

SAC
2017



Tuesday, April 11, 2017

MINNESOTA STATE UNIVERSITY MOORHEAD PRESENTS

19th Annual

ANDREW B. CONTEH

Student Academic Conference

*Student-Centered Education through Mentoring
Student Research and Creative Activities*



Since 1999



MINNESOTA STATE UNIVERSITY
MOORHEAD®



Greetings:

Among all the programs and activities that make Minnesota State University Moorhead a place of transformation where students achieve more than they believed possible, the Student Academic Conference stands out as a particularly special and transformative experience. In many ways, the conference exemplifies the qualities that make MSUM truly unique: our legacy as a university where the faculty-student relationship is at the heart of teaching and learning; our commitment to providing students with opportunities to explore and discover their passions; and the transformation that occurs when students discover their reason for being and feel prepared to pursue their purpose.

It's no surprise, then, that the conference was started by a faculty member who also exemplifies these qualities and stands out as truly special. Dr. Andrew Conteh, beloved and respected by generations of MSUM students, started the conference in 1998 in collaboration with then-student Ryan Sylvester. In the years since then, the conference has become an annual tradition and source of pride for our campus community.

So, it is fitting that in the 19th year of the conference, as Dr. Conteh ends his distinguished career at MSUM, it has been officially named the **Andrew B. Conteh Student Academic Conference**. As we celebrate Dr. Conteh's career and mourn his departure, we commemorate his legacy by naming the conference in his honor. We also ensure that, annually, we will celebrate not only the spirit of exploration and discovery but also the lasting impact of Dr. Conteh's spirit on our campus community.

Congratulations to the students who are presenting at the 2017 conference. Thank you to the faculty mentors who worked side-by-side with those students to make their presentations possible. And thank you, Andrew, for devoting your career to MSUM and having the foresight to establish one of our most treasured traditions.

Sincerely,

A handwritten signature in black ink that reads "Anne Blackhurst". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Anne Blackhurst
President

Conference Participants and Attendees:

I am honored to congratulate this year's participants in the Student Academic Conference. This truly signature annual event at MSU Moorhead recognizes and celebrates students whose initiative, energy, hard work, and scholarship have earned them a place in this important annual exhibition. The Student Academic Conference is strong testimony to our students' leadership and their ability to master and use what they've learned, as well as to the excellence of the faculty who stand behind and support them. This event allows our students to participate in what, for many of them, will become a regular part of their own future careers: for those who continue on to graduate degrees, the work of the academician requires not only the ability to investigate, to analyze, to compare and contrast— but also to articulately distill their results and discoveries in order to contribute to a broader scholarly conversation, on the one hand, and that provide practical consequences for all our lives, on the other. For those who move on to non-academic careers, the ability to investigate, to acquire new information, to analyze and synthesize it, to present it, converse regarding it, and to apply it—all these skills are necessary for future success and are evidenced by the work of this year's student participants. These students' accomplishments are among the most powerful proof of the importance and effectiveness of what we do here at MSUM.

Those of you here in attendance are in for a treat! Your attention to, enthusiasm for, and support of this event and our students speak volumes about the value our community places on the great work of our students, and on the MSUM faculty and staff who serve as their mentors.



Joseph Bessie, Ph.D.
Provost and Senior Vice President for Academic Affairs





19th Annual **ANDREW B. CONTEH** **Student Academic Conference**

Tuesday, April 11, 2017

9:00 a.m.	Poster Set-Up—Registration/Information Table <i>CMU Main Lounge</i>
9:00 a.m.	Featured Graduate Student Lecture Tia Marthaler <i>CMU 203</i>
9:40 a.m.	Presentation Session 1 and Poster Session 1 <i>Various CMU Rooms and Poster Display Area</i>
11:00 a.m.	Seating for the Luncheon <i>CMU Ballroom</i>
11:10 a.m.	Luncheon Starts <i>CMU Ballroom</i>
11:50 a.m.	Welcome, Introductions, Renaming of the Conference Remarks by Dr. Shawn Garrett, Lt. Ryan Sylvester, JAGC, USN President Anne Blackhurst
12:40 p.m.	Presentation Session 2 and Poster Session 2 <i>Various CMU Rooms and Poster Display Area</i>
2:00 p.m.	Break
2:10 p.m.	Presentation



Ryan Sylvester

1998 Mass Communications

Ryan Sylvester was an involved student at MSUM, serving as a resident assistant, tour guide, student orientation counselor, student senator, Model United Nations participant and advertising manager for The Advocate. After finishing his degree, Sylvester stayed at MSUM as a full-time employee, working in Housing and Residential Life as an Area Director. In addition, he decided to continue his education at MSUM, obtaining a Master of Science in Educational Leadership in 2002.

He proposed the idea of a conference to one of his professors as a way to fulfill a practicum requirement for his graduate degree, and his professor was supportive. Sylvester then went to Dr. Andrew Conteh, who helped the idea come to fruition.

“The interdisciplinary nature of the conference provides a unique layer where student presenters have to be able to communicate their topic to an audience that may or may not have the contextual background that students of a particular major or course may have,” Sylvester explained. “The conference is a great day to celebrate student achievement and learning.”



Shawn Garrett Ph.D.

Chemistry and Biochemistry Professor

Shawn Garrett, Ph.D., has been a faculty member in the Department of Chemistry and Biochemistry at MSUM for 26 years. She spoke at the first Student Academic Conference in 1999 where she discussed her experiences with biotechnology, biochemistry, and working on Project Kaleidoscope, an organization to reform science and math education. This year, she'll touch on not only conducting research, but also on having a supportive forum in which to communicate that research.

“This conference has given students practice in organizing research results and communication to an interested public,” said Garrett.

She notes because this is a smaller, more intimate conference, it allows for a more supportive forum. She says it also gives students valuable experience that translates to presenting at regional and national meetings associated with chemistry and biochemistry.



Julianne Feir

Major: Art Education

Year in School: Senior

Hometown: Glenwood, Minn.

STEAM Ahead: Art's integration for tomorrow's world changers



> By Lexi Byler

Art is known for being many children's favorite class, a staple in early childhood education. It develops children's creativity and is a way for them to express themselves. It has also been linked to improved academic performance. In contrast, science and technological innovation continues to expand. The importance of science, technology, engineering and mathematics (STEM) in the education system continues to prove true. Although the two subject areas differ, there is a way to combine them.

“These skills (art) are critical for the advancement and betterment of the next generation.”

– Julianne Feir

“America is in a creativity crisis,” said Art Education senior Julianne Feir.

She is looking at STEM in the education system at a different angle. Adding an “A” for art, STEAM focuses on the practical application of scientific principles coupled with artistic endeavors.

“These skills are critical for the advancement and betterment of the next generation,” said Feir.

Solving problems requires creativity. STEAM is an innovative way to teach traditional STEM subjects. It allows students to interpret information in a different way. The goal is for students to create, apply and incorporate art with STEM in their learning and work. Not all students are motivated by math and science. Integrating art into STEM may be the creativity needed to get students more engaged.

Tyler Carlson

Major: Psychology

Year in School: Senior Hometown: Rogers, Minn.

What is beautiful is good: Implicit and explicit bias in restaurant hiring decisions



> By Lexi Byler

Bias is embedded in human nature. Everyone has biases, regardless of whether they're implicit or explicit. The latter is beliefs or attitudes about a person or a group that an individual is aware of on a conscious level. Implicit bias is relatively the same, except the person is unaware of their bias. This type of bias refers to stereotypes that affect our thinking, understanding, actions and decisions in an unconscious matter.

Senior Psychology student Tyler Carlson chose this topic because of how complex the hiring process is – not only from a business and legal perspective, but from a psychological perspective as well. He conducted research on how facial attractiveness affects job candidates' chances of being hired, using a scale ranging from more attractive to moderately attractive and less attractive.

"I don't think a lot of people realize how much is actually taking place when we make hiring decisions," he said.

This is Carlson's second time presenting at the Student Academic Conference. Last year he presented on the stigmas of border bias. He finds value in showing his research and informing faculty and fellow students of the work he's done.

"The Student Academic Conference gives others and myself the chance to do something new and learn something new along the way, and that's what college and the conference are all about."

"The Student Academic Conference gives others and myself the chance to do something new and learn something new along the way, and that's what college and the conference are all about."

– Tyler Carlson



Zillah Adahman & Oluwatosin Balogun

Artificial Intelligence: Brain chips

> Zillah Adahman
Major: Computer Science
Year in School: Senior
Hometown: Abuja, Nigeria

> Oluwatosin Balogun
Major: Computer Science and
Computer Information Technology
Year in School: Senior
Hometown: Lagos, Nigeria



> By Lexi Byler

Artificial intelligence and the idea of inserting microchips into human brains is the essence of futuristic inventions. Existing research on monkeys and rats shows these animals can control things with their minds as a result of implanted brain chips. We are that much closer to what was once deemed unfathomable. MSUM seniors Zillah Adahman and Oluwatosin Balogun were both fascinated by the potential of this type of technology and chose to delve into it further.

“I’ve always been fascinated by the brain, and the ability to mimic the natural processes of the brain with a computer interests me.”

– Oluwatosin Balogun

“I’ve always been fascinated by the brain, and the ability to mimic the natural processes of the brain with a computer interests me,” said Balogun.

Computer scientists are diligently working to perfect neural interfaces, aiming to improve life as we know it. It could lead to enhanced memory, empowering the ability to communicate with others invisibly and allowing someone who suffers from paralysis to regain the ability to feel and touch. The duo not only looked into the benefits but also the challenges of producing technology that has the potential to be life-altering. There are manufacturing and safety issues, as well as psychological concerns about how drastically this could impact human lives.

“This research is still an ongoing development. Not many trials or experiments have been done on the human brain,” said Adahman.

“This research is still an ongoing development. Not many trials or experiments have been done on the human brain.”

– Zillah Adahman

Kaele Peterson

Major: Music Education

Year in School: Junior Hometown: Fergus Falls, Minn.

Music and classroom behavior



> By Lexi Byler

Music is a powerful medium that touches the hearts of people across the globe. The rhythm of a beat, the meaning behind lyrics and the joy of combining sounds to create something audibly beautiful are a few reasons why music is so many people's best friend. It accompanies us in our happiest moments, interrupts awkward silences on elevators and is the favorite part of many children's school days.

Music is capable of having a powerful hold on people. Typically taught in a manner in which students learn about music, MSUM junior Kaele Peterson is taking a different approach. The notion of utilizing music in general education classrooms as a tool for management is a revolutionary idea.

"The use of music in the classroom, no matter the classroom, really appealed to me," said Peterson.

She developed the idea after taking Social Foundations of Education and put it to practice

in the classroom she helped teach in for practicum. There, she worked with students with behavioral issues and saw how it affected their classroom behavior. Music can also be useful in special education.

"The positive effects of music extend beyond the classroom. Any teacher can use music to benefit their classroom and affect positive behavior changes."

"The positive effects of music extend beyond the classroom. Any teacher can use music to benefit their classroom and affect positive behavior changes."

– Kaele Peterson



Abel Pavivic

Major: Computer Science

Year in School: Senior Hometown: Fargo, N.D.

Speaking in code



> By Lexi Byler

Robots, flying cars and self-lacing tennis shoes are all futuristic inventions we thought we'd be enjoying by now. While we're still stuck in traffic on our way to school or work rather than soaring in the sky in this year's newest vehicles, scientific innovation continues to increase at a rapid pace.

Most people who own a smartphone are guilty of having conversations with them. Not texting conversations, but vocal conversations. These people speak into their mobile devices and expect an answer back from identities like Siri or Cortana; just two examples of many.

“Modern technology offers a lot of freedom in terms of how easily you can interact with the digital personality and receive help with daily tasks.”

– Abel Pavivic

“Modern technology offers a lot of freedom in terms of how easily you can interact with the digital personality and receive help with daily tasks,” said Pavivic.

Pavivic's research is about the level of interaction between humans and devices and explores how that connection can be deepened. Today's devices are equipped to respond to vocal cues. Over time, Pavivic believes these spoken prompts will gain clarity, to the point where the user will be convinced the computer understands them.

“I like understanding how computers think and how they prioritize requests. For a long time, computers were silent and could only offer beeps, but now it's less intimidating to accomplish things with their powerful capabilities,” he said.

Matthew Dakken

Major: Economics

Year in School: Junior

Hometown: Fargo, N.D.

An Analysis of the Stock Recommendations of Jim Cramer



> By Lexi Byler

Mad Money” is an American finance TV show that has aired for twelve years. Hosted by best-selling author Jim Cramer, the show focuses on investment and speculation in publicly traded stocks. Economics junior Matthew Dakken chose to analyze Cramer’s recommendations after searching for a more fun and engaging way to present information on consumer preferences than the traditional approach used in textbooks.

“Historically, the field of economics has not played well with other social sciences and has been reluctant to acknowledge their value.”

– Matthew Dakken

“Historically, the field of economics has not played well with other social sciences and has been reluctant to acknowledge their value,” said Dakken.

In his research, Dakken analyzes the market reaction to long-term returns of stocks “buy” recommended by Cramer, believing the TV personality’s charismatic nature makes his presentation both unique and more enjoyable to absorb. He focuses specifically on the first half of 2016, attempting to discover whether or not Cramer’s ability to outperform the market over the long-term is negligible.

Dakken is interested in exploring the combination of disciplines outside of economics and finance, like psychology and sociology. Looking at things through this interdisciplinary lens can be beneficial when researching economics and calculating finance.



PRESENTATION LISTINGS

ANTHROPOLOGY AND EARTH SCIENCE

The Development of the Landscape at the MSUM Regional Science Center and its Influence on the Occupation of Indigenous Peoples: Interpreted from Lake Agassiz Shoreline and Recent Deposits
Dominic Mugavero, Hanah Cook, Aishat Olowoshile, and Tyler Solberg
 Advisor: Karl Leonard

Understanding the Meskwaki and Thaaki Worlds: Language, Environment, and Geography
Melissa Foley
 Advisor: Erik Gooding

Magnetic Susceptibility Data from Chief Looking's Village
Carly DeSanto and Amy Woodruff
 Advisor: Rinita Dalan

BIOSCIENCES

Prairie Grassland Microbial Soil Diversity
Ashley Higgins
 Advisor: Sara Anderson

Area Patterning: Emx1/Emx2 Double Knockout
Ifeoluwa Obanla, Jacob Rositas, Milka Rahman, Stacy Osei, and Eberardo Barragan
 Advisor: Adam Stocker

The Effect of Emx2 Deletion in Area Patterning using FoxG1-IRES-Cre Technology
Oluwatobi Shittu, Jossette Velazquez, Sanekazu Watanabe, and Mia Steffenson
 Advisor: Adam Stocker

Optimization of Experimental Research Methods Involving in Vitro and in Vivo Models of Candida Albicans
Milka Rahman, Mandi Markwardt, and Nicholas Miller
 Advisor: Sumali Pandey

Phenylketonuria
Daniel Skoglund and Calanthea Mazoyo
 Advisor: Shawn Garrett

Tracking Anxiogenic Effects of Chronic Sleep Deprivation in Zebrafish
Alison Barkhymer
 Advisor: Brian Wisenden and Shawn Garrett

Effect of Deoxynivalenol Exposure on IL-6 Production in Human Pulmonary Epithelial Cells
Yewande Osunsanya, Fanta Barrow, and Tori Edwards
 Advisor: Sumali Pandey

The Role of Estuary Grasses in the Absorption of Nutrients
Philip Larson and Laura Wessberg
 Advisor: Brian Wisenden

The Biological Effect of Estrogen on Aquatic Vertebrates
Katherine Budke, Akira Shastri, Randi Lenius, Tana Kurtti, Nicole O'Neill, and Nehikhare Ekhatore
 Advisor: Patricia Wisenden, Ellen Brisch

Maternal Effects on Offspring as a Result of Environmental Visual and Chemical Predator Cues Presented at Various Life Stages
Jacob Tesch and Alexandra Macgregor
 Advisor: Adam Stocker

Biofilm Production in Cold Temperatures by Psychrophilic Bacteria
Kendra Brand, Ashley Rezachek, and Jesse Nelson
 Advisor: Michelle Tigges

Understanding the Effect of Salt on Transmembrane Protein Expression in Antarctic Bacteria
Victoria Gilbert, Nellie Campbell and Charles Bergman
 Advisor: Michelle Tigges

Preliminary assessment of taxonomic and functional diversity of bacteria across a prairie quality gradient
Elias Holte and Kristen Anderson
 Advisor: Sara Anderson

MSUM Nutrient Network
Matthew Geister-Jones
 Advisor: Alison Wallace

7E Science Lesson on Speciation
Christina Aigner
 Advisor: Richard Lahti

Effect of Intranasal Administration of Deoxynivalenol on IgA Production in Mice
Blessing Nwakanma
 Advisor: Sumali Pandey

The Role of Gut Microbiota on the Progression of Parkinson's Disease
Jenna Wegscheid and Whitney Welder
 Advisor: Adam Stocker

The Role of Obesity and Type 2 Diabetes in the Pathogenesis of Pancreatic Cancer
Whitney Welder, Jenna Wegscheid, MaKenzie Smith, and Kathryn Sistrunk
 Advisor: Adam Stocker

Comparison of Small-Scale Movements of Western Painted Turtles (Chrysemys Picta Bellii) Between the Sexes in Summer 2014 (a low-capture year) in Clay County, Minnesota
Iveta Harner and Breanna Huynh
 Advisor: Donna Stockrahm

Methods of Non-invasive Heart-Rate Monitoring of Zebra Fish
Brittney Kakac and Mark Lueders
 Advisor: Andanda Shastri and Brian Wisenden

The role of branched alpha keto acid dehydrogenase complex in Maple Syrup Urine Disease
Hawau Abdulsalam, Erhiga Ekhama, and Ross Rath
 Advisor: Shawn Garrett

Biochemical analysis of the glucose-6-phosphatase deficiency for those with Von Gierke's Disease
Yewande Osunsanya, Jesse Nelson, and Charles Bergman
 Advisor: Shawn Garrett

Turtle Tales: Where Do Local Painted Turtles (Chrysemys Picta Bellii) Fit Among the Species' North American Range?
Jordan White and Joseph Cleys
 Advisor: Sara Anderson

Grassland ecology investigations of baseline monitoring data

Hayley Hilfer, Stefanie Akhidenor, and Jade Schanz

Advisor: Alison Wallace

*Using GIS and Trapping Records to Quantify Small-scale Movements in Western Painted Turtles (*Chrysemys Picta Bellii*) in Clay County, Minnesota*

Sarah Sanderson and Miranda Sater

Advisor: Donna Stockrahm

7E Lesson Plan – Extend

Michael Colenso

Advisor: Richard Lahti

Do Genetic Changes in the Neocortex have Anatomical and Behavioral Repercussions in Mice?

Nancy Castro Borjas, Andrew Swedzinski, Alexandra Macgregor, Stefanie Akhidenor, and Katelyn Hixson

Advisor: Adam Stocker

Halting Parkinson's Disease Progression through Healing Intestinal Permeability and Gut Microbial Imbalance Via Diet

Kiana Ruch, Rachel Krause, Nicole O'Neill, and Shakiba Hajipouri

Advisor: Adam Stocker

7E Inquiry Lesson on the Cell Cycle

Trevor Harder

Advisor: Richard Lahti

7E Lesson Plan on Osmosis

Brooke Mayer

Advisor: Richard Lahti

Cortisol-dependent learning in zebrafish

Loretta Gyau, Mikaela Hanson, and Yewande Osunsanya

Advisor: Brian Wisenden and Shawn Garrett

Game Camera Study at the Minnesota State University Moorhead Regional Science Center near Glyndon, Minnesota

Eberardo Barragan, Angela Kooren

Advisor: Donna Stockrahm

*Comparison of Small-Scale Movements of Western Painted Turtles (*Chrysemys Picta Bellii*) Between the Sexes in Summer 2016 in Clay County, Minnesota*

Brittney Bruns

Advisor: Donna Stockrahm

*Morphometric Variation in Western Painted Turtles (*Chrysemys picta belli*) in Clay County, Minnesota*

John Reynolds

Advisor: Donna Stockrahm

Tree Squirrel Habitat Use in an Urban Campus Setting

Jessica Lindstrom and Jonna Vachal

Advisor: Donna Stockrahm

Urban Canada geese at American Crystal Sugar in Moorhead, Minnesota: Goose Numbers Are Down and Duck Numbers Are Up

Jaime Kallstrom and Rachel Rusten

Advisor: Donna Stockrahm

*Comparison of Sex Ratios of Western Painted Turtles (*Chrysemys Picta Bellii*) Based on Long-Term Capture Records Versus Sex Ratios Calculated from Single-Season Capture Records in Clay County, Minnesota*

Jessica Loeffler

Advisor: Donna Stockrahm

Impacts of Early Restoration Processes on Small Mammals in a Western Tall Grass Prairie in Clay County, Minnesota

Elisabeth Teige, Sarah Sanderson, Jessica Loeffler, Miranda Sater, and Jessica Lindstrom

Advisor: Donna Stockrahm

Writing to Learn Activities to Support Argumentation Skills in Biology Students

Brooke Meyer, Gregory Anderson, and Daniel Grande

Advisor: Alison Wallace

*An Investigation of the Bio-chemical Constituents and Potential Allelopathic and Insecticidal Efficacy of Wormwood (*Artemisia Absinthium*) in Aquaponics*

Isaac Heiser

Advisor: Andrew Marry, Brian Wisenden, and Chris Chastain

BUSINESS

The Enron Fraud Triangle

Pierre Djonou

Advisor: Sheri Erickson

Microsoft and LinkedIn

Rebecca Shoup

Advisor: Mohamed Elbannan

REIT Accounting Fraud

Devon Liljenquist

Advisor: Mohamed Elbannan

The Fargo Marathon and How It Benefits the F/M Community

Olivia Droogsma

Advisor: Jane Pettinger

New York Islanders: At a Discount

David Bush

Advisor: Sheri Erickson

An Analysis of Fraud

Tralonie Perkins

Advisor: Sheri Erickson

Tyco Scandal 2002

Mariah Hennen

Advisor: Mohamed Elbannan

ExxonMobil Merger

Dennis Skillings

Advisor: Mohamed Elbannan

A Study of the Fraud Triangle

Sandra Martin

Advisor: Sheri Erickson

Purchase Intention of Online Games: A Relationship between Consumer Personalities and Game Characteristics

Doner Ralph Manlangit

Advisor: Wooyang Kim

International Financial Reporting Standards (IFRS) and the Effects of the IFRS Adoption

Azbayar Enkhbayar Advisor: Mohamed Elbannan



PRESENTATION LISTINGS

The Nethnographic Nature of eSports Fans in Diffusing Online Game Engagement

Brandon Qual

Advisor: Wooyang Kim

The Perceived Value of Information Acquisition in the Choice of a Healthcare Organization: An Application of Foraging Theory

Morgan Shelton

Advisor: Wooyang Kim

Save The CPAs

Tina Schmitz

Advisor: Mohamed Elbannan

Consolidation @ Enron

Joseph Mathes

Advisor: Mohamed Elbannan

Hollywood Accounting

Laura Benson and Sonya Hicks

Advisor: Mohamed Elbannan

QWEST Scandal

Mona Barthouma

Advisor: Sheri Erickson

The Effects of PCAOB Regulations on the Audit Profession

Nicole Weiss

Advisor: Mohamed Elbannan

The Fraud Triangle @ Tyco

Jordan Heinen

Advisor: Sheri Erickson

Tax Planning

Tenzin Sherpa

Advisor: Mohamed Elbannan

Audit Fraud Case

Pierre Djonou

Advisor: Sheri Erickson

What does the Bible Say about Accounting?

Michael Korf

Advisor: Mohamed Elbannan

Financial Literacy, Family Communication, and Privacy Management

Peter Olson

Advisor: Thomas Hanson

Does Higher Gender Diversity in Corporate Boards Increase Financial Performance?

Qin Chen and Wen Zheng

Advisor: Eduardo Pablo

Portfolio Investment, Behavioral Biases, and Financial Literacy

Jenna Kalthoff Advisor: Thomas Hanson

CHEMISTRY

Improving the Drug Antipyrine: Synthesis of N1-Acyl Pyrazolidinone Analogs

Valerie Mores

Advisor: Craig Jasperse

Improving the Drug Antipyrine: Synthesis of N1-Acyl Analogs

Andrea Reynolds

Advisor: Craig Jasperse

Improving the Drug Antipyrine: Synthesis of C5-Dimethyl Pyrazolidinone Analogs

Joshua Agunsoye

Advisor: Craig Jasperse

Molecular Tweezers for Catalytic Hydrogenation and Dehydrogenation

Brooklynn Haslop and Taysir Bader

Advisor: Gary Edverson

Synthetic Methodologies for Pyrazolones Analogues as Potential Drug Candidates for Pulmonary Fibrosis

Taysir Bader

Advisor: Craig Jasperse

Improving the Drug Antipyrine: Synthesis of N1-Acyl Analogs

Erhiga Ekhama

Advisor: Craig Jasperse

Effect of Environmental Stresses on the Pigmentation of Antarctic Bacteria

Amanda Kemper, Sanekazu Watanabe, Sonam Singh Rajput and Oyiza Adepitan

Advisor: Michelle Tigges

Preparation and Crystallization of High-Purity C5-Aryl Pyrazolidinone Analogs

Trinh Pham

Advisor: Craig Jasperse

Lipid Composition Analysis of a Psychrophilic Bacteria

Mikaela Hanson, Erhiga Ekhama, Daniel Skoglund, and Fanta Barrow

Advisor: Michelle Tigges

Chemical Detection of the Major Classes of Endocrine Disrupting Compounds in Red River Water 2017

Yaa Pokua Osei Sarpong, and Iman Mohammed Ali

Advisor: Shawn Garrett

Synthesis of Pyrazolidinones: Analogs of the Drug Antipyrine

Hawau Abdulsalam

Advisor: Craig Jasperse

A Biochemical Analysis of Gilbert's Syndrome

Victoria Gilbert and Ashley Rezachek

Advisor: Shawn Garrett

Biochemistry of Oculocutaneous Albinism Type 1

Amanda Kemper, Laura Keimig, and Katherine Budke

Advisor: Shawn Garrett

Synthesis of Ligands from the Amides of 2,6-Pyridinedicarboxylic Acid

Hunter Strum and Jordan Feder

Advisor: Jeffrey Bodwin

Tying up: A Biochemical Analysis of Polysaccharide Storage Myopathy

Jordan White and Amanda Lee

Advisor: Shawn Garrett

Familial Amyotrophic Lateral Sclerosis and the Role of SOD1

Mikaela Hanson, Ashley Strube, and Kendra Brand

Advisor: Shawn Garrett

COMMUNICATION AND JOURNALISM

Cultivating Perceptions of Romantic Relationships Through the Effects of Social Media

Remington Layne, Payton Hoskins, Lindsey O'Driscoll, Ezzat Alhaidar, Lauren Freichels, Anne Dunham

Advisor: Anthony Ocana

Who Will Help? A Study of Social Identity and Uncertainty Reduction Theory

Mary Gangl

Advisor: Anthony Ocana

Path Finding for Autonomous Vehicles

Kyle Ross

Advisor: Yurii Boreisha

The Impact of Facebook Friend Requests between the Parent and Adolescent

Remington Layne, Marcus Erickson, Justin Duinick, and Nickolas Kuzas

Advisor: Anthony Ocana

Applying Expectancy Violations Theory to Interpersonal Professor-Student Relationships

Shelbey Marthaler, Kelly Carpenter, Taylor Borg-Sele, and Amanda Voelkel

Advisor: Anthony Ocana

Self-Objectification and the Media

Marcus Erickson, Kaelin Kraker, Blake Nemecek, Sarah Swenson, and Jaime Sjoblom

Advisor: Anthony Ocana

COMPUTER SCIENCE AND INFORMATION SYSTEMS

Speaking in Code

Abel Pavicic

Advisor: Yurii Boreisha

Video Game Algorithms Library

Anthony Nemmaoui-Ferre

Advisor: Yurii Boreisha

Exploring the Deep Web

Shine-Od Davaakhuu

Advisor: Yurii Boreisha

Machine Learning in Research

Sarah Oksol

Advisor: Yurii Boreisha

Wireless LAN Security

Brian Ternes

Advisor: Yurii Boreisha

Internet of Things

Angat Lamichhane and Sulayman Saho

Advisor: Yurii Boreisha

Generating Polyphonic Music using Convolution with LSTM

Binaya Bhattarai

Advisor: Yurii Boreisha

Digital Video Editing and Sony Vegas Pro 9.0

Carly Sturlaugson

Advisor: Yurii Boreisha

Modern Linear Regression Techniques in The Context of Data Science

Samuel Erickson

Advisor: Yurii Boreisha

The Importance of WLAN Network Security

Angel Payan

Advisor: Yurii Boreisha

Artificial Intelligence: Brain Chips

Zillah Adahman and Oluwatosin Balogun

Advisor: Yurii Boreisha

Motion Capture with Kinect

Elise Johnson and Alexander Gwaltney

Advisor: Yurii Boreisha

Star and Galaxy Classification Using Decision Trees

Paige Meyer

Advisor: Yurii Boreisha and Matthew Craig

Cryptographic Properties of Hash Functions to Ensure Maximum Security

Rostand Armel Fezeu

Advisor: Yurii Boreisha

Examining Vector Representation Systems for Word-Sense Disambiguation

Katriana Davenport-Kimball

Advisor: Yurii Boreisha

Video Game Programming with Python

David Ordermann

Advisor: Yurii Boreisha

Nanotechnology

Samuel Hager

Advisor: Yurii Boreisha

Docker: The Adoption of Containerization

Jason Thompson

Advisor: Yurii Boreisha

A World Built by Machines

Jonathan Schrade

Advisor: Yurii Boreisha

Creating the Truly Immersive Virtual Reality

Zachariah Johnson

Advisor: Yurii Boreisha

Python Computer Vision

Avery Knight and Kyle Petersburg

Advisor: Yurii Boreisha

Accessing the Internet through Light

Michael Armstrong

Advisor: Yurii Boreisha

Securing Cloud Computing

Moutaspha Ali

Advisor: Yurii Boreisha

COUNSELING AND STUDENT AFFAIRS

Development of a Peer Advising Program Manual

Laura Baier

Advisor: Lisa Karch

Dual Enrollment Experience in High School: Impact on Collegiate Student Success

Audrey Cole

Advisor: Lisa Karch, Clinton Bueling, and James Anderson

Closing the Achievement Gap through Advancement Via Individual Determination

Michael Morford

Advisor: Taryn Akgul and Lisa Karch

Learning to Lead: A Comprehensive School Counseling Leadership Program for At-Risk Students

Courtney Roatch

Advisor: Taryn Akgul, Lisa Karch, and Becky Boyle Jones



PRESENTATION LISTINGS

ECONOMICS, LAW AND POLITICS

Assimilation of Ethiopian Jews in the Mainstream Israeli Community

Blene Woldeselasse

Advisor: Paul Kramer

The more the merrier? A Case Study Analysis on the Economic Effect of Population Control Policies in Sub-Saharan Africa

Arnold Ikpatt

Advisor: Tonya Hansen

Business Climate and Poverty Rates: A State-by-State Analysis

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Shunichi Takitsu

Advisor: Jay Albrecht, Dawn Hammerschmidt, and Keith Wiederich

A Literature Review: Dehydration Effects on Human Performance

Lisa Sang

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A Literature Review: Whole-Body Cryotherapy in Patient and Athletic Populations

Shawn Sherman

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A Literature Review: Kinesio Taping-Success or Scam

Markelle Duttenhefner Ziegler

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A Literature Review: Ankle Sprain Management; Taping versus Bracing

Jesse Differding

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A Literature Review: Delayed Onset of Muscle Soreness (DOMS)

Shae Brown

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A Literature Review: Bridge Enhanced ACL Repair

Sydney Klein

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A Literature Review: Massage Therapy in Sports & Athletic Performance

Alexis Berscheid

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A Literature Review: Psychological and Psychosocial Impacts Associated with Youth Sport Participation

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Andrew Block and Adam Hanson

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Development of image calibration software for variable star astronomy

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“At the End of the Day You Only Have One Pair of Eyes:” Influences on Contact Lens Compliance among College Students

Linda Vue

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Jessie Clark

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Rachel Yonkovich

Advisor: Nancy Paul

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Julianne Feir

Advisor: Bradley Bachmeier

