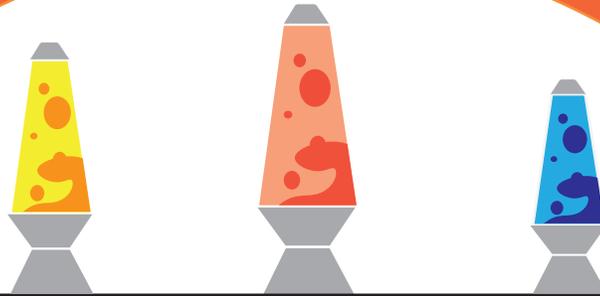


6<sup>TH</sup> ANNUAL



University of Wisconsin-Eau Claire

**PROVOST'S  
HONORS  
SYMPOSIUM**

research | scholarship | creative activity

APRIL 29, 2016

## WELCOME

### Welcome to the Sixth Annual Provost's Honors Symposium for Research, Scholarship, and Creative Activity.

Thanks to the generous support of **Provost Patricia Kleine** and the **Office of Research and Sponsored Programs**, we can offer this wonderful annual event: an opportunity for selected students to present their top-notch work in a professional conference format.

This year the Provost's Honors Symposium will showcase **101** students presenting **47** research, scholarly, and creative projects in over **34** disciplines.

Participants in the Provost's Honors Symposium are nominated each year by their UW–Eau Claire faculty mentors or major departments. Finalists are selected by the University Honors Council, a committee that includes three University Honors students, faculty representatives from each of the UW–Eau Claire colleges, and University Honors staff:

- Ruth Cronje, Honors Faculty Fellow
- Erik Hendrickson, College of Arts and Sciences
- Elizabeth LeMay, Honors Living-Learning Community representative
- Vicki Samelson, College of Education and Human Sciences
- Mariah Sands, Secretary, Honors student organization
- Rita Sperstad, College of Nursing and Health Sciences
- Ingrid Ulstad, College of Business
- Jeff Vahlbusch, Director, University Honors Program
- Cheyenne Wolfe, President, Honors student organization

In founding and organizing the annual Provost's Honors Symposium for Research, Scholarship, and Creative Activity, the University Honors Program is happily pursuing one of its four main goals: We “promote and support intellectual and scholarly achievement, great teaching, and student-faculty collaboration across the university.”

We thank you for supporting the outstanding students presenting here today, and their outstanding faculty and staff mentors!

*Jeff Vahlbusch*

**Director, University Honors Program**

---

**PROVOST'S RECEPTION**

All Presenters, Attendees, Faculty, Staff, Students,  
and Community Members are Invited!

Join Provost Patricia Kleine



for her reception following the presentations  
at 5:30 p.m.

**Dakota Ballroom**

Hors d'oeuvres and refreshments  
will be served.

A short program will start at 5:45 p.m.

---

## TABLE OF CONTENTS

Welcome .....	1
Schedule at a Glance.....	4
Presentations.....	7
<b>Session I: 1:00 – 2:00 p.m.</b> .....	<b>7</b>
Centennial moderators: Spencer Morgan & Adria Slade .....	7
Menominee moderators: Maggie St. Ores & Heather Weise.....	8
Ho-Chunk moderators: Mattie Kahn & Dana Warwick .....	9
Chancellors moderators: Kendall Clay & Hannah Metry .....	10
<b>Session II: 2:10 – 3:10 p.m.</b> .....	<b>11</b>
Centennial moderators: Ashley St. Aubin-Clark & Emily Powers .....	11
Menominee moderators: Maggie St. Ores & Heather Weise.....	13
Ho-Chunk moderators: Mattie Kahn & Dana Warwick .....	14
Chancellors moderators: Kendall Clay & Hannah Metry .....	15
<b>Session III: 3:20 – 4:20 p.m.</b> .....	<b>16</b>
Centennial moderators: Ashley St. Aubin-Clark & Emily Powers .....	16
Menominee moderators: Anna Bachmeier & Liz Stubbs.....	17
Ho-Chunk moderators: Rebecca Sandahl & Clorice Reinhardt.....	18
Chancellors moderators: Caleb Nunn & Ashley Pike .....	19
<b>Session IV: 4:30 – 5:15 p.m.</b> .....	<b>20</b>
Centennial moderators: Ashley St. Aubin-Clark & Audrey Steinman.....	20
Menominee moderators: Spencer Morgan & Liz Stubbs.....	21
Ho-Chunk moderators: Josh Stringer & Trung Nguyen .....	22
Chancellors moderators: Pa Zong Vang & Allison Fouks .....	24
Index of Presenters & Faculty Nominators/Advisors.....	25

## SCHEDULE AT A GLANCE

### SESSION I: 1:00 – 2:00 P.M.

#### CENTENNIAL

1. Evaluating Honors Education at UW-Eau Claire: A Multi-Year Analysis of Program Success
2. Exploring the Relationships among Disability Attitudes, Implicit Beliefs about Intelligence, and Motivation for Major
3. Holistic Communication Therapy for Individuals Transitioning from Male to Female

#### MENOMINEE

4. Redefining Diversity and Leadership: Addressing the Needs of Students of Color as Leaders on a University Campus
5. Short-term Intercultural Immersion Experiences and their Impact on Participants
6. Analyzing Group Work in a Language Classroom: A Study of Attention

#### HO-CHUNK

7. Ground-Penetrating Radar Imaging of a Strandplain along Lake Superior, Huron Mountains, Michigan, USA
8. In Hot Water and Tight Spots: Navigating Obstacles in Research and in Life
9. An Automated QM/MM Docking Suite for Quinone Reductases

#### CHANCELLORS

10. Combating ISIS in Indonesia
11. But is it Just? A Model to Rate the Justice Orientation of Community-Academic Research Partnerships
12. Riding the Bus for Social Justice

### SESSION II: 2:10 – 3:10 P.M.

#### CENTENNIAL

13. Participant Perceptions of the Aphasia Camp Experience: A Qualitative Analysis
14. Exploring Snapchat as a Tool for Social Exchange in Persons with Aphasia
15. Joint Video Self-Modeling as a Conversational Intervention for Persons with Traumatic Brain Injury

#### MENOMINEE

16. Fostering and Gauging Writing Proficiency Development During Study Abroad
17. Color in Marina Warner's *Indigo: Or Mapping the Waters*
18. The Significance of Salt in Michelle Cliff's *Abeng* and *No Telephone to Heaven*

#### HO-CHUNK

19. Steered, Molecular Dynamic Situations and Mutational Studies to Explore the Interplay of Coupled-Domain Dynamics and Substrate Binding in Prolyl-tRNA Synthetases
20. Dual-Responsive Properties of PEG-PDMAEMA Diblock Copolymers
21. First Principles Investigation of the Delithiation Process in Li<sub>2</sub>S

---

## **CHANCELLORS**

---

22. Dissonance Analysis in Piano Works of Debussy
23. 'Beads and Whiskey!': Puccini's Girl and the Romance of the American West
24. Music + Memories = Magic: Wisconsin Community and Nursing Home Projects

---

## **SESSION III: 3:20 – 4:20 P.M.**

---

## **CENTENNIAL**

---

25. Who's Going to Treat Me? A Content Analysis of Healthcare Providers' Web Biographies at Campus Health Centers Nationwide
26. El Salvador Immersion Clinical - NRSG 428 Section 312
27. Helping Students Understand Poverty and Stigma: The Community Connections Team Experience

---

## **MENOMINEE**

---

28. Sex Differences in Young Adults' Attraction to their Opposite-Sex Friends: An Artifact of Sampling Method?
29. Conflations of Correlation with Causation in Researchers' Descriptions of Their Work
30. Mama's Baby, Papa's Maybe: Links between Child-Father Resemblance and Child-Reported Paternal Investment

---

## **HO-CHUNK**

---

31. Total Kinetic Characterization of the Aminolysis of N-aryl-4-chloro-1,8-naphthalimides
32. Effects of Macromolecular Crowding on Structure and Catalytic Function of Escherichia coliProlyl-tRNA Synthetase
33. Condensed-Phase Effects on the Structural Properties of Nitrile and Imine Complexes of SiF4: A Computational and Low-Temperature IR Study

---

## **CHANCELLORS**

---

34. An Updated Analysis of Chinese and American Public Support for an International Climate Change Mitigation Treaty
35. An Updated Analysis of Chinese and American Public Willingness to Pay for Climate Change Mitigation Policy Action
36. Climate Change Denial and Skepticism in China and the United States: Evidence from a Topic Prevalence Analysis of Open-Ended Survey Question Responses

---

## **SESSION IV: 4:30 – 5:15 P.M.**

---

## **CENTENNIAL**

---

37. Airborne Particulates around Frac Sand Plants Using EPA-Certified Instruments
38. Supplementing the Scientific with the Humanistic in Speech-Language Pathology
39. Humans of Eau Claire Photo Stories

---

**MENOMINEE**

---

- 40. Peer Delivered Gatekeeper Training for Suicide Prevention
  - 41. Gender and AUDIT Score Significantly Interact to Effect Fluid Poured in a Simulated Alcohol-Free-Pour Task
  - 42. Discriminative Stimulus Effects of Naltrexone in Rats with Limited Access to Sucrose
- 

**HO-CHUNK**

---

- 43. "Feeding the Social Media Machine": Changing Internal Policy, Strategy, Practice, and Governance through Facebook
  - 44. The Effect of Different Tasks in Multitasking on Idea Generation
  - 45. Exploring Consumers' Reaction in the Bad Gift Situation Across Cultures
- 

**CHANCELLORS**

---

- 46. Tracking the Use of Free Fruit and Vegetable Coupons Given to Families and Assessing the Impact on Children's Consumption
- 47. Designing & Implementing an Elementary School Vegetable Snack Program to Increase Children's Consumption

## PRESENTATIONS

**SESSION I: 1:00 – 2:00 P.M.**

**CENTENNIAL**

moderators: **Spencer Morgan & Adria Slade**

**1. Evaluating Honors Education at UW-Eau Claire: A Multi-Year Analysis of Program Success**

Presenters: Carolyn Wolff, Anneli Williams, Allison Fouks

Faculty nominator: David Jones, English, Liberal Studies

In recent years, UW-Eau Claire's University Honors Program has grown substantially in number of students, recruiting a more diverse student body and contributing to national conversations on Honors Education. The program enrolls students across all colleges and many departments at UWEC, with Fall 2015 course enrollments reaching an all-time high of 826 seats. During the last three years, program growth has been supported and managed through an ongoing student-led data project. The Honors student body has become increasingly diverse, in part as a result of our Holistic Admissions process, which selects students not automatically admitted through a comprehensive review process. To evaluate the successes of the Honors Program yearly, incoming student cohorts have been created, organized, and analyzed by our team. Thus far we have seen growth in participation, especially since new initiatives implemented in 2009, as well as higher rates of first-to-second year retention and four-year graduation. Further statistical analysis is ongoing and shows the Holistic Admissions rate has increased, as have retention and graduation rates. All student-gathered information will help improve our University Honors Program's outreach and the larger Honors Education community.

**2. Exploring the Relationships among Disability Attitudes, Implicit Beliefs about Intelligence, and Motivation for Major**

Presenters: Katie Beck, Clare Stratton

Faculty nominator: Mary Beth Leibham, Psychology

The purpose of this study is to examine college students' disability attitudes, implicit beliefs about intelligence (i.e., mindsets), and motivation for choosing their major and the relationships among these three factors. Understanding these links is important because of the growing number of college students who will subsequently work with individuals with disabilities. As they enter professions that involve working with individuals with disabilities, it is likely that disability attitudes, mindsets, and motivation for pursuing their major/career will impact their interactions with the people with whom they work. Approximately 200 students completed surveys assessing their disability attitudes, mindsets, and motivation for major. We hypothesize that students with more intrinsic motivation for their majors will be more likely to have growth mindsets (i.e., belief that intelligence is not a fixed trait) and more positive disability attitudes than students who have more extrinsic motivation for their majors. This study has the potential to contribute to our understanding of the importance of mindset, disability attitudes, and major motivation for students who may work with individuals with disabilities.

**3. Holistic Communication Therapy for Individuals Transitioning from Male to Female**

Presenter: Alicia Nied

Faculty nominator: Abby Hemmerich, Communication Sciences and Disorders

Transgenderism has been in the news of late in the United States. Individuals transitioning from male to female may desire to change their voice and speech to be more feminine. Speech-language pathologists (clinicians) who work with this population may be unsure what aspects of communication to target in

therapy, beyond speaking pitch. The purpose of this study is to examine a multi-faceted approach to therapy, addressing five different components of communication, including pitch, breathiness, resonance, intonation patterns, and vocabulary. All of these components have been shown to impact others' perception of femininity, but no study has addressed all of them in a single participant. This single-subject study will compare the pre-therapy communication characteristics of an individual transitioning from male to female to her post-therapy communication characteristics to determine whether this therapy approach was effective. In addition, the communication characteristics of the male-to-female transgender individual will be compared to exemplars of communication from male and female speakers to determine which characteristics are most important for femininity.

---

**MENOMINEE**

moderators: **Maggie St. Ores & Heather Weise**

---

#### **4. Redefining Diversity and Leadership: Addressing the Needs of Students of Color as Leaders on a University Campus**

Presenters: Alexandra Putney, Becca Schaberg

Faculty nominator: Katherine Rhoades, Dean emerita, College of Education

Power. Privilege. Inequality. As university students become increasingly aware of their privilege and how personal and institutional privileges favor some groups over others, many are choosing to join a nationwide revolution and become allies to those who have been systematically silenced. Universities also have been moving toward expanding diversity and inclusivity and are emphasizing the importance of equality of opportunity for all students irrespective of social class, gender, race, or sexuality. The primary purpose of this semester-long qualitative research project conducted on the University of Wisconsin-Eau Claire campus was a) to examine the beliefs, thoughts, and feelings regarding leadership among students of color and b) to explore how their views are reflected in campus organizations' actions, events, and leadership opportunities. A secondary purpose emerged several weeks into the data-gathering process: to redefine the meaning of leadership on campus, especially for students of color, by analyzing the current relationship between diversity and leadership on campus and identifying changes students of color in leadership positions would like to see implemented.

#### **5. Short-term Intercultural Immersion Experiences and Their Impact on Participants**

Presenters: Emily Cronin, Paris Dunlop, Roxy Holt, Megan Huntley

Faculty nominator: Katherine Rhoades, Dean emerita, College of Education

In this qualitative research project, we explored the effects of short-term intercultural immersion experiences, first by conducting an in-depth literature review and then interviewing faculty and students associated with five immersion experiences offered at UW-Eau Claire. We aimed a) to discover if intercultural immersion experiences have lasting impact on student participants and, b) to determine if the teaching methods that faculty facilitators of immersion experiences used proved beneficial and effective for student participants. After analyzing our collective data, we concluded that short-term immersion experiences are truly impactful – despite their time constraints – and that they provide students with changed perspectives and new-found appreciation for cultures and individuals that vary from their own cultural backgrounds and identities. We also concluded that instructor methods deployed before, during, and after the immersion experience do influence the overall quality of the experience, with pre-immersion coursework, providing hands-on opportunities, and debriefing of certain experiences appearing to be the most beneficial. Our research further illustrated that each experience offered significant gains for future educational and professional success for student participants.

## **6. Analyzing Group Work in a Language Classroom: A Study of Attention**

Presenter: Krista Neyers

Faculty nominator: Anne Cummings Hlas, Languages

This research project investigates the frequency and duration of student attention lapses in the second language classroom in accordance with the pedagogical methods. Using existing data we collected previously as a part of this project, we have more recently been attempting to fill the gap in research focusing on pedagogical methods in the language classroom and their relationship with attention. This data includes iClicker reports, written surveys, and written transcriptions from 17 Spanish classes taught by 9 different faculty members, ranging from the 100 to 400 level with a total of 274 participants. Of these 17 classes, 3 were 75-minute classes and 14 were 50-minute classes. We used Microsoft Excel to analyze the data. More specifically, we analyzed when students entered and came out of attention lapses in relation to what was happening in the classroom. From this examination, students working in groups was one area where students reported numerous lapses. Our findings suggest trends during group work related to task type, group accountability, and collaboration.

---

## **HO-CHUNK**

moderators: **Mattie Kahn & Dana Warwick**

---

## **7. Ground-Penetrating Radar Imaging of a Strandplain along Lake Superior, Huron Mountains, Michigan, USA**

Presenter: Adam Wysocki

Faculty nominator: Harry Jol, Geography and Anthropology

Strandplains are a series of beach ridges that build out into a body of water over time as water levels drop or as sediment input increases. A pulseEKKO100 ground-penetrating radar (GPR) system was used with 100 MHz antennae, 1.0m antennae separation, and a step size of 0.25m to image the subsurface stratigraphy of a 4,000-year old strandplain along the Huron Mountains, northwest of Marquette, Michigan. Six GPR transects with lengths between 100-921 meters were collected near the Lake Superior shoreline under investigation. A Topcon RL-H3CL laser level was utilized in a topographic survey to geometrically correct the profiles. Results show depths of penetration between 7 to 10 meters, a velocity of 0.10 m/ns, and inclined stratigraphy with slopes ranging between 7.2 to 9.3°. By interpreting the radar stratigraphy, we suggest the lakeward-inclined stratigraphy is progradational throughout the 921 meter profile with periods of stillstand and aggradation. Information based on results helps build a better understanding of how the strandplain developed during a period of lake level drop for Lake Superior.

## **8. In Hot Water and Tight Spots: Navigating Obstacles in Research and in Life**

Presenter: Mara Reed

Faculty nominator: Matthew Evans, Physics & Astronomy

After the triumph of securing a permit to monitor a group of geysers in Yellowstone National Park during the summer of 2015, my research hit a snag. One of the sensors in a geyser's runoff channel failed to log distinguishable spikes in temperature when hot water flowed down the channel after an eruption. The frustration I felt while spending weeks trying to discern the problem mirrored another challenge; I was also facing a significant hurdle in finding better ways to maintain my mental health after a challenging and draining semester. But over the next year I accumulated truly valuable experiences while spending time in Yellowstone, attending a semester at Montana State, and exploring the caves of West Virginia. Now I reflect on how these experiences have influenced me and enabled me to view roadblocks and hurdles as detours, manage my mental health, and flexibly navigate obstacles in my life and research.

### **9. An Automated QM/MM Docking Suite for Quinone Reductases**

Presenter: Clorice Reinhardt

Faculty nominator: Sudeep Bhattacharyay and Sanchita Hati, Chemistry

Quinone oxidoreductases catalyze the reduction of quinones to hydroquinones using its flavin adenosine dinucleotide (FAD) cofactor. They play pivotal roles by detoxifying the in vivo reactive oxygenated species (ROS) that damage cellular organelles, and stabilize tumor suppressor proteins. Because of these crucial functions, quinone reductases offer great promise for use in anti-tumorigenic drug development. Quinone reductases (QRs) utilize a 'ping-pong' mechanism, wherein one active site catalyzes two opposing hydride transfer reactions involving FAD. Recent studies revealed that flavin's redox state modulates the active site electrostatics and the protein dynamics.

Understanding of the opposing electrostatic and dynamic effects is the key to successful design of molecules that can inhibit the reaction process. While many docking programs exist, it is our intent to surpass classical mechanical-based simulations by addition of a quantum mechanically-treated flavin ring and substrate. With this automated ligand docking tool, we hope to accurately model and predict the effects of novel ligand binding, aiding the screening process of drug development. The setup, methodology, and results will be presented.

---

## **CHANCELLORS**

moderators: **Kendall Clay & Hannah Metry**

---

### **10. Combating ISIS in Indonesia**

Presenter: Sarah Mezera

Faculty nominator: Eunsook Jung, Political Science

The rise of ISIS in the Middle East has altered the global war on terror as no group has ever done before, and the foreign recruitment strategy of ISIS is a critical aspect of its success in the Middle East and beyond. The case of Indonesia, the world's largest Muslim-majority country, has surprised many with its relatively low number of ISIS fighters. Estimates for ISIS fighters in Iraq and Syria with Indonesian nationality range from 500-700, which is relatively low compared to both Western and other Muslim countries. This paper discusses why ISIS has been unsuccessful in Indonesia. This question is particularly important because understanding how the world's largest Muslim-majority country has curtailed ISIS's recruiting efforts will be essential in both defeating ISIS and preventing radicalization in the future. The three most important factors in answering this question are the strength of the Indonesian economy in terms of growth and distribution, a well-functioning representative democracy, and the education programs and radicalization-prevention actions of Indonesian Muslim civil society organizations. An analysis of these three factors will explain how Indonesia has been able to renounce the radicalization efforts of ISIS while continuing its peaceful democratization process.

### **11. But is it Just? A Model to Rate the Justice Orientation of Community-Academic Research Partnerships**

Presenters: Allison Fouks, Deborah Thompson

Faculty nominator: Ruth Cronje, English, Honors

As at many institutions, some faculty at UWEC are partnering with community agencies to perform research to meet those agencies' data needs. Such community-based research can be an important component of an institution's civic engagement effort. Commentators such as Randy Stoecker and Harry Boyte have noted, however, that academics can function as technocrats when their epistemic power perpetuates oppressive power structures; they call for deliberate attention to establishing partnership conditions that empower

equitable collaboration in determining research goals and methods and analyzing data, equitable ownership and access to those data, and reciprocal benefit to both academic and community partners. In this presentation, we'll share a "justice barometer" model we have devised to rate the justice orientation of community-based research partnerships at our institution and communicate the results of our effort to use this model to rate a pilot group of community-based research efforts at UWEC.

## **12. Riding the Bus for Social Justice**

Presenter: Rachel Tillman

Faculty nominator: Ruth Cronje, English, Honors

The City of Eau Claire has decided to develop a new area along the river – the Cannery Redevelopment District (CRD) – to create a "built environment" to promote health in our community. The City envisions this riverfront (stretching north of the Family Video on Madison Avenue for about a mile along the Chippewa River) as a space much like Phoenix Park with bike paths, recreational areas, and new commercial development. But the neighborhood adjacent to the CRD is largely low income: 68% of the residents are renters, with a high percentage of households headed by single mothers. Gentrification of this area will price many of these residents out of the new housing market the CRD will create. Many residents are unaware of the City's plan to redevelop this area and fewer still have been successfully integrated into community conversations about what should happen in the CRD. This presentation relates the experiences of Honors students to solicit and integrate the voices of community residents into planning for the CRD.

**SESSION II: 2:10 – 3:10 P.M.**

**CENTENNIAL**

moderators: **Ashley St. Aubin-Clark & Emily Powers**

## **13. Participant Perceptions of the Aphasia Camp Experience: A Qualitative Analysis**

Presenter: Britton Clarke

Faculty nominators: Jerry Hoepner and Tom Sather, Communication Sciences and Disorders

Participants in this study were individuals with aphasia and their caregivers who attended a weekend aphasia camp. At the close of camp, open-ended surveys were completed independently by participants and were analyzed using qualitative content analysis. Barriers and facilitators to participation at aphasia camp were identified, as were categories relating to the aphasia camp experience. Additionally, responses were mapped onto the five chapters of the WHO-ICF Environmental Factors.

Fifty-four surveys with twenty-two open-ended questions each were completed both by people with aphasia and their caregivers over 2013 and 2014. Three categories of facilitators, three categories of barriers, and six categories describing aphasia camp experiences were identified. Aphasia camps appear to be a viable means to provide an environment that supports communication, participation, and relationships. Through this study, barriers and facilitators to camp experiences were identified and the camp experience as a whole was further investigated. This study provides a greater understanding of the aphasia camp experience from the perspective of camp participants, and may impact effectiveness and efficiency of similar service delivery models.

#### **14. Exploring Snapchat as a Tool for Social Exchange in Persons with Aphasia**

Presenter: Carissa Baier

Faculty nominators: Jerry Hoepner and Tom Sather, Communication Sciences and Disorders

Individuals with aphasia are at risk for social isolation, given physical, attitudinal, and communication impairments. They have expressed a desire to use social exchange technologies (e.g., Twitter, Facebook) as a platform to interact with peers, friends, and family (Worrall et al., 2011; Brown et al., 2010). However, access to such platforms is limited by complex interface and linguistic load (Egan et al., 2004, Elman, 2004). The development of aphasia-friendly social media platforms (e.g., AphasiaWeb), has been explored (Buhr, Hoepner, Miller, & Johnson, 2016; Miller, Buhr, Johnson, & Hoepner, 2013). Buhr and colleagues found that individuals with aphasia prefer and are most successful initiating “posts” with pictures. Picture-initiated posts generate more reciprocal exchange as well. The present study sought to use a universally available application, Snapchat, to facilitate exchange among a group of six individuals with aphasia from throughout Wisconsin. After a pilot study, examining Snapchat at an Aphasia Camp (Baier, Hoepner, & Sather, in prep), a one-month trial was initiated to examine peer exchanges. The study identified many important barriers to using the Snapchat app, including device and app operational competence, wireless access issues. This may serve as a guide for professionals introducing technologies that they would characterize as user-friendly and intuitive as needing more support and training. Qualitative outcomes include information about the range of experiences individuals wish to share. This includes sharing of identity, personal engagement, and the what/where of personal experiences.

#### **15. Joint Video Self-Modeling as a Conversational Intervention for Persons with Traumatic Brain Injury**

Presenter: Sarah Olson

Faculty nominator: Jerry Hoepner, Communication Sciences and Disorders

The current investigation examines the effects of joint Video Self-Modeling (VSM) as an intervention for social-pragmatic interactions by individuals with traumatic brain injuries (TBI) and their everyday communication partners. It has been established that individuals with brain injury and their everyday partners make more accurate assessments with the support of direct video review (Hoepner & Turkstra, 2013). Further, evidence from social-pragmatic interventions in TBI (Togher et al., 2013), aphasia (Kagan et al. 2007), dementias, and dysarthria show that joint interventions with everyday partners are more effective than solo interventions. The present study examined one couple over the course of a 16 week intervention period. Quantitative outcomes include reductions in the frequency of problematic behaviors by the individual with TBI and increase in supportive behaviors by the partner. It has been established that those behaviors typically co-vary, as partner support increases, problem behaviors decrease (Hoepner, Togher, & Turkstra, 2016). Qualitative analysis of transcripts from every session, show positive changes in support and problem behavior incidence. Further, the present study demonstrated improvements in the individual with TBI's memory, which was not treated directly. This likely relates to frequent review of videos generated in the recent past and the high-incidence of orientation/memory statements within sessions. Overall improvements in self-awareness and regulation on the part of both participants was noted. Information about treatment fidelity and implementation of the techniques were also identified.

**16. Fostering and Gauging Writing Proficiency Development During Study Abroad**

Presenter: Anneli Williams

Faculty nominator: Martina Lindseth, Languages

The objective of this project was to gauge the development of foreign language proficiency in writing during a semester-long study abroad program in Marburg, Germany, and to evaluate and improve the effectiveness of a new program component.

A thorough look “inside” the written student reports submitted twice during the semester, and a data comparison at the two benchmarks, revealed obvious and subtle evidence of improvement, making it possible to gauge the progress students were making toward a higher proficiency level. Specifically, we looked for tokens of advanced proficiency, which is the desired benchmark for target language proficiency at graduation as specified in the learning outcomes for language majors. German language structures that were analyzed in this context included subject-verb inversion in declarative sentences, the distinction between Nominative, Dative, and Accusative cases, and the use of overt connectors/conjunctions to create cohesion between sentences. We analyzed attempts at such structures and patterns of correctness and errors.

**17. Color in Marina Warner's *Indigo*: Or Mapping the Waters**

Presenter: Emilee Grunow

Faculty nominator: Theresa Kemp, English

Marina Warner's *Indigo* uses color to shape and frame the novel in highly particular ways. Color theory not only characterizes the interactions between colors in *Indigo*, it allows specific conclusions to be drawn that relate to race especially. Through prefacing each chapter with two colors, Warner highlights the two main narratives of the novel, suggesting the complexity of their relationship, which are both reflective of each other and of colonialism's impact on indigenous practice and community. Color serves to symbolize and deeply represent the interrelation of skin tone and race, privilege, and colonialist violence.

**18. The Significance of Salt in Michelle Cliff's *Abeng* and *No Telephone to Heaven***

Presenter: Kelly Binning

Faculty nominator: Theresa Kemp, English

Throughout Michelle Cliff's *No Telephone to Heaven* and its prequel *Abeng*, it is possible to trace the concept of salt. Following the multiple mentions of salt throughout both texts, it becomes clear that Cliff's use of salt in the lives of her characters seems to revolve around three rough categories: slavery and the history of Jamaica/the Savage family, religion and folktales, and salt as a paradoxical agent of both healing and torture, which is representative of intense power dynamics. The significances of salt within these categories eventually converge together to represent a “clash” of white and black history, the disturbing history Clare Savage had long been blind to, and the difficulty Clare has when attempting to navigate her complex biracial identity.

**19. Steered, Molecular Dynamic Situations and Mutational Studies to Explore the Interplay of Coupled-Domain Dynamics and Substrate Binding in Prolyl-tRNA Synthetases**

Presenter: Matthew Mocol

Faculty nominators: Sudeep Bhattacharyay and Sanchita Hati, Chemistry

Prolyl-tRNA synthetases (ProRSs) are multi-domain enzymes and members of the aminoacyl-tRNA synthetases family. ProRSs catalyze the covalent attachment of proline to tRNA<sup>Pro</sup>. They are divided into two evolutionarily distinct groups based on sequence alignment and structural architecture - “prokaryotic-like” and “eukaryotic-like”. The “prokaryotic-like” ProRSs contain an insertion (INS) domain between motifs 2 and 3 of the catalytic domain, whereas “eukaryotic-like” ProRSs have C- and/or N-terminal extension domains. Previous experimental studies have shown that the catalytically important proline-binding loop (PBL) undergoes a large-scale conformational transition upon prolyl-adenylate binding for both groups of ProRSs.

Computational and biochemical studies on “prokaryotic-like” ProRSs have suggested that the global dynamics of an insertion domain (INS) is coupled with the local dynamics of the PBL and the complete deletion of the INS domain has a significant impact on substrate binding. To understand how the energetics of substrate binding is influenced by INS domain dynamics, the substrate binding process is simulated for both various ProRSs using Steered Molecular Dynamics (SMD) simulations. The theoretical results are being validated by experimental studies.

**20. Dual-responsive Properties of PEG-PDMAEMA Diblock Copolymers**

Presenter: Elizabeth Laskowski

Faculty nominator: Elizabeth Glogowski, Materials Science

Smart polymers are polymers that dramatically change properties in response to a small change in an external stimulus. Poly(2-(dimethylamino)ethyl methacrylate) or PDMAEMA is a smart polymer that changes water solubility in response to both temperature and pH. The effect of changing polymer structure on smart properties has been investigated. A series of PDMAEMA diblock copolymers have been synthesized, characterized, and tested to determine the impact of polymer molecular weight, polymer concentration, and ionic strength on smart properties. Characterization methods used include UV-Visible Spectroscopy, Dynamic Light Scattering, Nuclear Magnetic Resonance Spectroscopy and Gel Permeation Chromatography. Applications for PDMAEMA diblock copolymers range from drug delivery to sensors.

**21. First Principles Investigation of the Delithiation Process in Li<sub>2</sub>S**

Presenter: Jack Postlewaite

Faculty nominator: Ying Ma, Materials Science

Lithium ion batteries are among the most widely used energy storage devices in consumer electronics. However, limited capacity is still a major problem that hinders their application in a few key markets including electric vehicles. Many different materials are currently under intensive investigation, and lithium sulfide (Li<sub>2</sub>S) is a promising high capacity cathode material. Unfortunately, the delithiation of Li<sub>2</sub>S is usually sluggish, and a high charge voltage is required as a result. To understand the associated microscopic mechanism of the delithiation process in Li<sub>2</sub>S, first principles calculations based on the density function theory are performed. The structural evolutions for systems with different amount of lithium vacancies that correspond to different percent of delithiation are simulated using ab initio molecular dynamics. These calculations provide an atomistic understanding of the delithiation process in Li<sub>2</sub>S, and help to develop new methods that can be used to minimize the activation barrier of Li<sub>2</sub>S particles.

**22. Dissonance Analysis in Piano Works of Debussy**

Presenters: Andrea Ranzau, Claire Arneson, Emily Gullerud

Faculty nominators: Gary Don, Music & Theater Arts, and James Walker, Mathematics

This interdisciplinary project applied mathematics and music theory to analyze several Debussy piano pieces. The students used spectrogram-based acoustical dissonance analysis on the chordal changes shown in the musical scores for the pieces. They compared the dissonance levels in the pieces when they are played in just tuning versus playing in equal-tempered tuning. Their results provided independent, quantitative confirmation of the musical-theoretic dissonance analysis obtained by Gary Don (Professor of Music Theory at UWEC) in one of his papers (“Brilliant Colors Provocatively Mixed: Overtone Structures in the Music of Debussy,” *Music Theory Spectrum*, 23(1), 2001, pp. 61–73).

**23. ‘Beads and Whiskey!': Puccini’s Girl and the Romance of the American West**

Presenter: Cody Norling

Faculty nominators: Ryan Jones and Gretchen Peters, Music & Theater Arts

For a music history senior thesis, this study contextualizes the subject of the opera within Native American history, specifically identifying the connection between two Native American characters and historical realities in California during the Gold Rush. Through textual analysis of these two characters, Cody develops their broader dramatic significance in the storyline. Through musical analysis, Cody identifies numerous stylistic markers consistently attached to the two characters and places this “Indian” style in context to broader compositional trends of the contemporaneous Indianist movement. Cody also addresses Puccini’s concern with “authenticity” in the opera through an identification of arrangements of Indian melodies in the opera and a consideration of their dramatic significance. Cody’s thesis for this paper identifies the complex relationship between these “authentic” musical materials and the stereotyped “exotic” image of the two Indian characters. Cody writes, “The result is an indigenous musical characterization that, like the text, has little connection to its attempted authenticities but rather, relies on a stereotyped “exotic” image to ultimately fulfill the romanticized requirements of an American Gold Rush narrative.”

**24. Music + Memories = Magic: Wisconsin Community and Nursing Home Projects**

Presenters: Joyce Idarraga, Alissa Peanasky, Allison Sontag

Faculty nominators: Lisa Quinn-Lee, Social Work

Music is a relatively low-cost and low-risk approach to managing the behavioral and psychological symptoms of dementia. Our first project was bringing the national Music and Memories program into 150 nursing homes. Agency staff were surveyed close to the start of the Music & Memory Project, at 3 months, and at 6 months to evaluate the impact of this program on staff and overall work environment. The second project was taking the Music and Memories program into the Eau Claire community by bringing the benefit of personalized music to 25 persons with dementia living in their homes with a caregiver. Caregivers completed the Caregiving Distress Scale (CDS) at intake and at 3-month follow-up. In addition, they also completed a questionnaire about and to evaluate the feasibility and impact of the music on caregivers’ stress level and quality of life. Expected results are that personalized music decreases caregiver stress, including paid caregivers in nursing homes and family caregivers in the home.

**25. Who's Going to Treat Me? A Content Analysis of Healthcare Providers' Web Biographies at Campus Health Centers Nationwide**

Presenters: Allison Manson, Katie Schmitz

Faculty nominator: Evan Perrault, Communication & Journalism

Research finds that college students do not know the differences between common providers at campus health centers (e.g., NPs, and PAs) and would be reluctant to receive care if unable to see a physician. The current study seeks to determine what kinds of information campus health centers provide to students about their providers online to determine if a lack of sufficient information could be to blame. A content analysis was performed of 2,127 biographies from 294 Division-I campus health centers. Results reveal that campus health centers do a good job including professional information about providers (e.g., schools attended, certifications), but fail to provide information explaining the differences and similarities between the various personnel who can provide care. Additionally, personal information about providers is lacking (e.g., hobbies) despite prior studies finding that students want this information to increase relatability. Finally, one of the most important pieces of information students want to know about providers are their philosophies of care - only 2.6% of biographies included one. We hope these findings will help campus health centers reassess the kind of provider information they present online.

**26. El Salvador Immersion Clinical**

Presenters: Haley Housh, Allison Miller, Karen Nakano, Kelly Peterson, Eva Riedesel, Leah Rolfzen, Kaitlyn Troge, Courtney Walin

Faculty nominator: Jill Hecker Fernandes, Nursing

International clinical immersion experiences have been shown to promote cultural competencies in undergraduate nursing students (Caffrey, Neander, Markle, & Stewart, 2005). The immersion process began weeks prior to leaving the United States with readings, discussions, and films to develop knowledge of Salvadorian culture and history. Students worked to develop and prepare projects in Spanish based on community health promotion and education. These projects are a part of an evolving five-year initiative to provide knowledge and skills to community health care workers where access to care is extremely limited. This includes community assessment, examination of outcomes, and healthcare concerns. The outcomes of clinical immersion abroad are successful in not "fixing" another culture, but rather gaining insight and experience in attempt to become more culturally competent. This includes sustainability of the experience to transcend to future clinical groups and the people of El Salvador. The student advantage to cultural immersion goes beyond meeting the requirements for clinical practice through engaging and sharing transcultural perspective to ultimately develop and diversify professionalism through the art of nursing.

**27. Helping Students Understand Poverty and Stigma: The Community Connections Team Experience**

Presenters: Kali Boldt, Mark Priebe

Faculty nominator: Julie Anderson, Biology, and Ruth Cronje, English

This research involves developing qualitative and quantitative instruments to investigate the impact of the Community Connections Team clinical experience on undergraduate participants' development of critical literacy. Critical literacy pedagogy places patient health in the context of wider socioeconomic and political

systems that produce and sustain health inequalities, and it seeks to understand, analyze, and resist practices that lead to inequalities experienced by marginalized members of society. At present, there is no protocol that captures the important nuances of student understanding, attitude, and skills pertaining to critical literacy; this research seeks to fill this void. This study aggregates multiple forms of data collection before and after the volunteers' clinical experience, employing essay prompts and a questionnaire. The qualitative and quantitative data will help devise further refinements of the assessment protocol, as well as provide insight into the efficacy of the Community Connections Team experience on participants' critical literacy. This research seeks to transcend the current cohort of Community Connections Team volunteers as it offers an annual assessment for future volunteers in the UWEC-Marshfield Clinic connection.

---

**MENOMINEE**

 moderators: **Anna Bachmeier & Liz Stubbs**


---

**28. Sex Differences in Young Adults' Attraction to their Opposite-Sex Friends: An Artifact of Sampling Method?**

Presenter: Whitney Joseph

Faculty nominator: April Bleske-Rechek, Psychology

When young adults have been asked either to think of an opposite-sex friend or bring an opposite-sex friend to the lab, men have reported more attraction to their friend than women have. In two studies utilizing a naturalistic sampling strategy - in which we approached male-female dyads at a university student center - we failed to replicate the sex difference in attraction between male and female friends. To test the possibility that previous studies documented a sex difference in attraction because men and women in those samples had different types of people in mind when they were asked to think of or select an opposite-sex friend, we asked young adults to "think of an opposite-sex friend." Men more often than women subsequently characterized the person they thought of as someone they were attracted to. We conclude that men's and women's everyday experiences with their opposite-sex friends differ from their mental definitions of opposite-sex friends.

**29. Conflations of Correlation with Causation in Researchers' Descriptions of Their Work**

Presenters: Carly Murray, Michaela Gunseor, Stephanie Darling, Mark Priebe

Faculty nominator: April Bleske-Rechek, Psychology

In this study, we investigated the frequency with which social scientists use cause-and-effect language in descriptions of their work and the frequency with which it is appropriate given their research design and findings. We coded poster titles, abstracts, and supporting summaries from the 2015 Association for Psychological Science convention program. As a five-person team, we used the first poster session to establish coding rules. For the remaining twenty sessions, every fifth poster was independently coded by both the last author and a two-person team. The final data set consisted of 21 samples, one from each poster session. We recorded use of causal language in the title (e.g., "The Good, the Bad, and the Strange: How Non-normative Behavior AFFECTS Moral Judgments"), in the short abstract (e.g., "We investigated how the personality trait of narcissism INFLUENCES the behavior patterns..."), and in the supporting summary (e.g., "Results suggest that promotions RESULTED IN increases in satisfaction..."). When researchers did use causal language, we coded it as justified if their research included an imposed manipulation of the causal variable referred to in the causal language. Our analysis of the content of the posters revealed that across poster sessions, over half of researchers used causal language. On average, fewer than half of those also described a research design or findings that clearly justified the causal language. Our findings imply that the confusion between correlation and causation extends to those training future scientists.

### **30. Mama's Baby, Papa's Maybe: Links between Child-Father Resemblance and Child-Reported Paternal Investment**

Presenters: Casey Bloechl, Rachel Griffiths, Carly Murray, Rebecca Nelson

Faculty nominator: April Bleske-Rechek, Psychology

In humans, both males and females engage in parental care. For women, the fitness benefits of engaging in parental care are relatively certain, as maternity is 100% certain. Because conception occurs internally to the female, however, ancestral males would never have 100% certainty of their paternity. Evolutionary theorists have proposed that males have evolved to be sensitive to an offspring's resemblance to them as a cue of paternity. In this study, we test the hypothesis that offspring's physical resemblance to their father is positively associated with his investment, whereas offspring's physical resemblance to their mother is not associated with her investment. We brought 248 young adults into the lab, where they reported on their family history, primary mother figure's investment, primary father figure's investment, and perceptions of their physical resemblance to each parent. Each young adult also supplied a photo of themselves around the age of 10, a current photo of themselves, a current photo of their primary mother figure, and a current photo of their primary father figure. As expected, young adults' perceptions of their resemblance to their father were positively correlated with perceptions of their father's investment, whereas perceptions of their resemblance to their mother were not correlated with perceptions of their mother's investment. As a second phase of the research, we are currently collecting naïve outsiders' ratings of the degree to which each of the original participants (at age 10 and now) resembles their mother and their father. We will report the extent to which outsiders' ratings of participants' resemblance to the father (but not mother) correlate with participants' reports of that parent's investment.

---

## **HO-CHUNK**

moderators: **Rebecca Sandahl & Clorice Reinhardt**

---

### **31. Total Kinetic Characterization of the Aminolysis of N-aryl-4-chloro-1,8-naphthalimides**

Presenters: Stanford D. Mitchell, Samantha M. Anderson

Faculty nominator: David E. Lewis, Chemistry

The unprecedented aminolysis of the title compounds by butylamine has been studied kinetically. A Hammett plot of the reaction in pure butylamine had revealed that the reaction is first order in the naphthalimide, and that there is substantial build-up of negative charge at the imide nitrogen during the reaction. However, finding the kinetic order with respect to the amine was more problematical. We have succeeded in demonstrating that the reaction is also first order in butylamine, and during those studies we also demonstrated that the reaction is subject to both general acid and general base catalysis.

### **32. Effects of Macromolecular Crowding on Structure and Catalytic Function of Escherichia coliProlyl-tRNA Synthetase**

Presenters: Lauren Adams, Ryan Andrews

Faculty nominator: Sanchita Hati, Chemistry

Most computational and experimental studies to understand the molecular mechanism of an enzyme-catalyzed reaction are usually performed in dilute solutions. However, enzymatic activities in vivo occur in a crowded environment composed of many macromolecules. We are performing computational, spectroscopic, and kinetic studies to investigate the impact of macromolecular crowding on the structure and enzymatic activity of Escherichia coli prolyl-tRNA synthetase. This enzyme is a member of an important family of enzymes that are essential for the biosynthesis of proteins in all living organisms. The overall goal is to evaluate if there is a need to take into consideration the effect of macromolecular crowding for structure-based drug design to inhibit the function of pathogenic prolyl-tRNA synthetases.

### 33. Condensed-Phase Effects on the Structural Properties of Nitrile and Imine Complexes of SiF<sub>4</sub>: A Computational and Low-Temperature IR Study

Presenter: Nicholas Hora

Faculty nominator: Jim Phillips, Chemistry

Our research involves the identification of molecular complexes - defined as any association of two otherwise stable molecules - that change structure when their chemical environment is altered, e.g., gas phase to solution. Our interest in nitrile - SiF<sub>4</sub> complexes stems from a previous study on CH<sub>3</sub>CN SiF<sub>4</sub>, in which condensed-phase structural changes were predicted but not observed. We expect larger carbon groups to enhance the bonding interaction and lead to more significant structural change in the condensed phase. Using quantum chemical computations, we obtain key structural and energetic properties of these complexes, including: structures, binding energies, frequencies, and N-Si potential energy curves. For example, the equilibrium structure of C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>CN-SiF<sub>4</sub> has an N-Si distance of 2.878 Å, about 0.15 Å shorter than CH<sub>3</sub>CN SiF<sub>4</sub> [1]. However, thin film infrared spectra showed no signs of structural change in the nitrile complexes. More recently, we have turned our attention to stronger bases, imines, including pyridine and its fluoro-substituted analogues, e.g., F<sub>2</sub>C<sub>5</sub>H<sub>3</sub>-SiF<sub>4</sub>. We presume the increases basicity of the imines will manifest compounds that undergo structural changes in condensed phases. (1) Helminiak, et. al. J. Phys. Chem. A. 2014, 118, 4266.

---

## CHANCELLORS

moderators: Caleb Nunn & Ashley Pike

---

### 34. An Updated Analysis of Chinese and American Public Support for an International Climate Change Mitigation Treaty

Presenters: Emily Koehn, Hunter Hermes, Ryan Hammer

Faculty nominators: Eric Jamelske, Economics, Jim Boulter, Watershed Institute for Collaborative Environmental Studies, and Won Yong Jang, Communication & Journalism

Surveys were conducted of Chinese and American citizens from May – October 2015 (N=7,556). We investigate support for signing an international climate treaty and what factors influence support for a treaty in each country. We use two questions randomized across respondents specifically referring to the 2015 United Nations Framework Convention on Climate Change meeting in Paris, France. One question is unconditional with no mention the other country, while the other is conditional on knowing the other country will not sign the treaty. Our current results are consistent with previous findings showing greater support for an international climate treaty among Chinese respondents. Support diminishes by just over 10 percentage points in both countries when it is known the other country will not participate. Almost two-thirds of Americans support signing a climate treaty with no mention of China, while just over 50% support a treaty without China's participation. Additionally, a variety of variables reflecting climate change perceptions are positively correlated with support for a climate treaty in both countries, while political affiliation influences support among Americans.

### 35. An Updated Analysis of Chinese and American Public Willingness to Pay for Climate Change Mitigation Policy Action

Presenters: Greg Sikowski, Helue Vazquez Valverde

Faculty nominators: Eric Jamelske, Economics, Jim Boulter, Watershed Institute for Collaborative Environmental Studies, and Won Yong Jang, Communication & Journalism

Surveys were conducted of Chinese and American citizens from May – October 2015 (N=7,556). We investigate willingness to pay for an increased cost of living arising from policies putting a price on greenhouse gas emissions to mitigate climate change. We also examine what factors influence willingness to pay in each country. We employ a double-bounded dichotomous choice contingent valuation framework with five randomized initial bid values followed up by specific second bid values based on the initial bid value response. All monetary values are considered in both home country currencies and international dollars converted using purchasing power parity. Our current results are consistent with previous findings showing a higher willingness to pay for climate change mitigation policy action among Americans compared to the Chinese. However, adjusting for income differences and purchasing power parity reveals a significantly higher willingness to pay among the Chinese. Additionally, a variety of variables reflecting climate change perceptions are positively correlated with willingness to pay for climate change mitigation in both countries, while political affiliation influences willingness to pay among Americans.

### **36. Climate Change Denial and Skepticism in China and the United States: Evidence from a Topic Prevalence Analysis of Open-Ended Survey Question Responses**

Presenters: Paul Cooper, David Hahn, Tung (Andy) Nguyen

Faculty nominators: Eric Jamelske, Economics, Jim Boulter, Watershed Institute for Collaborative Environmental Studies, and Won Yong Jang, Communication & Journalism

Citizen opinions are crucial for policy action to mitigate climate change. However, due to the complexity of the issue, public views are diverse and can be uninformed or misinformed. There is evidence that American opinions on climate change are influenced by sources advocating denial/skepticism. To better understand public views on climate change, we analyze responses to the open survey question “what comes to mind when you hear the words ‘climate change’?” Surveys were conducted of Chinese and American citizens from May – October 2015 (N=7,556). We investigate the frequency that words/topics associated with climate change denial and/or skepticism appear in American and Chinese responses respectively. We also examine what respondents’ views, beliefs, and characteristics other than nationality are related to comments associated with denial/skepticism and analyze common themes found in these comments. Preliminary results indicate a greater frequency of statements indicating denial/skepticism from American respondents which is consistent with their significantly lower acceptance of climate science in other survey results compared to Chinese respondents. These results also both correlate with American respondents’ political affiliation.

---

**SESSION IV: 4:30 – 5:15 P.M.**

---

**CENTENNIAL**

moderators: **Ashley St. Aubin-Clark & Audrey Steinman**

---

### **37. Airborne Particulates around Frac Sand Plants Using EPA-Certified Instruments**

Presenters: Hannah Brown, Joshua Burns, Maryanne Cowart, Ethan Fuhrman, Ella Keenan, Jacob Kentnich, Cody Petska, Pang Houa Xiong Yang

Faculty nominators: Crispin Pierce, Environmental Public Health

Environmental exposure to airborne pollutants, notably fine particulates (PM<sub>2.5</sub> and smaller) and crystalline silica (quartz), is of growing concern in western Wisconsin due to the expansion of industrial sand mining for hydraulic fracturing. Exposures to PM<sub>2.5</sub> are associated with cardiovascular and lung disease while exposures to crystalline silica are associated with lung diseases such as silicosis, silico-tuberculosis, and

lung cancer, as well as nonmalignant renal and autoimmune diseases. Under current regulatory structures in Wisconsin and many other states, direct air quality monitoring is rarely required (currently just 15% of facilities in WI). This research constitutes the third phase of direct-reading, filter-based, and now EPA-certified instrument use to measure fine particulates around frac sand plants in Wisconsin. Consistent with results from the first two phases, PM2.5 particulate levels were higher than regional DNR background levels.

### **38. Supplementing the Scientific with the Humanistic in Speech-Language Pathology**

Presenter: Katherine French

Faculty nominators: Mary Canales, Nursing, and Jennifer Shaddock, English

Speech language pathology is a dynamic field that is science-driven and sequential in nature in moving from assessment through goal-planning to intervention. A student-created training module for future and current speech-language pathologists suggests supplementing our scientific training with additional humanistic training. Humanistic techniques involve the philosophical and ethical stance that emphasizes the value and agency of human beings, individually and collectively. As clinicians and healthcare providers we need to concern ourselves with how people process and document the human experience. The training module provides five brief lessons to help students better understand or shift their perspective on how the services they provide affect the human experience. More specifically they discuss the power of language, individual identity, familial relationships, services within the context of the health institution, and the concept of health within illness.

### **39. Humans of Eau Claire Photo Stories**

Presenters: Lily Anderson, Amanda Thao, Elly West

Faculty nominators: Wanrudee Buranakorn, Art & Design

This project is a collaboration of 1 faculty, 3 UWEC photography students, and 100 DeLong Middle School's sixth-grade students who research, interview, and write about fifty exceptional people in Eau Claire. Examples of exceptionality include a high school student with Spina bifida with a dream of competing in the Paralympics, owners of local businesses, young adults following their dreams, and a young boy with Asperger Syndrome who uses his disorder to spread awareness. The UWEC student collaborators take photographic portraits, edit, and print the final images for exhibition. The major form of disseminating the results is an exhibition of fifty portraits combining with writings of the sixth-graders. The exhibition is aimed for the end of Spring 2016 semester at various spaces in the Eau Claire community such as DeLong Middle School and Eau Claire Public Library.

---

## **MENOMINEE**

moderators: **Spencer Morgan & Liz Stubbs**

---

### **40. Peer-Delivered Gatekeeper Training for Suicide Prevention**

Presenters: Emily Burish, Amy Steingas

Faculty nominator: Jennifer Muehlenkamp, Psychology

To help prevent college student suicide, many campuses implement gatekeeper training programs that aim to teach students warning signs and how to intervene. Despite research showing that peers are more likely to respond favorably to peer-delivered mental health messages, most gatekeeper training programs are delivered by professionals. The current project, however, utilized peers to provide gatekeeper training and evaluates the immediate (pre-post) and longer term (3 month follow up) impact of the program. Data from over 500 students (71.5% female, mean age = 20.48) has been collected and group comparisons show significant positive effects for the training. Students who completed the training show increases in perceived knowledge of warning signs, self-reported likelihood to intervene, and confidence for intervening with a

potentially suicidal peer. A majority of student reported they found the training valuable and would recommend it to others (62.8% strongly agreed). Follow-up data will be presented. The preliminary results provide evidence that peer-delivered gatekeeper programs can have a positive impact and provides another avenue for campuses to consider as part of a comprehensive approach to suicide prevention.

#### **41. Gender and AUDIT Score Significantly Interact to Effect Fluid Poured in a Simulated Alcohol-Free-Pour Task**

Presenters: Meredith Watson, Charles Bakalars, Whitney Hasenberg

Faculty nominator: Doug Matthews, Psychology

Research demonstrates if college students are asked to pour a standard drink they often pour more than a standard drink in a simulated alcohol pouring task. Previous work suggests that subjects may also pour less fluid if they also are asked to pour for an unfamiliar peer. However, it is unknown if the gender of the unknown peer, as well as previous alcohol use, impacts fluid amount poured in a simulated alcohol pouring task. To investigate this, we had male and female subjects pour a standard 12 ounce beer first for themselves and then for either the male or female researcher. Subjects completed the AUDIT and a two week follow back drinking report. Results indicate AUDIT score significantly predicted the amount subjects poured for themselves and the experimenter and that gender of the subject interacted significantly with the AUDIT classification in relation to the amount of fluid subjects poured. These data suggest that subjects' previous alcohol use and the dynamics of the gender dyad significantly impact fluid poured in a free pouring task.

#### **42. Discriminative Stimulus Effects of Naltrexone in Rats with Limited Access to Sucrose**

Presenter: Jody Herrmann

Faculty nominator: David Jewett, Psychology

Daily, but limited, access to sugar results in “binging” in rats. The excessive sugar intake has been reported to increase dopamine and endorphin function in the brain. Naltrexone, an opioid antagonist, is not discriminable at typical doses in standard operant paradigms in opioid-naïve subjects. We attempted to establish naltrexone as a discriminative stimulus in rats given 12-hour access to sucrose solutions. After establishing the sucrose baseline, rats were given daily injections of either saline or naltrexone (3.2 mg/kg, 15 min PT). During the training session, correct lever presses (left following naltrexone, right following saline) were reinforced with a food pellet. Training continued until subjects exhibited 80% or more condition-appropriate responses for eight out of 10 consecutive sessions. Naltrexone was established as a discriminative stimulus in all subjects. Interestingly, acute water substitution did not alter the discriminative stimulus effects, suggesting that sucrose consumption produced a long-term change in endorphin function. Chronic (2 week) water substitution eliminated the discriminative stimulus effects of naltrexone. Rats with constant water or limited saccharin access were unable to discriminate naltrexone.

---

### **HO-CHUNK**

moderators: Josh Stringer & Trung Nguyen

---

#### **43. "Feeding the Social Media Machine" Changing Internal Policy, Strategy, Practice, and Governance through Facebook**

Presenter: Cory Long

Faculty nominator: Nicole Schultz, Communication & Journalism

With the emergence of Facebook on the business scene, organizations have scrambled to discover ways of creating public rhetoric to manage their image. Research shows that companies are using different tactics when employing Facebook to strategically relate to their fan bases. However, much of the research

conducted fails to explain how Facebook alone has restructured collaboration between departments and generated innovation. This study describes how companies' public Facebook pages have internally merged departments that traditionally are separate, such as human resources, public relations, marketing, and public affairs. Specifically, this study seeks to understand how Facebook messages are created without guiding policy and, as a reaction, how organizational policy and practice are structured through feedback. Individuals from the aforementioned departments in small to medium sized companies were interviewed on how these departments are merging as a result of Facebook's implementation. Results show that Facebook is affecting organizational policy, strategy, practice, and governance.

#### **44. The Effect of Different Tasks in Multitasking on Idea Generation**

Presenters: Rebecca Nelson, Sarah O'Driscoll

Faculty nominator: Sydney Chinchanchokchai, Management & Marketing

With the availability of mobile devices, consumers have a tendency to perform more than one task at a time, which also leads to less attention to media messages. This inevitable multitasking behavior in digital consumers presents an untapped opportunity for researchers. While there are multiple studies on multitasking in consumer behavior research, the studies of multitasking and consumer creativity are still underrepresented. Previous research has looked at different types of multitasking (sequential vs. simultaneous; see Farino and Chinchanchokchai, 2014) and different types of task load (perceptual vs. cognitive load; see Karch and Chinchanchokchai, 2015) on creativity. However, it is unclear how the structure of the task (structured vs. unstructured) would affect creativity. The purpose of this study is to examine how different types of tasks in multitasking behavior affects participant's ability in completing an idea generation task, which is an indication of creativity.

#### **45. Exploring Consumers' Reaction in the Bad Gift Situation across Cultures**

Presenters: Yook Jo, Gracia Clark

Faculty nominator: Sydney Chinchanchokchai, Management & Marketing

Cultural differences in norms, values, and overt behavior are widely recognized. The most studied research area in cross-cultural differences is the difference between Easterners (Asians) and Westerners (North Americans). One of the most pervasive differences between Asians' and North Americans' social motivation and behavior is reflected in the manner in which individuals view themselves and their relation to others (Markus & Kitayama, 1991). Asians have interdependent self-concepts that emphasize the connectedness between themselves and others. In contrast, North Americans are inclined to think of themselves independently of others. Gift giving plays an important role in society. Individuals often give to charitable organizations in order to benefit victims of misfortune. Gifts are exchanged between family members and close friends on special occasions (birthdays, Christmas, etc.) and are given as tokens of affection to romantic partners (Shen et al. 2011). The current study looks at the impacts of bad gifts across cultures (Eastern vs Western), especially how Western (American) vs. Eastern (Asian) consumers react when they receive bad gifts and how it would affect their relationship with the giver.

**46. Tracking the Use of Free Fruit and Vegetable Coupons Given to Families and Assessing the Impact on Children’s Consumption**

Presenters: Anna Hamer, Joe Hunt, Kjirstin Martell, Matthew Pergolski

Faculty nominators: Sydney Chinchanchokchai, Management & Marketing, and Eric Jamelske, Economics

Many American communities are lacking healthy options when it comes to children’s nutrition. Poor nutrition in childhood can lead to obesity, which persists into adulthood and is linked to several costly chronic diseases. Thus, increasing children’s fruit and vegetable consumption has become an important focus among practitioners, policymakers and researchers. There is a developing literature examining a variety of methods to increase children’s fruit and vegetable intake in school settings. These programs have shown modest positive effects limited to consumption at school. Prior research has also shown that the majority of children’s daily fruit and vegetable intake occurs during school lunch. This suggests that researchers and policymakers should develop strategies to impact children’s fruit and vegetable intake at home. This study is designed to increase Eau Claire County children’s consumption of fruits and vegetables at home by increasing access through free fruit and vegetable coupons provided to parents. We examined the rate at which families redeemed the coupons and whether students whose families redeemed the coupons showed an increase in fruit and vegetable consumption.

**47. Designing & Implementing an Elementary School Vegetable Snack Program to Increase Children’s Consumption**

Presenters: Josh Bodnar, Lorena Garceau, Ryan Mikula, Levi Soborowicz

Faculty nominators: Sydney Chinchanchokchai, Management & Marketing, and Eric Jamelske, Economics

Many American communities are lacking healthy options when it comes to children’s nutrition. Poor nutrition in childhood can lead to obesity, which persists into adulthood and is linked to several costly chronic diseases. Thus, increasing children’s fruit and vegetable consumption has become an important focus among practitioners, policymakers and researchers. There is a developing literature examining a variety of methods to increase children’s fruit and vegetable intake in school settings. These programs have shown modest positive effects limited to consumption at school. Despite successes, vegetable intake among children continues to be significantly lower than recommended guidelines. This suggests that researchers and policymakers should develop strategies to specifically increase children’s vegetable consumption. This study briefly reviews key findings from prior research on school-based interventions to increase children’s fruit and vegetable consumption. We also highlight a variety of challenges in conducting this type of research in partnership with schools and other researchers. From our experiences, we describe the planning, design, and research expectations for a new vegetable snack program evaluation in partnership with one elementary school beginning in fall 2016.

**INDEX OF PRESENTERS & FACULTY NOMINATORS/ADVISORS**

Name	Major(s)/ Department(s)	Presentation #
Adams, Lauren	Biochemistry & Molecular Biology	32
Anderson, Julie	Biology	27
Anderson, Lily	Art, Studio	39
Anderson, Samantha	Chemistry, Business Emphasis	31
Andrews, Ryan	Biochemistry & Molecular Biology	32
Arneson, Claire	Physics; Mathematics	22
Baier, Carissa	Communication Sciences & Disorders	14
Bakalars, Charles	Psychology	41
Beck, Katie	Communication Sciences & Disorders	2
Bhattacharyay, Sudeep	Chemistry	9, 19
Binning, Kelly	English	17
Bleske-Rechek, April	Psychology	29, 29, 30
Bloechl, Casey	Psychology	30
Bodnar, Josh	Biology	47
Boldt, Kali	Biology	27
Boulter, Jim	Watershed Institute for Collaborative Environmental Studies	34, 35, 36
Brown, Hannah	Environmental Public Health	37
Buranakorn, Wanrudee	Art & Design	39
Burish, Emily	Psychology	40
Burns, Joshua	Environmental Public Health	37
Canales, Mary	Nursing	38
Chinchanachokchai, Sydney	Management & Marketing	44, 45, 46, 47
Clark, Gracia	Psychology	45
Clarke, Britton	Communication Sciences & Disorders	13
Cooper, Paul	Biology	36
Cowart, Maryanne	Environmental Public Health	37
Cronin, Emily	Psychology	5
Cronje, Ruth	English	11, 12, 27

Name	Major(s)/ Department(s)	Presentation #
Darling, Stephanie	Kinesiology, Movement Studies	29
Don, Gary	Music & Theater Arts	22
Dunlop, Paris	Nursing	5
Evans, Matthew	Physics & Astronomy	8
Fouks, Allison	Nursing	1, 11
French, Katherine	Communication Sciences & Disorders	38
Fuhrman, Ethan	Environmental Public Health	37
Garceau, Lorena	Criminal Justice; Economics	47
Glogowski, Elizabeth	Materials Science	20
Griffiths, Rachel	Biology; Pre-Veterinary Medicine	30
Grunow, Emilee	English, Critical Studies	18
Gullerud, Emily	Mathematics	22
Gunseor, Michaela	Psychology; Business Administration	29
Hahn, David	Accounting; Marketing	36
Hamer, Anna	Psychology; Business Administration	46
Hammer, Ryan	Economics	34
Hasenberg, Whitney	Psychology	41
Hati, Sanchita	Chemistry	9, 19, 32
Hecker Fernandes, Jill	Nursing	26
Hemmerich, Abby	Communication Sciences & Disorders	3
Hermes, Hunter	Physics	34
Herrmann, Jody	Psychology	42
Hlas, Anne Cummings	Languages	6
Hoepner, Jerry	Communication Sciences & Disorders	13, 14, 15
Holt, Roxy	Nursing	5
Hora, Nicholas	Chemistry; Medicine, Pre-professional	33
Housh, Haley	Nursing	26
Hunt, Joe	Economics	46
Huntley, Megan	Nursing	5

Name	Major(s)/ Department(s)	Presentation #
Idarraga, Joyce	English, Education	24
Jamelske, Eric	Economics	34, 35, 36, 46, 47
Jang, Won Yong	Communication & Journalism	34, 35, 36
Jewett, David	Psychology	42
Jo, Yooik	Psychology, Behavioral Analysis	45
Jol, Harry	Geography & Anthropology	7
Jones, David	English, Liberal Education	1
Jones, Ryan	Music & Theater Arts	23
Joseph, Whitney	Psychology	28
Jung, Eunsook	Political Science	10
Keenan, Ella	Environmental Public Health	37
Kemp, Theresa	English	17, 18
Kentnich, Jacob	Environmental Health	37
Koehn, Emily	Economics	34
Laskowski, Elizabeth	Materials Science	20
Leibham, Mary Beth	Psychology	2
Lewis, David E.	Chemistry	31
Lindseth, Martina	Languages	16
Long, Cory	Communication, Organizational	43
Ma, Ying	Materials Science	21
Manson, Allison	Mass Communication, Public Relations	25
Martell, Kjirstin	Biology	46
Matthews, Doug	Psychology	41
Mezera, Sarah	Political Science, Legal Studies	10
Mikula, Ryan	History	47
Miller, Allison	Nursing	26
Mitchell, Stanford	Biochemistry & Molecular Biology; Medicine, Pre-professional	31
Mocol, Matthew	Biochemistry & Molecular Biology	19

Name	Major(s)/ Department(s)	Presentation #
Muehlenkamp, Jennifer	Psychology	40
Murray, Carly	Psychology; French	29, 30
Nakano, Karen	Nursing	26
Nelson, Rebecca	Psychology	44
Nelton, Rebecca	Psychology	30
Neyers, Krista	Spanish, Teaching	6
Nguyen, Tung (Andy)	Finance	36
Nied, Alicia	Communication Sciences & Disorders	3
Norling, Cody	Music, Music History	23
O'Driscoll, Sarah	Psychology	44
Olson, Sarah	Communication Sciences & Disorders	15
Peanasky, Alissa	Social Work	24
Pergolski, Matthew	Management, Operations	46
Perrault, Evan	Communication & Journalism	25
Peters, Gretchen	Music & Theater Arts	23
Peterson, Kelly	Nursing	26
Petska, Cody	Environmental Public Health	37
Phillips, Jim	Chemistry	33
Pierce, Crispin	Environmental Public Health	37
Postlewaite, Jack	Engineering & Medicine, Pre-professional	21
Priebe, Mark	English, Literature & Psychology	27, 29
Putney, Alexandra	Materials Science	4
Quinn-Lee, Lisa	Social Work	24
Ranzau, Andrea	Music; Spanish, Linguistics	22
Reed, Mara	Physics; Geology, Hydrogeology	8
Reinhardt, Clorice	Biochemistry & Molecular Biology	9
Rhoades, Katherine	University Honors	4, 5
Riedesel, Eva	Nursing	26
Rolfzen, Leah	Nursing	26

Name	Major(s)/ Department(s)	Presentation #
Sather, Tom	Communication Sciences & Disorders	13, 14
Schaberg, Becca	Communication Sciences & Disorders	4
Schmitz, Katie	Mass Communication, Public Relations	25
Schultz, Nicole	Communication & Journalism	43
Shaddock, Jennifer	English	38
Sikowski, Greg	Economics; Psychology	35
Soborowicz, Levi	Economics; Mathematics	47
Sontag, Allison	Social Work	24
Steingas, Amy	School Psychology	40
Stratton, Clare	Special Education	2
Thao, Amanda	Journalism	39
Thompson, Deborah	Art, Studio	11
Tillman, Rachel	Biology	12
Troge, Kaitlyn	Nursing	26
Vazquez Valverde, Helue	Economics; Finance	35
Walín, Courtney	Nursing	26
Walker, James	Mathematics	22
Watson, Meredith	Psychology; Medicine, Pre-professional	41
West, Elly	Art, Studio	39
Williams, Anneli	Geography; German	1, 16
Wolff, Carolyn	Communication Studies	1
Wysocki, Adam	Geography, Environmental	7
Xiong Yang, Pang Houa	Environmental Public Health	37

## SPONSORED BY:



Provost Patricia Klein



University Honors Program



Office of Research & Sponsored Program/ CERCA

The Power of



University of Wisconsin-Eau Claire