-4:00 PM

Lesson with Potential from Teachers with Potential

Sydney Bajdas, Allison Buskey, Mary DiCioccio, Roberto Gonzalez, Victoria Johns
Megan Little, Kevin Morali, Emily Moyer, Megan Ott, Sarah Wood, Alexis Wydysh
Mentors: Keary Howard, Tedi Cox

From fractions to calculus (and plenty in between) presenters provide transferable lessons, projects, and activities for middle and secondary mathematics classrooms.

Poster display with no formal presentation

Make It Take It

Katherine Adinolfe, Genevieve Audino, Brianna Elliott, Madison Evans, Karah Herman
Jennifer Kershner, Shannon Ketzak, Meghan Roberts, Emma Romell, Kalee Schreiber
Katherine Yudin
Mentors: Keary Howard, Tedi Cox

Recharge your creative talents by replicating and creating teacher-tested, hands-on mathematics activities in childhood and middle level classrooms.

Poster display with no formal presentation