Spotlight on First-year Research

Council Oak Room, Davies Center
Tuesday, May 2, 2017
11 am to 12:45 pm

Oral presentations begin at 11:15. One oral-only session will be followed by brief verbal summaries of the poster projects.

Oral Presentation

The NorthMet Sulfide Mining Project
Jared Berg
Faculty Mentor/Collaborator: Tarique Niazi

For hundreds of years, mining of minerals and metals has been a dominant source of economic well-being for residents in Midwestern United States. Up until the early to the mid-20th century, economic rationality alone would be a deciding factor for authorities to greenlight a mining operation. The past accumulated environmental impact of such projects, however, has communities and governments (city, state and national) wised up to evaluate mining operations on multiple criteria, including their environmental and social impact. As a result, economic rationality of a given project now has to compete with its environmental and social rationalities, which produce a number of actors voicing their agendas – developers, miners, mining companies, government leaders, community activists and environmental groups. My investigation in the NorthMet Sulfide mining project (a.k.a. NorthMet Project), which will be located in cities of Hoyt Lakes and Babbit in northern Minnesota, reveals these inherent tensions between economic rationality on the one hand, and environmental and social impacts on the other. PolyMet, the project operator based in Canada, will mine metals such as copper, nickel, palladium, platinum, cobalt and gold from sulfide ore that was deemed worthless until recently when new extractive technologies came online. The project, nevertheless, has set off a divisive debate over its economic benefits, and environmental and social costs. While developers, the mining company and government leaders emphasize economic benefits in job creation, community activists and environmental groups balance those benefits with the projects’ impact on the land around the project site and the water systems.

Poster Presentations

Perceptions of Pokémon Go on Health
Gracia Clark, Allison Brunett
Presented by first-year student Allison Brunett
Faculty Mentor/Collaborator: Yoonsin Oh

The purpose of this study is to analyze perceptions on health when Pokémon Go players tweeted about the game. Pokémon Go is an augmented reality exergame that requires players to travel to accomplish game goals. News outlets (e.g., Oliver, 2016) have reported Pokémon Go players sharing on twitter how this game has motivated them to be physically active. However, no study has been conducted to
examine the actual amount of tweets expressing players’ perceptions of the game on health. In this study, researchers collected publicly available tweets by using an advanced search of hashtags to get a consistent pool (e.g. #PokémonGo & #walking). Tweets were collected from one week out of each month from July 2016 through January 2017. Based on grounded theory (Glaser & Strauss, 1967), qualitative analysis methods were used for categorization. We numbered and coded the tweets to determine how players who tweeted might perceive the game on health topics. About 29% of tweets reflected positively on physical health, and 15% indicated the person tweeting increased their physical activity by playing Pokémon Go. Tweets with positive perception on physical health were not representative of a large amount of the tweets collected.

Libraries and Censorship: The Accessibility to Information in Wisconsin Public Library Systems
Seth Anderson-Lind, Annalyn Alt, Derek Fritz, Austin Kassner, Karin Knapp, Clare McCarty, Hillary Smith, Blake Wacholz
Faculty Mentors/Collaborators: Paul Kaldjian

The purpose of this project is to look for spatial variations in the access to information using public library databases in the state of Wisconsin. Books with diverse content are often banned or challenged; the American Library Association (ALA) has been keeping track of bans or challenges against texts since 1990 as they pursue free access of knowledge. Wisconsin has close to 400 public libraries organized into 16 public library systems. We will cross-reference a selection of ALA’s commonly challenged books containing diverse content with Wisconsin library databases to see how such books are made available to the public. Once the information is gathered, we will organize the data spatially, such as in a map, in the search for patterns that suggest censorship. This research would shed light on the issue of censorship as well as allow for reflection within Wisconsin on statewide stances with information and knowledge being accessible to all.

How Do Traditional and Non-Traditional Students at UW-Eau Claire View School Policies Related to Class Performance?
Karin Knapp, Samantha Korn
Presented by first-year student Karin Knapp
Faculty Mentor/Collaborator: Jarrod Hines

The current study will investigate the degree to which students and instructors agree with university-wide and classroom-specific policies at the University of Wisconsin-Eau Claire. Student and teacher attitudes toward policy fairness will be assessed using an anonymous online survey. Research participants will include current students and instructors, with the student group being categorized as either traditional or nontraditional based upon their self-perception and the university policy definition. Policies are hypothesized to differentially impact traditional and nontraditional students and therefore may be rated differently based upon group membership. We will examine attitudes toward policies associated with, e.g., attendance, class-specific D2L incorporation, and the amount of weight given to online and in-class assessments. We expect to find that nontraditional students are more dissatisfied with policies than traditional students, although instructors may rate the impact of policies similarly regardless of student classification. Finally, we anticipate an incongruence between students’ perceptions of the nontraditional classification and the official definition as provided by university policy. It is our hope that this information might be used to enhance the degree to which students’ life circumstances are considered when constructing policies that impact them.
Resident perceptions of walkability in an Eau Claire neighborhood

Logan Bergevin, Josie Myers

Presented by first-year student Josie Myers

Faculty Mentor/Collaborator: Karen Mumford

Residents who live in walkable neighborhoods are more likely to engage in higher levels of walking, report lower safety concerns, and experience higher levels of social engagement compared to those living in less walkable neighborhoods (Mason et al., 2013; Talen and Koschinsky, 2014). Although objective measures of the physical characteristics of walkable neighborhoods are important (e.g. street connectivity, walkable destinations, building density etc.), resident perceptions of neighborhood settings are equally important. These perceptions highlight the feelings and experiences of residents have in their neighborhoods. In fall 2016, we conducted household surveys in a neighborhood in Eau Claire, WI to explore resident perceptions of neighborhood walkability and safety. We used the shortened version of the Neighborhood Environment Walkability Scale (NEWS) instrument, a well-validated walkability perceptions survey. Of the 110 residents that we contacted, over 58% participated in the survey. Preliminary results suggest that residents perceive their neighborhood to be relatively walkable. Most residents felt they lived within walking distance to a number of destinations and that their neighborhood maintained sidewalks and other physical features that supported walking. Findings from this study will assist in the identification of strategies to improve walkability and health and inform efforts to support healthy neighborhood developments.

How Does Stimulus Difficulty Impact Study Time Allocation in Younger Adults?

Presented by first-year student Emily Onken

Faculty Mentor/Collaborator: Jarrod Hines

There are many contexts in which people are allowed multiple opportunities to study new information prior to a test. It is important to understand how people allocate restudy efforts to enhance learning efficiency. Prior research used homogeneous sets of word pairings (of similar difficulty), but the current research will use a mixture of easy-, moderate-, and difficult-to-remember pairings to determine the degree to which possible memory confidence cues (below) are reactive to stimulus difficulty. Participants will study a set of word pairs (e.g., DOG-SPOON), take a memory test, and repeat this process a second time. We expect to find relationships between item-specific restudy time and (1) a person’s memory of their past test performance (a recollection of getting an answer correct or incorrect previously); (2) participants’ impressions of item difficulty following an initial study attempt; (3) objective memory accuracy during an initial test (prior to restudy); (4) subjective memory test confidence; (5) objective response times to test stimuli; and (6) subjective response time estimates (i.e., how fast they think they responded to test questions). The relative weighting of cues is expected to differ based upon the ease of learning each word pair.

Is Tolerant Good Enough? Eau Claire and the Practice of Welcomingness

Caryn Donahue, Carissa Dowden, Anna Graaskamp, Megan Honnold, Paige Kaiser, Jessica Naze, Morgan Ziskovsky

Carissa Dowden presenting; authors include 5 first-years

Faculty Mentor/Collaborator: Paul Kaldjian

Immigrants are a vital part of community success, and many groups, such as Welcoming America, are advocates of inclusive communities. This, along with growing attention to immigrant-friendly cities, lead to the question of whether or not Eau Claire should be considered a “welcoming” city. Our research
team invited city council, school board and other community leaders in Eau Claire to an interview. Fourteen individuals accepted and were asked five questions about their perspectives and experiences on Eau Claire’s welcomingness. These results were compiled and analyzed. We found that a majority (67%) think Eau Claire is welcoming “to some extent,” suggesting city leaders are aware of problems, but are unsure how to tackle them. In addition, there were noticeably differing opinions as to what was a problem, suggesting a lack of consensus. Being welcoming is intentional and won’t happen by itself, so we recommend Eau Claire engages with organizations around the country like WelcomingAmerica.org, and draws from the experiences of other communities to create more opportunities for inclusivity.

**Retrofitting a Self Navigatable Robot Using myRio Technology**  
Rebecca Tollakson, Marissa Zaleski  
*Presented by first-year student Rebecca Tollakson*  
Faculty Mentor/Collaborator: Kim Pierson

As technologies evolve so does the scope of what can be added to our self-navigating robots. This research delved into utilizing a new kind of hardware on our current robotic frame. We used existing LabView code, but implemented it onto a different hardware base. The frame for the robot was built using parts available in the lab. The main task for this project was to understand the MyRio “brain” and use it to navigate the robot including interface it with existing motors. In addition, we added and tested a new compact long range IR sensor configuration, which broadens the viewing range while taking up very little space on the robot. Using an array of varying troubleshooting techniques, our robot is able to navigate its terrain better than its predecessor.