Faculty Excellence Exhibition

Monday, April 17, 2023

3:00-5:00 p.m.

Rotunda/Terrace Rooms, Bovee University Center

Faculty Excellence Exhibition

Monday, April 17, 2023
3:00-5:00 p.m.
Rotunda/Terrace Rooms, Bovee University Center

3:00 p.m.	**Saxophone Quartet** Johannah Chatman – Soprano Saxophone Ke'aloha Duhaylonsod – Alto Saxophone Cohen DeYoung – Tenor Saxophone Ariah Bremby – Baritone Saxophone
3:10 p.m.	**Welcome** David Weindorf, Vice President for Research and Innovation
3:15 p.m.	**International Impact Awards** Presented by: David Weindorf, Vice President for Research and Innovation
	Student Mentorship Awards Presented by: David Weindorf, Vice President for Research and Innovation
	Faculty Distinguished Service Award Presented by: Nancy Mathews, Provost/Executive Vice President
	Excellence in Teaching Awards Presented by: Nancy Mathews, Provost/Executive Vice President
	Lorrie Ryan Memorial Excellence in Teaching Award Presented by: Shu Guo, Excellence in Teaching Awards Chairperson
	Provost's Awards for Outstanding Research and Creative Activity Presented by: Nancy Mathews, Provost/Executive Vice President
	President's Awards for Outstanding Research and Creative Activity Presented by: Robert O. Davies, President
	Recognition of Grant Recipients
3:45-5:00 p.m.	**Poster Viewing and Reception**

International Impact Award

Created by the Office of Research and Graduate Studies in 2023, to recognize faculty who go above and beyond what is expected of faculty for engaging at the international level with teaching, scholarly activity, or service.

Anthony Chappaz, Professor, Department of Earth & Atmospheric Science
Dr. Anthony Chappaz has received the 2022-2023 International Impact Award. He consistently collaborates with international researchers and mentors international graduate students. He has also been educated internationally, with a B.S. in Chemistry from the University Grenoble Alpes in France, an M.S. in Chemistry and Microbiology of Water from the University of Poitiers in France, a Ph.D. in Geochemistry from the University of Quebec in Canada, and a post-doctoral research fellowship at the University of California – Riverside in the USA. Since joining CMU faculty in 2011, Dr. Chappaz has published 29 peer reviewed papers (with seven more under review), and 21 of those papers were co-authored with 51 international researchers from countries including Australia, Canada, China, Denmark, England, France, Russia, Scotland, and Switzerland. He has advised or co-advised graduate students and post-doctoral researchers from Brazil, Bulgaria, Canada, China, Columbia, France, India, Iran, Nigeria, and Turkey. Dr. Chappaz has been awarded beam time at synchrotron facilities in the USA and Europe. Access to beam time is highly competitive, and since Dr. Chappaz started at CMU, he and his students have had access to over 100 days of beam time.

Kathleen G. Donohue, Professor, Department of History, World Languages & Culture
Dr. Kathleen Donohue has received the 2022-2023 International Impact Award. Having completed graduate school in Germany, she was eager to foster international relationships when appointed at CMU. Additionally, Dr. Donohue earned a Fullbright Fellowship to teach for a year at Friedrich-Schiller-Universität in Jena, Germany. She was also chosen as one of three faculty members to identify international institutions that might make beneficial partners for CMU, eventually including FSU in Germany. In 2009, she was awarded a second Fullbright and spent two years in Germany, one at Ruhr-Universität-Bochum (RUB), and another at Heidelberg Center of American Studies (HCAS). Upon her return to CMU in 2011, she began to organize and run conferences to encourage international scholarly exchange. When elected Director of Graduate Programs for the history department, Dr. Donohue brought RUB on board as a partner institution, created a Semester Abroad Track in the MA, recruited several faculty members from CMU and RUB for faculty exchanges, and collaborated with World Languages to introduce a Reading Knowledge Exam in German, French, and Spanish for doctoral students and Semester Abroad Track students. In 2017, Dr. Donohue spent 3 weeks traveling across ten French institutions and was able to bring the University of Toulouse in as a partner. She has also collaborated on several Eramus+ grants to support student and faculty exchanges and has fostered an interest in studying abroad in her students.

Student Mentorship Award

Created by the Office of Research and Graduate Studies in 2023, to recognize faculty who go above and beyond what is expected of individuals mentoring students whether they be involved with undergraduate students, graduate students, or both.

Lissa Schwander, Associate Professor, Department of Social Work
Dr. Lissa Schwander has received the 2022-2023 Student Mentorship Award. As an associate professor and field education director in the Bachelor of Social Work program, Dr. Schwander works closely as a mentor to her students. Since fall of 2022, she has been the designated social work advisor for 65 students in the program and will be adding students throughout the year. Although she has been at CMU since 2017, she still mentors former students from her former position at Calvin. Since the social work program is so diverse, many of the students she mentors are from disadvantaged groups, such as BIPOC, LGBTQ+, and first-generation

students. Dr. Schwander also works with students and faculty at the Isabella County Restoration House and collaborates with CMED, Health Professions, and other programs at Ferris State and Mid-Michigan College to implement the Interprofessional Education requirement of CMED's accreditation. Additionally, she has worked with students on honors research projects, independent studies, and a McNair Scholars project, as well as helped students with their applications for graduate school. She has also helped ensure students were able to get their field education hours during the pandemic and volunteered to mentor students to ensure their physical and mental safety amidst escalating division and racism. She created the program CLASS Student Response Team to provide necessary skills for the students who staffed it, who provided peer support and mentoring to other students struggling during the pandemic.

Benjamin Swarts, Professor, Department of Chemistry
Dr. Benjamin Swarts has received the 2022-2023 Student Mentorship Award. Since starting at CMU almost ten years ago, Dr. Swarts has mentored over 50 undergraduate students and over 20 graduate students. In the last few years, Dr. Swarts has supervised or is currently supervising 23 senior capstone students, 7 master's students, 6 BCMB Ph.D. students, and 5 non-CMU outreach students. These students have contributed to many of his publications, including ones in The Journal of the American Chemical Society, The Journal of Organic Chemistry, and Nature Communications. To fund these research projects, Dr. Swarts has had several grants, totaling over two million dollars. He also has several patents and patent applications. Dr. Swarts has helped place his students in graduate programs. He also developed a diversity-oriented community college outreach program with four local community colleges, including the Saginaw Chippewa Tribal College. This program helps students along the path to doing research at CMU and obtaining a bachelor's degree to start a career in science. Over 75% of participating students have currently earned bachelor's degrees.

Faculty Distinguished Service Award

Created by the Provost in 2002, the award recognizes faculty members with a record of sustained and distinguished service at CMU.

Emil Boasson, Professor, Business Information Systems Department
In 13 years of service as Director of the Master of Science in Information Systems (MSIS) program, Dr. Boasson has made extraordinary contributions, including working diligently to increase the total number of MSIS students enrolled, from 63 in January 2010 to 612 in the Fall of 2022. He has been the linchpin of the program's success through a collaborative effort among faculty and staff while maintaining a smile and having time to support colleagues and students. A key factor in Dr. Boasson's success is that he works with students throughout their journey, including recruiting both domestically and internationally, evaluating application materials, communicating with incoming and current students, facilitating class registration through advising, mentoring teaching assistants, and helping students find academic and wellness resources.

Excellence in Teaching Awards

Created by CMU in 1985, the awards are presented for outstanding teaching efforts by faculty. Awardees are selected from a list of faculty members nominated and supported by their peers and students, who then undergo a rigorous selection process via members of the Excellence in Teaching Committee.

Jodi Brookins-Fisher, Professor, School of Health Sciences
Jodi Brookins Fisher is a Professor in the School of Health Sciences. Jodi is passionate about what she teaches and has a wealth of experiences that inspire her students. Her priority is to establish a climate of respect, kindness, and decency to each other within each class, as this helps her lay the groundwork of clear and high expectations. Jodi uses a variety of modes, including group work, journaling, self-reflection, case studies,

games, guest speakers, and field trips. She especially loves experiences outside of the class that is a win-win for the students and the community.

Robert Fanning, Professor, Department of English Language and Literature
Robert Fanning is a Professor of English in the Department of English Language and Literature. Professor Fanning strives to create a tight-knit community in his classroom by providing an environment of deep connection, respect, trust, and empathy among all students. As one student affirmed, "This professor prioritizes a comfortable, safe haven for creativity," and another stated, "He treats every student as if they are the most valuable person in the classroom." Fanning compares his class to "a large boat we're launching out to sea, that we all must launch together, hop in and row, joyfully, in unison, to both appreciate the journey and reach our shared destination."

M. Dawn Nelson, Professor, Department of Communication Sciences & Disorders
Dr. M. Dawn Nelson is a Professor of Audiology within the Communication Sciences & Disorders department. Dr. Nelson's teaching is centered on cultivating strong classroom learning communities. She is passionate about building positive relationships with students to successfully lead them toward mastery of the learning content. Dr. Nelson's empathetic and compassionate approach to teaching fosters a supportive learning environment for all students. Dr. Nelson is also known among students and colleagues for providing real-world applications and materials to supplement the course content. Her courses help students develop strong connections between theory and practice.

Kirsten Nicholson, Professor, Department of Biology
Dr. Kirsten Nicholson is a Professor of Biology in the College of Science and Engineering. Dr. Nicholson's teaching employs "supported active learning" that asks, "students to take control of their education." Her students speak highly of Dr. Nicholson and her methods. One student offered that her teaching "fosters a sense of respect and belonging in students and encourages the mindset that they are all working toward a common goal." A colleague shared, "she is extremely respectful of students in the classroom, and it shows in their willingness to ask questions and engage in discussion in class."

Wendy Robertson, Associate Professor, Department of Earth & Atmospheric Sciences
Dr. Wendy Robertson is an Associate Professor of Earth and Atmospheric Sciences in the College of Science and Engineering. She strives to foster a welcoming, respectful, inquisitive, and collaborative classroom community. With her innovative pedagogy, Dr. Robertson pioneers the development and real-world application of simulations and game-based learning to engage and inspire students. As stated by one of her students, "The games made learning fun – I wanted to keep doing it." Dr. Robertson emphasizes applying knowledge and skills to students' future careers through student-directed projects, examples like technical documents, data collection, and analysis, and making sound recommendations, and proposals for broad audiences.

Lorrie Ryan Memorial Excellence in Teaching Award

The Lorrie Ryan Memorial Excellence in Teaching Award is presented each year to CMU one CMU faculty member who inspires students through an exemplary commitment to building a sense of community within the learning environment. Additionally, the recipient demonstrates profound mentorship and respect for others.

Alejandra Rengifo, Professor, Department of History, World Languages & Cultures
Alejandra Rengifo, a Spanish Professor in the Department of History, World Languages, and Cultures, is invested in building learning communities. Her teaching philosophy centers on creating safe spaces where

students "…can identify the common goal of shared learning done through teamwork and social interaction." Students and colleagues affirm her commitment to student success. One student wrote: "I rarely feel as connected with other students … as I do in the classes with this professor." A colleague described her as "…a positive role model … who deeply cares about student learning..." A student agreed: "This instructor is one of the most genuinely caring professors I have ever had." Dr. Rengifo is the 2022-2023 Lorrie Ryan Memorial Excellence in Teaching Award winner.

Provost's Awards for Outstanding Research and Creative Activity

Created by CMU to recognize excellent scholarship, creativity, and promise. The award is presented to faculty members who are in the early stage of their academic careers.

Chanseok Jeong, Assistant Professor, School of Engineering & Technology
Dr. Chanseok Jeong has received the 2022-2023 Provost's Award for Outstanding Research and Creative Activity. Since his appointment at CMU in Fall 2020, Dr. Jeong has already published seven articles in high-impact peer-reviewed journals. In the short time he has been here, he has already received almost a half million dollars in external grants, as the principal investigator from the NSF. After joining CMU, Dr. Jeong received external grants totaling $488,847 (with his share of $288,847) as the principal investigator from the NSF. In addition to his prolific research, he has created synchronous internal training materials for his current and prospective research team. Dr. Jeong is also a committed mentor to his students, especially women and minority students. He advised an SET undergraduate student, Shashwat Maharjan, who is published as the first author in the prestigious journal Soil Dynamics and Earthquake Engineering.

Heather Trommer-Beardslee, Assistant Professor, Department of Theatre & Dance
Heather Trommer-Beardslee has received the 2022-2023 Provost's Award for Outstanding Research and Creative Activity. She has contributed both scholarly and creative work in the field of dance. Professor Trommer-Beardslee has been recognized nationally and internationally for her work. In 2019, she was invited to perform and display her choreographic work in Nagoya, Japan alongside the internationally renowned Masashi Action Machine. This also allowed her to lead a study abroad trip for eight students whom she trained to accompany her on this trip. She has choreographed and produced four dance films that have been selected nationally and in Canada, Portugal, and Brazil. One of the most notable is her film *Rising,* memorializing the Sanford flood. Professor Trommer-Beardslee played an important role in adapting dance performances and classes to fit Covid-19 safety protocols, including solo performances instead of traditional group performances. Additionally, she was a co-author of several chapters, as well as a co-editor, of the book *Removing the Educational Silos: Models of Interdisciplinary and Multi-disciplinary Education.* One of her recent co-authored scholarly articles is "A Model of Interprofessional Learning: Dance and Physical Therapy Students' Collaborations on Classes for People with Parkinson's Disease".

President's Award for Outstanding Research and Creative Activity

Created by CMU for peers to select and recognize outstanding senior faculty members for scholarships of national and international merit.

Jennifer Schisa, Professor, Department of Biology
Dr. Jennifer Schisa has received the 2022-2023 President's Award for Outstanding Research and Creative Activity. Dr. Schisa has taught at CMU in the biology department for over 20 years. In her time at CMU, she has received over 3 million dollars of research grants. Dr. Schisa currently has 23 publications and has published 2 papers per year in 2019, 2021, and 2022. Dr. Schisa has presented at 81 conferences, and her works have been cited over 1,230 times. She has been invited to serve on 10 NSF panels or NIH study sections since 2009.

Additionally, Dr. Schisa received CSE's Outstanding Research Award in 2010. Not only is she dedicated to her research, but to her teaching as well. She has featured student co-authors on all her research papers except one since 2005 and has mentored 75 undergraduate research students and 21 graduate students. Additionally, she has won the CSE Outstanding Teaching Award in 2014 and the CMU Excellence in Teaching Award in 2016.

Kirsten M. Weber, Professor, Department of Communication
Dr. Kirsten Weber has received the 2022-2023 President's Award for Outstanding Research and Creative Activity. She is a professor of communications at CMU. Her research centers on interpersonal and health communication, specifically theory development, health disparities, and health interventions. She has 16 publications so far and has served as a PI or co-investigator in numerous studies utilizing 14 different grants. Her research has contributed significantly to the development of Relational Turbulence Theory in the field of communication. Dr. Weber has also done research on how information exchange impacts health experiences, including decisions about treatment. She has also documented healthcare disparities and implanted interventions to mitigate these disparities. Recently, Dr. Weber has also been focusing on information sharing on social media, and how this affects marginalized communities.

CMU Faculty Posters

Beth Bailey, Professor, College of Medicine
Impact of Prenatal Tobacco Exposure on Fetal Growth: Amount of Exposure and Second Trimester Fetal Growth Measurements

Background: Recent research revealed small and inconsistent findings on the link between prenatal tobacco exposure and fetal growth. While the head size and femur length appear to be most affected, failure to control for confounding or account for the amount of exposure may explain inconsistencies. Goal: To examine whether fetal growth effects following exposure to tobacco are evident in the second trimester, specific to certain growth parameters, and dose-dependent. Methods: Electronic health records at an academic obstetric practice identified study-eligible pregnant women (64 tobacco smokers, 100 controls) with no other drug use. Extracted data included background/medical information, and ultrasound results (fetal weight, femur length, head circumference, biparietal diameter, abdominal circumference) coded as percentiles. Results: Controlling for background differences, 10+ cig/day resulted in a 10+ percentile point reduction in estimated fetal weight, femur length, head circumference, and biparietal diameter compared to non-exposed controls. Exposure to <10 cig/day predicted a significant reduction in only biparietal diameter. Exposure was unrelated to the abdominal circumference. Conclusions: Results may explain previous inconsistent and smaller effect size findings and demonstrate the utility of considering the amount of tobacco exposure when examining/quantifying fetal growth effects. Findings also suggest that even a reduction in pregnancy smoking may positively benefit some aspects of fetal development.

Michelle Cassidy, Assistant Professor, Department of History, World Languages & Cultures
Anishinaabe Soldiers, Citizenship, and the Civil War

Considering the Civil War from the perspective of Company K of the First Michigan Sharpshooters—composed mainly of Anishinaabe soldiers—demonstrates how the war became part of Anishinaabe strategies to maintain access to land and resources in their Great Lakes homeland. Anishinaabe (Ojibwe, Odawa, and Potawatomi) men enlisted in the U.S. Army for political reasons related to both citizenship and Indigenous expectations of the federal government. Many of the men claimed the rights and responsibilities that they

associated with male citizenship—voting, owning land, and serving in the army—while actively preserving their status as "Indians" and Anishinaabe peoples. Religious and social networks were also important and may help explain why some Anishinaabe men chose to enlist while others did not. The stories of Company K men contribute to our understanding of the complexities of Civil War soldiers, including why they enlisted, what they experienced, and their post-war struggles. In their fight against removal, dispossession, political marginalization, and loss of resources in the Great Lakes, the Anishinaabeg were part of state and national debates related to citizenship, allegiance, military service, and the government's responsibilities for veterans and their families.

Debraj Chakrabarti, Professor, Department of Mathematics
Several complex variables are better than just one!

Complex analysis is a natural development of calculus in which real numbers are replaced by complex numbers, a generalized notion of number encompassing imaginary quantities such as the square root of negative one. Basic processes of calculus, such as differentiation, integration, and series expansion, acquire a deeper meaning with complex numbers, and have many applications to science and engineering. The analog of multivariable calculus with complex numbers was developed only in the twentieth century and brings some new surprises. Special techniques are needed to deal with questions related to the functions of several complex variables.

Jeremy Davis, Associate Professor, Department of Art & Design
Sound Sculptor

Introduction: Jeremiah Davis, MFA, leads the sculpture area within the Studio Art program in the Department of Art and Design. Originally coming from a largely traditional background at the Lyme Academy College of Fine Art in Connecticut, his graduate work was done at the School of the Art Institute of Chicago (SAIC). Jeremy's work draws inspiration from representations of the human body, and by extension, human *transmission*. Working primarily in 3D, Jeremy has incorporated sound as a 4th dimension to explore with his work. His most recent work, *Disambiguated: a Self-Sound Portrait* is a sculpture that uses the artist's own vocal formant frequencies to create a self-portrait of sound using hand-made tuning forks whose sound is amplified by the base on which they are mounted. This work was a semi-finalist in the *2022 Outwin Boochever Portrait Competition* held at the National Portrait Gallery at the Smithsonian Institution in Washington D.C. https://portraitcompetition.si.edu/exhibition/2022-outwin-boochever-portrait-competition/

Shay Dawson, Associate Professor, Department of Recreation, Parks & Leisure Services Administration
Effect of a Manualized Equine-Assisted Therapy Intervention on Participants With Autism Spectrum Disorder in Serbia & U.S.

Adolescents and young adults with a diagnosed autism spectrum disorder (ASD) in the severe to the moderate functioning range were recruited for this study in Serbia and the United States (U.S.). A total of ten participants, five from each respective country, participated in a 15-week equine-assisted therapy (EAT) intervention that utilized ground-based learning through a manualized program approach. The purpose of the study was to test the effects of a manualized 15-week EAT intervention on the social functioning of individuals with severe to moderate ASD across two cultures using a single-subject research design. Nine out of 10 participants displayed improved social functioning over the course of the 15-week EAT intervention in both cultures.

Trevor Diehl, Associate Professor, School of Broadcast & Cinematic Arts
Niche News and Audience Fragmentation: Mapping the Political Ideology of News Selection at the Individual, Group, and Organizational Levels

How are audiences fragmented along ideological lines? Fragmentation has been studied by looking at either individual media selections, or by observing macro-level patterns of attention to news organizations. While selective exposure studies typically show strong evidence of fragmentation, studies that employ network analysis typically do not. This project engages with the mixed evidence on audience fragmentation through multilevel conceptualization and analysis. We develop a novel theoretical approach that builds upon the classic notion of *niche news* but go further by integrating concepts from network analysis studies. We then test this framework with multilevel survey data from the United States (N = 1,965). We do not find support for clear fragmentation along ideological lines. Instead, news consumption happens within a niche, which reflects competition and symbiosis among news organizations. This approach highlights the influence of system-level factors on partisan news selection, like the ideological valence of the major news outlets available to the public, as well as the ideology of the shared audience within a niche. The results have implications for democratic society, as media systems become more partisan, in the U.S. and across the globe.

Sarah Domoff, Associate Professor, Department of Psychology
Adolescents' Phone Use and Academic Performance: Recent Work from the Family Health Lab

Dr. Sarah Domoff, PI of the Family Health Lab in the Department of Psychology, will be sharing recent research conducted with her graduate and undergraduate student mentees. The poster presentation that she will share was previously presented by graduate student, Samantha Klunejko, at last year's National Association for School Psychologists Conference. Specifically, Klunejko et al. examined the association between adolescents' phone use and academic performance. We found that addictive phone use associated with poorer grades among middle school students. Additionally, using social media while doing homework was associated with poorer grades for boys; using social media during class was associated with poorer grades for girls. Implications for school policy and phone restrictions are discussed, as well as future directions the Family Health Lab seeks to pursue.

Marco Fornari, Professor, Department of Physics
A Smorgasbord from Physics

Research at the intersection of materials science, computational physics, and quantum computing is illustrated using few recently published results: lone-pair effects to lower the thermal conductivity, inverse-problem theory applied to thermoelectric energy harvesting and cooling, benchmarking quantum calculations, and design of optical metamaterials. Support from the Department of Energy and the Defense Advanced Research Projects Agency is acknowledged.

Adam George, Lecturer II, and Paul O'Connor, Associate Professor, School of Health Sciences
The Effect of Tempo and Exercise Selection with Blood Flow Restriction Training on Maximal Strength

Adam George, Joseph Servitto, & Paul L. O'Connor, Ph.D
Objective: To evaluate the effect of manipulating tempo and exercise selection with blood flow restriction (BFR) training of the lower body. Methods: 33 resistance trained college-aged males participated in the study. The subjects were randomized into one of four groups: knee extension normal tempo (KE_{NOR}), knee extension time under tension (KE_{TUT}), back squat normal tempo (BS_{NOR}), and back squat time under tension (BS_{TUT}). All groups completed 18 progressive resistance training sessions over 6-weeks. The primary outcome measures were absolute and relative changes in maximal strength. Results: All groups experienced a significant increase in maximal strength pre to post. There was no difference between NOR or TUT groups. Absolute strength gains (lbs) in BS_{NOR} were significantly lower than KE_{NOR} & KE_{TUT} (18.89±11.93 vs. 49.78±28.62 & 59.14±24.92). Absolute strength gains in BS_{TUT} were significantly lower than KE_{NOR} & KE_{TUT} (21.88±13.35 vs. 49.78±28.62 & 59.14±24.92). Relative strength gains in BS_{NOR} were significantly lower than KE_{NOR} (5.90%±3.86 vs. 17.33%±13.84). Conclusion: There was no difference between normal tempo and time under tension groups. Gains in absolute strength were larger in KE groups compared to BS groups.

Sarah Grinn, Assistant Professor, Department of Communication Sciences & Disorders
Peripheral and Central Auditory Changes Following Virtual-Reality Music Exposure in Youth Populations

As of 2020, there were 50.2 million virtual reality (VR) headset users in the United States, and this number is projected to increase to 65+ million in 2023. The extreme social limitations of the COVID-19 pandemic inspired youth concert-goers to adopt VR concert attendance, using commercially purchased VR headsets with built-in speakers and lenses that simulate an in-person concert experience. Relatedly, the World Health Organization recently reported that more than 1 billion youth worldwide exhibit risky music-listening behavior. This study prospectively monitored peripheral and central auditory changes following a 90-minute "live-streamed" VR music concert performed by a popular youth band - "The Chainsmokers" - to review the risk of noise-induced injury from this new and robustly popular platform. 30 participants (18-25 yr) with baseline thresholds <16 dB-HL (.25-8 kHz) underwent comprehensive pre/post-exposure evaluation, including audiometry, otoacoustic emissions, hearing-in-noise testing, heart rate and blood pressure measurement, and auditory brainstem response testing.

Samantha Hahn, Assistant Professor, College of Medicine
The Association Between Weight Perception and Disordered Eating: Considering Actual Weight Status and Weight-Based Teasing as Moderators.

Samantha L. Hahn, C. Blair Burnette, Rebecca M. Puhl, Jerica M. Berge, Marla Eisenberg, Dianne Neumark-Sztainer
Introduction: This study examined whether associations between weight perception and disordered eating differ by actual weight status and experiences of family weight teasing. Methods: Project EAT 2010-2018 (N=1,502) data were used to examine whether weight perception in adolescence (M_{age}: 14.5±2.0 years) was cross-sectionally and longitudinally (M_{age}: 22.0±2.0 years) associated with disordered eating. Adjusted logistic regressions were used to calculate predicted probabilities of disordered eating, stratified by weight status and family weight teasing. Results: In cross-sectional analyses, the predicted probability of unhealthy weight control behaviors (UWCB) was similar for those who perceived their weight as "overweight", irrespective of actual weight status (BMI ≥85th percentile: 68.3%, BMI <85th percentile: 66.0%). However, among those that did not perceive their weight as "overweight", those with higher BMI were nearly two times as likely to use

UWCB (45.6% among BMI≥85th percentile vs 24.6% among BMI<85th percentile). For those who experienced family weight teasing in adolescence, perceiving one's weight as "overweight" was associated with an increased likelihood of binge eating in emerging adulthood (17.3% vs. 8.2%). Conclusions: Perceiving one's weight as "overweight" is associated with an increased likelihood of disordered eating, though these relationships may differ by actual weight status and experiences of family weight teasing.

Anne Hornak, Professor, Department of Higher Education
Formative Influences: How Capital Shapes Rural Students' College-Going Intentions

Anne M. Hornak, Sarah Williams, Skylar Duke, Frim Ampaw, Additional Contributors: Jaime Vanenkevort, Blake Jonassen
This project is part of a longitudinal study investigating how a cohort of rural high school seniors develops college-going intentions. Rural students experience inequities in access to higher education. Although most research on rural students' college-going analyzes their deficits, this qualitative paper uses an asset-based approach to focus on resources and forms of capital that shape students' postsecondary plans. We use the lenses of rural sociology (Nelson, 2016), asset-based perspectives (Yosso, 2005), and the extant literature to gain a deeper understanding of the ways in which rural students know and understand the post-high school transition to college. We exclusively focus on their college knowledge, intent to attend college, and attitudes toward postsecondary education.

Kechi Iheduru-Anderson, Associate Professor, School of Rehabilitation and Medical Sciences
Anti-Black racism scholarship: A bridge to inclusive practices in healthcare education and practice

The Future of Nursing 2020-2030 calls for nurses to be leaders in promoting health equity and eliminating healthcare disparities, which includes addressing systemic racism and its impact on healthcare outcomes. To promote health equity and eliminate health disparities, a more nuanced understanding of systemic racism in nursing is necessary, one that acknowledges the impact of structural racism on health outcomes and emphasizes the need for structural change to address these disparities. Anti-Black racism scholarship in nursing aims to address policies, procedures, and practices in education, service, leadership, and research that work collectively to perpetuate various forms of inequities. Dr. Iheduru-Anderson's anti-Black racism scholarship critically examines historical and contemporary experiences of Black people in nursing across settings and levels. Her scholarship offers insights into the lived experiences of the Black nursing community through counter stories, highlighting the need for greater attention to addressing systemic and institutional barriers to promoting diversity, equity, and inclusion in the nursing profession. She challenges nursing and other healthcare professions to interrogate the intersection of racial exclusion and discrimination in achieving DEI in healthcare professions. Her studies offer various concrete and actionable strategies for confronting anti-Black racism and discrimination across academic and practice settings. Anti-Black racism scholarship is directly relevant to achieving the objectives of the Future of Nursing 2020-2030 initiatives.

Megan MacPherson, Assistant Professor, Department of Communication Sciences & Disorders
Individual Differences and Group Trends in Sympathetic Activation in Speakers with Parkinson's Disease

Dysautonomia and disordered speech production frequently co-occur in Parkinson's disease (PD). Activation of the sympathetic branch of the autonomic nervous system (ANS) is key in meeting task demands and is linked to higher-level motoric and cognitive-linguistic functions including speech production. However, autonomic data collected during speech production by individuals with PD is lacking, limiting our understanding of the

relationship between autonomic pathophysiology and speech function. Heterogeneity of autonomic and speech symptoms is a hallmark of PD so group-level analyses alone may not sufficiently capture this relationship. Therefore, the purpose of this study was to characterize sympathetic activation during speech production in speakers with PD at the group and individual levels. Peripheral autonomic signals were continuously and synchronously collected with the speech acoustic signal while eight individuals with PD completed multiple speech production tasks. Measures of skin conductance level and response were examined. Preliminary findings indicate that sympathetic activation profiles across speech tasks followed the same general pattern in most individuals with PD. This pattern is similar in speakers with and without PD such that more cognitive-linguistically demanding speech tasks are associated with greater sympathetic activation. Individual differences in the patterns and absolute levels of activation were also evident.

Gina McGovern, Assistant Professor, Department of Human Development & Family Studies
Racial Equity-Oriented Practices for Social and Emotional Learning in Afterschool Programs: Readiness and Reluctance among Afterschool Educators

Gina McGovern, PhD and Anyah L. Lewis
Research on social-emotional learning (SEL) demonstrates improved outcomes for many youth (Durlak et al, 2015). However, SEL has not traditionally been attuned to marginalized youth's identities or the injustices they face, placing a burden on youth to navigate these challenges (Love, 2019). Recently, Rivas-Drake et al developed a measure to assess the extent to which middle school teachers advance racial equity through SEL instruction (REQSEL; 2021). The current study engaged nine afterschool educators in eight focus groups to a) gather feedback on how to adapt the REQSEL for afterschool settings, b) describe the racial equity SEL practices they implement in their programs, and c) identify barriers that prevent them from implementing these practices. Our preliminary thematic analysis (Braun & Clarke, 2022) suggests a general lack of attention to racial equity topics in SEL activities, and a hesitancy to engage these topics deeply. Educators were inclined to discuss racism only if brought up by youth, rather than design activities to purposefully engage racial equity topics. They expressed interest in incorporating racial equity topics more intentionally in programs but recognized that they needed more confidence to adequately do so in a way that does not cause youth additional stress.

Anna Monfils, Professor, Department of Biology
Conducting Biodiversity Science in the 21st Century

Natural history collections provide the collections, the extended data, and the people and expertise to address critical science challenges and social issues at the local, regional and global level. As the we look to reintegrating science across disciplines and domains, build inclusive education and workforce experiences, and creating open science communities, Natural History Collections professionals have been leaders in building open science networks. Working with collaborators within the local, regional, national and international museum communities, our CMU team of students and faculty have helped advance research, education and outreach relative to habitat conservation in prairie fens for the Federally endangered Poweshiek skipperling butterfly; built, disseminated and implemented inclusive data literacy open education resources, and conducted outreach to highlight new and emerging opportunities to grow the community, build collaboration, and create a diverse and inclusive 21st Century museum workforce. This poster was designed to communicate some highlight of the research, education and outreach we have conducted as an open science team in the last ten years. The poster format integrates science communication, art and accessibility; we encourage those viewing the poster to provide feedback, share insights and engage with content.

Kevin J. Pangle, Professor, Department of Biology
Using Patterns in Chemistry and Growth to Examine the Composition of Lake Michigan's Salmon Fisheries

Mixed stock fisheries, which arise when multiple, spatially distinct natal sources contribute to a single adult population, pose unique challenges to fisheries managers due to their complex nature. The relative contributions of stocks and the degree of spatial mixing is still not well known for most fisheries, particularly those in large systems. A goal of my research, in collaboration with state and federal agencies, is to evaluate the stock composition of steelhead (*Oncorhynchus mykiss*), Chinook salmon (*O. tshawytscha*), and Coho salmon (*O. kisutch*) across the entirety of Lake Michigan fisheries. These fisheries are currently supported by extensive stocking, as well as natural reproduction from numerous tributaries. To determine the natal origin of fish, we use unique chemical and growth signatures found on their scales and otoliths (ear stones) that are elucidated using pattern recognition algorithms (e.g., random forest) and validated using known-origin fish. Our results have revealed substantial movement and mixing of salmon stocks in Lake Michigan and have identified key sources of natural reproduction. This research greatly improves managers' understanding of Lake Michigan's salmon fisheries and emphasizes the importance of multiagency cooperation to sustainably regulate fisheries resources.

Julien Rossignol, Professor, College of Medicine
PAMAM dendrimers: A versatile drug delivery system for brain diseases

Rossignol Julien, Srinageshwar B, Stadler J, Andrews M, MacDonald B, Poudel A, Gallien J, Toth A, Malkowski C, Schalau R, Evers-Smith J, Swiontek J, Mersino L, Otero P, Raymor G, Resk M, Bueno CA, Thompson C, Garmo L, Koneru S, Richmond J, Richardson G, Patel M, Swanson D, Sharma A, Dunbar GL
Introduction: PAMAM dendrimers are 3-dimensional nanomolecules with multiple applications in biomedical sciences. These dendrimers can carry drugs and DNA/biomolecules to target systems, including those that necessitate the crossing of the blood-brain barrier (BBB) to deliver its cargo to the brain. One of the advantages of PAMAM dendrimers, compared to the current viral-based delivery systems, is that these dendrimers can carry and deliver very large plasmids (DNA) in addition to delivering drugs simultaneously (mixed-cargo). The aim of the current study was to analyze the drug delivery applications of our modified-surface PAMAM dendrimers (G4-90/10) in stroke and glioblastoma (GB; brain cancer) models *in vitro* and *in vivo*. Results: G4-90/10 dendrimers can: (1) cross the BBB following systemic injections in mice; (2) complex and carry large plasmids that were successfully delivered to the neurons and astrocytes (glial cells) *in vitro* and *in vivo* in rats; (3) deliver the therapeutic gene in stroke rats and reduce motor deficits; (4) specifically target human GB cells for destruction and tend to improve the survivability of GB mice. Conclusion: PAMAM dendrimer is a promising versatile cargo delivery vehicle that has multiple applications to treat brain diseases, including GB.
Support for this study was provided by the National Institute of Health, NIH R21 (R21EY030012), American Heart Association (18AIREA 33990094; AIREA 957277), the College of Medicine, Department of Chemistry and Biochemistry, the E. Malcolm Field Endowed Chair and the John G. Kulhavi Professorship in Neuroscience, and Neuroscience Program at Central Michigan University.

Jason Taylor, Professor, Department of Economics
Beeronomics 1933: Economics of 3.2 Beer Legalization Prior to the End of Prohibition

In April 1933, eight months prior to the end of federal alcohol Prohibition, states gained the ability to legalize the production and sale of 3.2 percent alcohol beer. In separate papers, I have examined various economic aspects of this very early New Deal policy. 1) Economics: We estimate that around 100,000 jobs were created

in the beer production, sales, and service industries in the spring of 1933, nearly 60,000 of which were created in April when the nation emerged from the trough of the Great Depression. 2) Politics: States that had large brewing traditions were more likely to have representatives speak and vote in favor of the beer bill than states with less tradition. 3) Geography: Prohibition did not bring a major shift in the location of breweries in the era immediately before and after. 4) Entrepreneurial Response: In terms of speed, we show that around 200 breweries were engaged in legal sales on April 7. By June 1, around 300 breweries were selling, and 400 by August 1. The remaining 200 breweries commenced sales over the final five months of the year. 5) Longevity: Breweries that entered more quickly after relegalization survived longer past 1933.

Heather Trommer-Beardslee, Assistant Professor, Department of Theatre & Dance
Moving Within Collaboration: Dances Open to Possibility

Heather Trommer-Beardslee, MFA, is the coordinator of the CMU Dance Program in the Department of Theatre and Dance where she specializes in screendance, dance production, and jazz dance. Her recent research interests include interdisciplinary teaching practices, consent practices in performing arts education, and dance education for people living with Parkinson's Disease. Trommer-Beardslee's concert dances and dance films have been performed and screened nationally and internationally and her scholarship has been published in a variety of journals and books. Current projects include a jazz and tap dance exchange with the internationally known jazz dance company, Masashi Action Machine of Nagoya, Japan and a new collaborative dance film inspired by the creative relationship between Walt Disney and Salvador Dali.

Kirsten Weber, Professor, Department of Communication
Triadic Medical Encounters: When Caregivers Intervene on Behalf of Neurodivergent Patients

Researchers have consistently documented health disparities regarding the care people with intellectual and developmental disabilities receive. In part, these disparities are due to communication challenges that arise between patients and health practitioners. Caregiver involvement in medical encounters can help to mitigate the health disparities neurodivergent individuals face. The present study predicted that the nature of a caregiver's relationship (paid vs family member) with the neurodivergent patient would influence if the caregiver intervened during triadic medical encounters. Results of a survey completed by 109 caregivers of adult neurodivergent patients found that family caregivers, as compared with paid caregivers, were more likely to intervene on the patient's behalf during triadic medical encounters. Specific communication techniques family caregivers were more likely to utilize included hinting communication, communication that elaborated, communication that corrected, and communication that bypassed the patient. Results offer practical advice for caregivers and medical practitioners during triadic medical encounters with neurodivergent patients.

Andrew Wehrman, Professor, Department of History, World Languages & Cultures
The Contagion of Liberty: The Politics of Smallpox in the American Revolution

Andrew Wehrman's book *The Contagion of Liberty* was published by Johns Hopkins University Press in December of 2022 and is currently a finalist for the *Los Angeles Times* Book Prize for history. The book is a result of more than a decade of research into the origins of inoculation and vaccination in the new United States and chronicles the raucous debates and insatiable demand of ordinary Americans for their government to protect the public from disease during and after the American Revolution. A key chapter in the book is George Washington's decision to inoculate the Continental Army, which came as a result of this bottom-up

pressure from Colonists for access to inoculation. *The Contagion of Liberty* has been reviewed by *The Wall Street Journal*, *The Lancet*, *Nature*, and *The American Journal of Public Health*. It was also named one of the best books on public health published in 2022 by *Harvard Public Health*.

Jennifer Weible, Associate Professor, Department of Teacher & Special Education
What makes a curious learner? Connecting affect, learning, and design

Dr. Jennife3r L. Weible, is focused on science curiosity, primarily with youths in informal STEM settings. These settings range from field trip experiences to afterschool programming, to summer STEM camps. My research explores three broad areas: 1) how the learning experience impacts affect such as science curiosity, creativity, and self-efficacy towards STEM subjects, 2) how the design of the activities can influence curiosity and the learning outcomes, and 3) how technology can support or facilitate youth learning and curiosity. I explore research questions like, "How does participation in a STEAM Making experience impact youths' science curiosity and career goals?" and "Are there connections between curiosity and computational thinking?" To answer these, I collect data such as knowledge tests, affect scales, interviews, and video observations as well as student work and other artifacts, and analyze the data using methods such as statistics, interaction, domain and taxonomical, and thematic analyses.

Cathy Willermet, Professor, Department of Philosophy, Anthropology & Religion
Comparing the degree and timing of neurocranial and viscerocranial fluctuating asymmetry and dental enamel defects

Cathy Willermet, Emily Moes, Heather J. H. Edgar, and Corey S. Ragsdale
Fluctuating asymmetry (FA) refers to random developmental divergences from bilateral symmetry during development. Does the timing of FA reflect developmental stress? We explore timing of FA in two areas of the cranium, the neurocranium (adult development around age six) and viscerocranium, (adult development around puberty), and compare them to the timing of dental enamel defects in the canine, which develops by age six. Using a Mexican Colonial-era sample, we placed paired and unpaired cranial landmarks on three-dimensional photogrammetric models. We compared correlations between each cranial FA region, and to the frequency of dental defects by dental crown regions. While there was no correlation between the two cranial FA scores, two enamel defect frequencies showed a weak but insignificant correlation with neurocranium FA. None of the analyses involving viscerocranial FA were significant. The relationship between neurocranial FA and enamel defects in the canine correspond to the ages at which these structures form. This study adds to our knowledge about how nonspecific stress markers can help us understand how and when stress affects the body. *Funding by: CMU FRCE Grant #48945; UNM Latin American and Iberian Institute Field Research Grant; AAPA Professional Development Grant; SIUE STEP Grant; UNM Research Allocations Committee.*

Zulfia Zaher, Assistant Professor, Department of Journalism
USERS' SENSE OF EMPOWERMENT, COMMUNICATIVE BEHAVIOR, AND PUBLIC ENGAGEMENT ON INSTAGRAM: AN EXAMINATION OF THE #BLACKOUTTUESDAY CONVERSATIONS

Zulfia Zaher, Tisha Dejmanee, Kirsten Weber
#BlackoutTuesday was a digital action devised by Brianna Agyemang and Jamila Thomas, two Black music executives, in the wake of George Floyd's murder in Minneapolis and the subsequent, unprecedently large Black Lives Matter protests. We argue that the study of #BlackoutTuesday Instagram posts is a significant contribution to research on Black Lives Matter as 1) they reflect the commentary of a large community of

allies who do not fit the main demographic groups of participants in BLM conversation, and 2) this conversation was centered around Instagram, rather than Twitter which is often considered the foundational platform of the movement. We conducted quantitative content analysis to address the research questions. Using CrowdTangle, we collected ten thousand Instagram posts containing #BlackOutTuesday published on June 2, 2020. Using a series of Chi-Square tests, the results revealed that the users' gender, race, and source types were significantly associated with their sense of empowerment and communicative behavior regarding #BlackOutTuesday conversation on Instagram. This study also investigated the factors that influenced higher engagement. Employing a One-Way ANOVA, the results showed that source types, particularly celebrities and for-profit and media organizations, generated more *Likes.* We also found that negative emotions created more *Likes* and *Comments.*

Faculty and Staff Recognition Recipients of External Funding during 2021-2022

Investigator(s)	Funding Agency	Project Title
Ibrahim Abdulhamid	Wayne State University/Cystic Fibrosis Foundation	Therapeutic Development Center Year 2
Lauren Agnew	NetVirta, Inc.	NetVirta Body Scanning Rental
Jocelyn Ang	Lilly USA, LLC	A Randomized, Double-Blind, Placebo-Controlled, Phase 2/3 Study
Jocelyn Ang	Astellas Pharma Global Development, Inc.	Invasive Aspergillosis (IA) or Mucormycosis (IM) in Pediatric Subjects
Alison Arnold	Michigan Public Health Institute/CDC/USDHHS	Funding for Preventing Adverse Childhood Experiences Data to Action Year 2
Alison Arnold	John Hopkins University/United States Department of Education	Evaluation Research Sub-Contract with JHU for PAX Good Behavior Game (GBG)
Alison Arnold	Michigan Department of Health & Human Services /CDC/USDHHS	Michigan Department of Health and Human Services Suicide Prevention CDC Grant Proposal-CMU Subaward Year 2
Jesse Bakke with Co-Investigator Michael Conway	Life Magnetics, Inc.	Life Magnetics Technician Hire
Martin Baxter	University Corporation for Atmospheric Research/NOAA/USDOC	Evaluation of Model QPF and Associated Hydrologic Impacts Predicted
James Bujaki	Alaska Native Tribal Health Consortium-National Telehealth	Telehealth Broadband Project

Michael Callaghan	BioMarin Pharmaceutical, Inc.	BMN 270-303
Hunter Carrick	University of Michigan/NOAA/USDOC	Measurement of Biogeochemical Rates and State Variables to Understand Phosphorus
Hunter Carrick	Saginaw Chippewa Indian Tribe/Bureau of Indian Affairs/USDOI	Measurement of Biogeochemical Rates and State Variables to Understand Phosphorus
M. Ariel Cascio	Wenner-Gren Foundation	Meanings of Autism and Work: Autistic and Non-Autistic People Navigating Shared
Debraj Chakrabarti	National Science Foundation	New Frontiers in Several Complex Variables
Debraj Chakrabarti	Simons Foundation	Analysis and Geometry in Several Complex Variables
Sanjay Chawla	Chiesi USA, Inc.	Model for Extubation Readiness Timing Among Preterm Infants
Meera Chitlur	Sanofi US Services, Inc.	Study of rFVIIIFc-VWF-XTEN; BIVV001 in Previously Treated Pediatric Patients
Ray Christie	Economic Development Administration/ USDOC	Central Michigan University Research Corporation Facility Renovations
Michael Conway With Co-Investigators Maggie Williams, Rebecca Uzarski, Elizabeth Alm	Michigan Department of Health and Human Services/USDHHS	Detection of SARS-CoV-2 in Sewage Samples Year 2
Matthew Cooper	West Michigan Shoreline Regional Development Commission/MDEGLE/USEPA	Macroinvertebrate Monitoring and Data Assessment in the Muskegon Lake Area
Julie Cunningham	Great Lakes Bay Regional Alliance/ Gerstacker Foundation	Great Lakes Bay Region Chief Science Officer Program
Julie Cunningham	Gratiot County Community Foundation	Great Lakes Bay Region Chief Science Officer (CSO) Program at CMU
Julie Cunningham	Gaylord Community Schools	Gaylord PS Maker Space Consultation

Julie Cunningham	Wayne State University	CMU Design Thinking Workshop for Wayne State
Julie Cunningham	Great Lakes Bay Regional Alliance	CMU Esports Camp
Margaret Desormes	EightCap, Inc./USDHHS	Early Childhood Collaborative with EightCap, Inc., 2021
Margaret Desormes	EightCap, Inc./USDHHS	Early Childhood Collaborative with EightCap, Inc. 2022
Margaret Desormes	Michigan Department of Education/USDA	Child and Adult Care Food Program Emergency Operating Reimbursement Program
Margaret Desormes With Co-Investigator Holly Hoffman	Michigan Department of Education/ USDHHS	Child Care Stabilization Grant
Margaret Desormes With Co-Investigator Carrie Ludwig	Michigan Department of Education/USDA	Child and Adult Care Food Program 2021-22
Tanya Domina	Carhartt, Incorporated	Carhartt Master Services Agreement
Tanya Domina	Morrison Outdoors LLC	Sleeping Bag Insulation Comparison Testing Fall 2021
Tanya Domina	Northern Classics	Northern Classics Baby Winterwear Insulation Study Fall 2021
Tanya Domina	Lunaler Group	Lunaler Baby Manikin Pull-Up Diaper Microclimate Validation Study Fall 2021
Tanya Domina	VF Outdoor, LLC (NorthFace)	The North Face Manikin Thermal Insulation Improvement Validation Study Winter 21
Tanya Domina	VF Outdoor, LLC (NorthFace)	The North Face Manikin Thermal Insulation Improvement Validation Study Spring 22
Sarah Domoff	University of Michigan/NIH/USDHHS	Building Capacity for Research and Action for Vulnerable Youth at Pine Rest

Daniel Drevon	Wayne State University/HRSA/USDHHS	Leadership Education in Neurodevelopmental and Related Disorders Training Pgm
Gary Dunbar	Field Neurosciences Institute	Efficacy Testing of Rodent Adult Stem Cells for Treating Huntington's
Gary Dunbar	Michigan State University/NIH/USDHHS	Influence of Systemic Immune Inflammation Upon Tauopathy Phenotype Mouse Models
Jesse Eickholt	Great Lakes Fishery Commission	Automated Spillway Surveillance for Risk Assessment at FishPass
Jennifer Evanuik With Co-Investigator Dianne Desalvo	Institute of International Education	IIE American Passport Project
Megan Farrell	Leelanau Historical Society & Museum	Leelanau County Historical Newspaper Digitization & Hosting
Megan Farrell	Bullard Sanford Memorial Library	Vassar Pioneer Times Microfilming 2006-2019
Megan Farrell	Bullard Sanford Memorial Library	Vassar City & Cemetery Records Digitization
Megan Farrell	Spies Public Library/ City of Menominee	Menominee Newspaper Digitization 1885-1900
Megan Farrell	Bullard Sanford Memorial Library	Vassar Pioneer Times 2006-2019 Digitization and Hosting
Megan Farrell	Bay County Library System	Pinconning Journal Digitization and Hosting
Megan Farrell	East Lansing Public Library	Towne Courier Newspaper Microfilming 1963
Megan Farrell	Constantine Township Library	Constantine Twp. Library, MI Newspaper Digitization and Hosting 1891-1977
Megan Farrell	Constantine Township Library	Constantine Twp., MI Newspaper Digitization Only
Megan Farrell	East Lansing Public Library	Towne Courier Newspaper Digitization & Hosting 1963

Megan Farrell	Michigan Department of Education	MOU Between CMU and Michigan Department of Education: Digitization of Newspapers
Nicole Ferguson	Midland County Educational Service Agency	Audiological Consultant Services for Midland County Educational Service Agency
Nicole Ferguson	Covenant Healthcare	Audiologic Consultant Services for Covenant HealthCare
Amy Ford With Co-Investigator Jillian Davidson	National Indian Education Association/ W.K. Kellogg Foundation	Native Teaching Fellows Project
Marco Fornari	University of Southern California/USDOE	Quantum Computation for Quantum Prediction of Materials and Molecular Properties
Marco Fornari	University of Southern California/ DARPA/USDOD	BeQuEST: Benchmarking Quantum Enhancement in Science & Technology
Shannon Franz	Corporation for Public Broadcasting	Annual CPB Grant- Television 2021-2022- Interconnection Grant (IC)
Shannon Franz	Corporation for Public Broadcasting	Annual CPB Grant - Television 2021-2023 CSG-DSG-USSG
Shannon Franz	Corporation for Public Broadcasting	21-23 Annual CPB Grant - Radio
Thomas Gehring	Michigan Sea Grant/NOAA/USDOC	Michigan Sea Grant Graduate Student Research Fellowship Application for Dustin B
James Gerhart	Rush University Medical Center	Relieving Burden of Psychological Symptoms Among Families of Covid 19 Patients
Alexander Glaros	Evidera, Inc./bluebird bio, Inc.	Patient-reported Outcome (PRO) Data-Transfusion Dependent P-Thalassemia
Alexander Glaros	Agios Pharmaceuticals, Inc.	Efficacy and Safety of Mitapivat in Subjects with Sickle Cell Disease
Alexander Glaros	Agios Pharmaceuticals, Inc.	Mitapivat with Transfusion-Dependent Alpha- or Beta-Thalassemia (ENERGIZE-T)

Alexander Glaros	Agios Pharmaceuticals, Inc.	Mitapivat with Transfusion-Dependent Alpha- or Beta-Thalassemia (ENERGIZE-T)
Scott Grant with Co-Investigator Neli Ragina	Children's Foundation	Impact of Integrating HPV Education Among Pediatric Patients & Caregivers
Colleen Green	Salish Kootenai College/National Science Foundation	All Nations Louis Stokes Alliance for Minority Participation 2021-22
Colleen Green	Michigan Department of Labor & Economic Opportunity	Student Transition Enrichment Program (STEP) FY 2022
Imad Haidar	Michigan Center for Clinical Systems Improvement	Social Determent of Health
Imad Haidar	Michigan Center for Clinical Systems Improvement	Screening, Brief Intervention, and Referral to Treatment
Imad Haidar	Dow Chemical Company	Dow Analytics Support 2022
Imad Haidar	Paystr LLC	Process Support
Imad Haidar	Avasure, LLC	AvaSure Analytics
Ghassan Hamadeh	Blue Cross Blue Shield of Michigan Foundation	Facilitators and Barriers to Deprescribing in the Elderly
Deborah Hamlett	Detroit Public Television/MDE	Michigan Learning Channel Affiliation Agreement Year 2
Sabrina Heidemann	Boston Children's Hospital/CDC/USDHHS	Understanding COVID-19 Among Critically Ill Children In the PALISI Network
Meret Henry	St Jude Children's Research Hospital	TOT17
Meret Henry	St Jude Children's Research Hospital	TBANK- Protocol for Collecting, Banking, and Distributing Human Tissue Samples
Troy Hicks	National Council of Teachers of English	Reading and Writing New Perspectives: A Partnership Between the LOC and the NCTE
Ute Hochgeschwender	National Institutes of Health/USDHHS	Semi-Synthetic, Magneto-Photonic Circuit for Non-Invasive Control

Ute Hochgeschwender	National Institutes of Health/USDHHS	Selective Control Synaptically-Connected Circuit Elements by Interluminescence
Ute Hochgeschwender	National Institutes of Health/USDHHS	Selective Dissection of Local and Distributed Neocortical Inhibitory Circuits
Ute Hochgeschwender	Brown University/National Science Foundation	NeuroNex Technology Hub: Bioluminescence for Optimal Brain Control and Imaging
Holly Hoffman	Michigan Department of Education/ USDHHS	Brazelton Touchpoints Individual Level Training
Holly Hoffman with Co-Investigator Margaret Desormes	Michigan Department of Education/ USDHHS	MDE Stabilization 2022 #2
Joseph Inungu	Calhoun County Mental Health Authority/ SAMHSA/USDHHS	Calhoun County Assisted Outpatient Treatment Program Year 2
Koblar Jackson with Co-Investigator Juan Peralta	US Department of Energy	FLO-SIC: Efficient Density Functional Calculations Without Self-Interaction
Amrish Jain	Emory University	RTA Registry-Natural History of Distal Renal Tubular Acidosis in a N. American
Chanseok Jeong	National Science Foundation	Collaborative Research: Development of Realistic Seismic Input Motions
Primavera Jimenez	US Department of Education	CMU-TRIO Upward Bound Northwest Detroit 2021-22
Primavera Jimenez	US Department of Education	CMU-TRIO Upward Bound Southwest Detroit 2021-22
Primavera Jimenez	US Department of Education	Central Michigan University - Talent Search Detroit 2021-22
Primavera Jimenez	US Department of Education	Central Michigan University-Upward Bound-Southwest
Primavera Jimenez	US Department of Education	Central Michigan University-Upward Bound-Northwest

Erica Johnson	Viacom International, Inc.	CMU MTV CVP Voter Engagement Support
Theresa Jones	Clare-Gladwin RESD	Clare-Gladwin RESD Writer's Workshop
Theresa Jones	Clare-Gladwin RESD	Clare-Gladwin RESD Writer's Workshop - Spring 2022
Theresa Jones With Co-Investigator Nicholas Barone	MidMichigan Physicians Group	Videostroboscopic Evaluations 21-22
Nirupama Kannikeswaran	Wayne State University/NIH/USDHHS	Translating an Efficacious Illness Management Intervention
Jason Keeler	National Science Foundation	Collaborative Research: Mesoscale Airmasses
Beth Kennedy	US Department of Education	DeafBlind Central: Michigan's Training and Resource Project Year 4
Larry Klaus	Michigan State Police	MCOLES Funding for Officer Training 2021
Larry Klaus	Michigan State Police	911 Public Service Answering Points Training Fund 2021
Larry Klaus	Michigan State Police	MCOLES Funding for Officer Training 2022
Aaron LaCluyze	University of North Carolina at Chapel Hill/USDOD	Next-Level, Robotic Telescope-Based Observing Experiences to Boost STEM
Roderick Lammers	University of Georgia Research Fdn/ US Dept of the Army/USDOD	Network for Engineering with Nature
Helen Lee	Alma Public Schools	Alma Public Schools Sports Physicals
Helen Lee with Co-Investigator Debra Kimball-Christie	St Louis Public Schools	St. Louis Public Schools Sports Physicals
Debra Linton	Michigan Department of Environment (EGLE)/USEPA	Next Generation Climate Change Curriculum Support

Aimee Luat	Wayne State University/NIH/USDHHS	Novel DWI Methods to Minimize Postoperative Deficits in Pediatric Epilepsy Surg.
Aimee Luat	Wayne State University/University of California S.F./NIH/USDHHS	Brain Vascular Malformation Consortium: Predictor's of Clinical Course
Aimee Luat	Michigan Department of Health and Human Services/USDHHS	Epilepsy and Telemedicine Year 3
Alissa Martin	Venthera, Inc.	VT30-101
Gina McGovern	University of Michigan/ William T. Grant Foundation	Development of a Measure of Equity-Based Social Emotional Learning Practices
Andrew McNaught With Co-Investigator Tracy Galarowicz	Great Lakes Fishery Trust	Importance of Food Predators to Lake Whitefish and Cisco Recruitment
Kathleen Meert	National Institutes of Health/USDHHS	Collaborative Pediatric Critical Care Research Network (CPCCRN)
Kathleen Meert	University of Michigan/NIH/USDHHS	Pediatric Influence of Cooling Duration on Efficacy in Cardiac Arrest Patients
Kathleen Meert	Research Institute at Nationwide Children's Hospital	GM-CSF for Reversal of Immunoparalysis in Sepsis-induced MODS (GRACE)
Kathleen Meert	University of Utah/NIH/USDHHS	Collaborative Pediatric Critical Care Research Network (CPCCRN)
Kathleen Meert	Pfizer, Incorporated	Start Up Costs - Trumenba
Kathleen Meert	University of Michigan/NIH/USDHHS	1/2 Pediatric Influence of Cooling Duration on Efficacy Cardiac Arrest Patients
Kevin Miller	Polar Products, Inc.	Cooling Rates of the Polar Life Pod and Immersion Tub
Anna Monfils	Michigan State University/USFWS/USDOI	Poweshiek Skipperling Conservation: Habitat Management Plans and Assessment

Evan Montague	US Department of Education	Preparation for Success: CMU's McNair Program 2021-22
Evan Montague with Co-Investigator Holli Black	Michigan Department of Labor & Economic Opportunity/USDE	Michigan Gear Up 2021-2022
Evan Montague with Co-Investigator Kori Burlager	Michigan Department of Labor & Economic Opportunity	Pathways to Academic Student Success (4S) FY 2022
Anja Mueller	SQ Industrial LLC	SQI Dental Adhesives - Contract Lab and Analytical Work
Girija Natarajan	American Academy of Pediatrics	Ethnicity Difference in Left Ventricle Hypertrophy and Remodeling in Children
Larissa Niec	Psi Chi, The International Honor Society in Psychology	An Assessment of the Effectiveness of Online PCIT Trainings for Clinicians
Jennifer Nottingham	American College of Lifestyle Medicine	Wellness2Go 2122-1
Jennifer Nottingham	American College of Lifestyle Medicine	Wellness2Go 2122-2
April Osburn	Mid Central Area Health Education Center /WSU/HRSA/USDHHS	AHEC Infrastructure Development Program Year 10
Philip Oshel	International Flavors & Fragrances, Inc.	Microscopy Services for IFF
Jyotsna Pandey	Grand Valley State University	Interprofessional Education and Student Understanding of their Future Roles
Jyotsna Pandey With Co-Investigator Raju Chowdhary	Region VII Area Agency on Aging/USDHHS	Group Exercise, Training and Fitness (GET Fit): OTAGO Exercise Program
Kaleb Patrick	Blue Cross Blue Shield of Michigan Foundation	Speaker Series June 2021-September 2021
Juan Peralta	US Department of Energy	Computational Methods Based on Density Functional Theory for Reactions

Georgios Perdikakis	US Department of Energy	Renewal Proposal: Investigation of the Role of Nuclear Physics in Heavy Element
Georgios Perdikakis	Triad National Security, LLC	LENZ-GEANT SIMULATIONS at CMU 2
Georgios Perdikakis With Co-Investigators Mihai Horoi, Matthew Redshaw, Alfredo Estrade Vaz	US Department of Energy	Nuclear Astrophysics and Fundamental Symmetries: Research Activities at CMU
Valeri Petkov	US Department of Energy	Lattice Instabilities and Emergent Electronic Phases and Collective Behavior
Sheri Pickover With Co-Investigator Nicholaus Erber-LaPierre	Mid-Michigan District Health Department	Implicit Bias Training: Considerations and Practical Application
Andrew Prout	Children's Foundation	Role of Microbiome in Immune Paralysis after Trauma & Major Surgery in Children
Karin Przyklenk	University of Cincinnati/NIH/USDHHS	Ultrasound-mediated Controlled Hypoxemic Reperfusion for Inhibition of Injury
Karin Przyklenk	Radius Health, Inc.	PTHrP Receptor Stimulation: A Novel Strategy
Neli Ragina	Blue Cross Blue Shield of Michigan	CMED Student Free Clinic Operations Support
Neli Ragina	Blue Cross Blue Shield of Michigan Foundation	Asami Takagi: COVID-19 Knowledge Among American Indian Patients
Neli Ragina	Michigan State Medical Society (MSMS) Foundation	Comparative Effectiveness of Prenatal Care Methods for Increasing Breastfeeding
Madhvi Rajpurkar	PSI Pharma Support America, Inc.	Phase 1/2 Study to Evaluate the Pharmacokinetics of Marzeptacog Alfa

Matthew Redshaw	National Science Foundation	Precise Q Values for Ultra-Low Energy and Highly Forbidden Beta Decays
Katherine Regling	Hemophilia of Georgia	Biomarkers of Inflammation and Bone Health in Patients with Hemophilia A
Georgeta Rosca	National Institutes of Health/USDHHS	Nicotinamide Nucleotide Transhydrogenase and Bioenergetic Metabolism
Julien Rossignol With Co-Investigators Jesse Bakke, Douglas Swanson, Ajit Sharma, Gary Dunbar	American Heart Association	Astrocyte-to-Neuron Conversion Strategy using PAMAM Nanomolecules
Peter Ryan	Nexteer Automotive Corporation	Nexteer Engineering Senior Design Project 21-22
Peter Ryan	Vantage Plastics	Vantage Plastics Engineering Senior Design Project 21-22
Peter Ryan	Dow Chemical Company	DOW Engineering Senior Design Project 21-22: Prototype PE Flexible
Peter Ryan	Moeller Mfg. Company, LLC DBA Moeller Aerospace	Moeller Engineering Senior Design Project 21-22: Wax Dispersing Airfoils
Peter Ryan	Gentex Corporation	Gentex Engineering Senior Design Project 21-22
Peter Ryan	Bandit Industries, Inc.	Bandit Engineering Senior Design Projects 21-22: Horizontal Grinder Tool Holder
Peter Ryan	Bandit Industries, Inc.	Bandit Engineering Senior Design Projects 21-22: Metal Detection
Peter Ryan	Moeller Mfg. Company, LLC DBA Moeller Aerospace	Moeller Engineering Senior Design Project 21-22: Electronic Part Load
Peter Ryan	ABB Inc.	ABB Engineering Senior Design Project 21-22
Peter Ryan	Ford Motor Company	Ford Engineering Senior Design Project 21-22

Peter Ryan	Engineering Society of Detroit	DTE/ESD E-Challenge 5
Peter Ryan	Advanced Battery Concepts	Advanced Battery Concepts Senior Design Project Spring 22
Sureyya Savasan	Children's Foundation	Clonal T-Large Granular Lymphocyte Proliferations in Immune Dysregulation
Usha Sethuraman	National Institutes of Health/USDHHS	Severity Predictors using Immunology and Transcriptomics in Saliva Year 2
Rene Shingles	NATA Board of Certification, Inc.	BOC Board President
David Stockton	Genzyme Corporation	Genzyme Pompe Registry
James Student	National Science Foundation	Collaborative Research: The Role of Grain Boundary Migration in Water in Quartz
Bradley Swanson With Co-Investigator David Zanatta	National Science Foundation	Graduate Research Fellowship Program: Aaliyah Wright
Benjamin Swarts	Washington University St. Louis/NIH/ USDHHS	Treating Secondary Cardiomyopathies by Mimicking the Adaptive Hepatic
Benjamin Swarts	University of Massachusetts Amherst/NIH/ USDHHS	Host Proteins that Interact with the BCG Cell Envelope
Benjamin Swarts	Washington University St. Louis/NIH/ USDHHS	Leveraging Glucose Transport and the Hepatic Adaptive Fasting Response
Benjamin Swarts with Co-Investigators Wenjun Du, Janice Tomasik, Anja Mueller, Choon Lee	National Science Foundation	MRI: Acquisition of an NMR Spectrometer for Research and Training at CMU
Melissa Tuttle With Co-Investigator AnnMarie Bates	Organization for Autism Research	Autism Education and Acceptance Training

Donald Uzarski With Co-Investigators Dennis Albert, Matthew Cooper, Thomas Gehring	US Environmental Protection Agency	Continuation of the GLCWMP: 2020-2025
Michael Verona	MyMichigan Health	MyMichigan Health Counseling Services Collaboration
Jonathan Webb	Michigan State Police/FEMA/USDHS	Central Michigan University North Campus Mitigation Project
Richard Westover With Co-Investigator Amy Robinson	The GroundTruth Project, Inc.	Report for America Host Newsroom
Bryan Whitledge With Co-Investigator Kathy Irwin	American Library Association/NEH	American Rescue Plan: Humanities Grants for Libraries
Catherine Willermet	US Forest Service/USDA	Mark Twain National Forest Archaeological Site Evaluation Project Pilot Study
Patricia Williamson	FACE Foundation	Albertine Cinematheque French Film Grant
Daelyn Woolnough With Co-Investigator Hunter Carrick	Saginaw Chippewa Indian Tribe/Bureau of Indian Affairs/USDOI	A Collaborative Approach to a Holistic Evaluation of the Chippewa River
Lauren Yagiela	University of Utah/NIH/USDHHS	Pediatric Critical Care and Trauma Scientist Development Program Year 3
David Zanatta	US Fish & Wildlife Service/USDOI	Population Assessments and Conservation Genomics of Proposed ESA Threatened
David Zanatta	US Fish & Wildlife Service/USDOI	Patterns of Genetic Diversity and Population Connectivity

David Zanatta With Co-Investigator Daelyn Woolnough	US Fish & Wildlife Service/USDOI	Using Environmental DNA (eDNA) as a Detection Tool for Mussel
Tao Zheng	National Aeronautics and Space Administration	Regional Inverse Modeling in North and South America for NASA
Gregory Zimmerman	MyMichigan Health	Sports Physicals at West Midland Family Center, April 2022