

Faculty Excellence Exhibition

Monday, April 15, 2024 2:00-4:00 p.m. Rotunda/Terrace Rooms, Bovee University Center

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- 2:00 p.m. Saxophone Quartet Johannah Chatman – Soprano Saxophone Ke'Aloha Duhaylonsod – Alto Saxophone Cohen DeYoung – Tenor Saxophone Ariah Bremby – Baritone Saxophone
- 2:10 p.m. Welcome Bradley Swanson, Interim Vice President for Research and Innovation

2:15 p.m. International Impact Awards

Presented by: Bradley Swanson, Interim Vice President for Research and Innovation

Student Mentorship Awards

Presented by: Bradley Swanson, Interim 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

Student Choice Award Presented by: Carley Sneddon, CMU Senior and Student member of the ETA Committee

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

2:45-4:00 p.m. Faculty 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.

Nailya Delellis, College of Health Professions

Dr. DeLellis has served as a Fulbright Scholar and a Fulbright Specialist at Karaganda State Medical University and Western Kazakhstan Marat Ospanov State Medical University, both in Kazakhstan. She has served as a Foreign Research Advisor to approximately twenty doctoral dissertations and has taught master classes in research design, methods and ethics, strategic planning, and epidemiology. Dr. DeLellis has collaborated with colleagues in Central Asia to research patient care, disease prevention, and public health policy and coauthored articles in multiple prestigious academic journals. She hosted medical school administrators from Kazakhstan and assisted them in developing their graduate program in public health at Astana State Medical University. Her research with colleagues, both American and international, has been presented at many international forums, and she is a passionate advocate for international outreach. She has made a meaningful impact through teaching, consulting, researching, mentoring, and writing.

Michael Pisani, College of Business Administration

Dr. Pisani holds a PhD in International Business and an MBA in International Management. He is a dedicated collaborator with institutions in Latin America. He has organized virtual partnerships with institutions in Mexico and Chile and participated in sister city projects. Dr. Pisani has served in an advisory role to government officials in Paraguay and Belize, as well as provided pro bono consulting and mentorship opportunities, including personally assisting a student from Paraguay in the university application process in the US. Additionally, he has provided teaching, consulting, and community development in Belize, El Salvador, Haiti, Mexico, Nicaragua, and Paraguay. He has published numerous books and articles from his research and has made a significant impact through his scholarship. He has presented his findings internationally, including in Paraguay and South Korea. Dr. Pisani has been recognized for his accomplishments as a 2016-2017 recipient of the President's Award and a 2004-2005 recipient of the Provost's Award.

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.

Lana Ivanitskaya, Department of Industrial and Organizational Psychology

Dr. Ivanitskaya has guided both undergraduate and graduate students in their research endeavors. Many of her students have had presentations and publications result from their work with Dr. Ivanitskaya. Many of those students have also won awards for their work with her. Seven students that she served as a chair for received the Outstanding Dissertation Award from CMU. One of her undergraduate mentees has even received a Fulbright award. In 2023, five of her mentees presented their research in Rome. Dr. Ivanitskaya co-authored two presentations for *American Public Health Association* in 2023 with three of her doctoral students. In 2020, she received funding to work with her mentees to assist in mask making for the COVID-19 pandemic. They created a website with easily accessible information for people to learn how to make their own masks, and then worked with the Mecosta Country Amish seamstresses to produce masks, which Dr. Ivanitskaya's student Nitumigaabow Champagne distributed amongst the Navajo Nation. Several of her former students and mentees have been inspired by her to pursue careers in academia as a result of her support.

David A. Kinney, Department of Politics, Society, Justice & Public Service

Dr. Kinney was nominated for the Student Mentorship Award by two former students. Each of the former students talked about how the programs Dr. Kinney founded, the Girls Empowerment and Boys Respecting Others and the Niijkewehn Mentoring, greatly impacted their careers. These programs worked with middle and high school students to help them overcome obstacles in their lives. Through the former student's nominations, it is clear that the mentoring Dr. Kinney provides his CMU students with a deep dedication to developing positive youth development programs that increase the life outcomes of youth who face adversity while also preparing his undergraduate students with real-world experiences necessary to thrive working with youth in their professional life. Dr. Kinney goes above and beyond conventional teaching methods. He prioritizes immersing students in real-life experiences in working with youth, shaping their education and compelling them to learn through active engagement.

Faculty Distinguished Service Award

Created by the provost in 2001, the award recognizes faculty members with a record of sustained and distinguished service at CMU. Nominations were reviewed, and the winner was selected by the Shared Governance and Communications Committee.

Heather Trommer-Beardslee, Department of Theatre and Dance

Since joining CMU in 2011, Associate Professor of Dance, Heather Trommer-Beardslee, has a consistent history of dedication to serving the CMU community by engaging in sustained collaborative interdisciplinary efforts and continuously working to engage students in meaningful community outreach endeavors. For many years, she has partnered with the Isabella County Commission on Aging and Crestwood Village Assisted Living facility to teach dance classes to participants and residents. She regularly works outside of class structures to bridge the gaps between disciplines and collaborate with students and faculty across campus. One example includes working with Biology faculty to teach cellular division through dance. This is all in addition to her rigorous committee service on campus, for the National Dance Education Organization and the Journal of Dance Education.

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.

Naga Shilpa Alamuri, Department of Management

A fixed-term faculty of Management in the College of Business Administration, Professor Alamuri engages and inspires students with high expectations and clear guidelines and puts great effort into planning each lecture so that the time students spend in class is rewarding. She is highly praised by students and colleagues. A student stated, "You had such a huge impact on my academic career because you expected so much from me but challenged me in a way that helped me to succeed." A colleague commented that she "provides an excellent professional role model for our students."

Andrew Blom, Department of Philosophy, Anthropology & Religion

Dr. Andrew Blom is an Associate Professor in the Department of Philosophy, Anthropology & Religion. He is a mentor who builds community and focuses on the well-being of his students. One of his colleagues affirms that he has made it his mission to support students in any way he can. He opens class "in ways that invite people into the space as their full selves." He allows time for announcements and celebrations, which he sees as an opportunity to learn more about his students' activities and involvements. He fosters relationships and promotes leadership in ways that bring important intellectual and social diversity to his classroom.

Anne Hornak, Department of Counseling, Educational Leadership & Higher Education

Dr. Anne M. Hornak is in her 15th year as a Professor of Higher Education in the College of Education & Human Services. Her philosophy of teaching can best be described as "student-centric, relevant, and innovative." Dr. Hornak's focus on "investing in creating and cultivating student connections" was identified as something students appreciate most about her instruction. One student added that "she provides a safe, dynamic, and inclusive learning environment at all times." Additionally, a colleague described her "incredibly high energy in the classroom and her ability to help students apply complex topics to everyday situations" as commendable.

Rachael Nelson, School of Health Sciences

Dr. Rachael Nelson is a Professor of Exercise Science in the College of Health Professions. Dr. Nelson's teaching approach requires students to engage in the material, complete an assessment, take part in the discussion, and incorporate learning into the laboratory. One student stated, "she made connections...to help the students truly grasp the aim" while another noted that she is "the epitome of an educator who cares not only about a student's education, but their success as an individual." A colleague noted that her teaching has evolved to what he believes is "the most effective strategy supported by strong research evidence."

Joseph Sommers, Department of English Language & Literature

Dr. Joseph Sommers is a Professor of English in the College of Liberal Arts and Social Sciences. An unfailingly dedicated teacher, Joe has claimed that, as a teacher, "the best tools in my arsenal might be good humor and empathy," and that one of his primary aims in teaching is to "create trust and respect" between instructor and student. Joe's students have no end of praise for his outstanding work in and out of the classroom. One student noted that "he refuses to take anything but our best effort" and that "we were engaged and inspired every day in his class." Joe's colleagues share the same high regard for him. One noted in a peer evaluation that he "is well prepared not only in presenting the subject matter but also in fostering students' thinking and creativity."

Lorrie Ryan Memorial Excellence in Teaching Award

Lorrie Ryan was a faculty member in human environmental studies and an awardee of the 2002 Excellence in Teaching Award. This award, established in 2006, is given in her memory each year to a faculty member who inspires students by building a sense of community within the learning environment and demonstrating a profound mentorship and respect for others.

Dawn Decker, Department of Teacher & Special Education

Dr. Dawn Decker is a Professor of Special Education in the College of Education & Human Services. At the core of her teaching philosophy is providing individual student investment, an organized and relevant course experience, and role modeling what she hopes to see in future educators. One student commented that "with an easy-going nature, fair and concise feedback, and regular check-ins, both privately and as a

class, this professor goes above and beyond to ensure that students feel respected and valued." Additionally, a colleague expressed appreciation for Dr. Decker's commitment to being a well-rounded, present, and accessible educator.

Student Choice Award

Created by CMU to recognize a faculty member for creative excellence in overall instructional effectiveness.

JoDell Heroux, Department of Teacher & Special Education

Dr. JoDell Heroux is a professor in the Department of Teacher and Special Education. Her background in Disability Studies and Universal Design for Learning (UDL) guides her instruction and reflects her unwavering commitment to inclusion. For Dr. Heroux, teaching isn't just about disseminating information it's about creating an environment where every individual feels valued and empowered. UDL is a dynamic framework that celebrates different ways of learning, engaging, and demonstrating knowledge, which maximizes student learning. She goes above and beyond to create "a space that honors and values (students') knowledge and experiences, demonstrating her commitment to humane and just teaching".

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 in the early stages of their academic careers.

Jack Day, Department of Human Development & Family Studies

Dr. Day's research examines the experiences of LGBTQ+ youth and youth of color in schools. His published articles and juried presentations in this area include entries in nationally recognized, high-impact journals and conferences in the fields of development, adolescence, psychology, and family research. In addition to maintaining productive collaborations with leaders in his field, Dr. Day also mentors CMU students in his research, leading to two student presentations at national conferences for child development and family relations. He also serves as the faculty advisor for the Honors Gender and Sexuality Alliance Registered Student Organization. He has been an invited speaker on his research at several other CMU RSOs. He also serves on MDEC and the EHS DEI committees. Dr. Day also serves our surrounding communities by sitting on the board of the Sexual Orientation and Gender Identity Youth Advocacy Council, whose mission is to identify risks and explore needs for LGBTQ+ youth in the Great Lakes region. In 2023, he was invited to join a high-profile panel with Attorney General Dana Nessel, Senator Jeremy Moss, and former Representative Frank Foster to discuss LGBTQ+ policies in Michigan. He shared findings from his research on the impact of policies that affirm and support LGBTQ+ youth.

Samantha L. Hahn, College of Medicine

Dr. Hahn is in her second year as a faculty member; before joining the Central Michigan College of Medicine (CMED) faculty, Dr. Hahn received exceptional training from many leaders in the Nutritional Sciences and Public Health field. At the University of Michigan, Dr. Hahn received her MPH and PhD in Nutritional Sciences (Epidemiology & Intervention) under the mentorship of Drs. Kendrin Sonneville and Katherine Bauer. Moreover, Dr. Hahn completed a dietetic internship and is a Registered Dietitian. Most recently, Dr. Hahn completed a two-year T32 Postdoctoral Fellowship at the University of Minnesota, where she worked with Dr. Dianne Neumark-Sztainer, a pioneer in the epidemiology of eating behaviors and activity across the lifespan. Although Dr. Hahn is early in her career, she has already received four grants at CMU and has established herself as an eminent scholar in eating disorder prevention. Dr. Hahn's interdisciplinary training allows her to leverage diverse and sophisticated methodologies to advance the understanding of factors that initiate and potentiate risk for eating disorders at a population level. Dr. Hahn brings more to CMU than her research skills

and productivity. Dr. Hahn is also an excellent teacher and dedicated mentor who recognizes the immense responsibility and privilege of contributing to the development of CMU's students, mentoring 13 here at CMU.

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.

Alice Tait, Department of Journalism

Dr. Alice Tait has received the 2023-2024 President's Award for Outstanding Research and Creative Activity. She is a professor of journalism at CMU. She has a significant record of quality research and creative activity in mass media effects, particularly issues related to diversity in the urban environment. She has produced 18 refereed and invited journal articles, 16 refereed conference papers, and four edited books. Dr. Tait became a recognized authority in the field when she co-edited the publication of *The Information Society and the Black Community*, co-edited with mass communications professor Dr. John Barber. She also secured research grants, which funded a 3-volume series: *Ethic Media*. In 2015, Dr. Tait received the Lionel C. Barrow Jr. Award for Distinguished Achievement in Diversity Research and Education from the International Association for Education in Journalism and Mass Communication in recognition of outstanding individual accomplishment and leadership in diversity efforts within the discipline over a sustained period of time. In 2022, she received the Albert Nelson Marquis Lifetime Achievement Award by Marquis' Who's Who; was profiled by George Daniels in his book *Barrier Brakers: Media Educators Meeting the Diversity Challenges Across the Decades*; and was a featured Barrier Breaker panelist at the AEJMC national convention.

David Zanatta, Department of Biology

Dr. Zanatta has published 64 peer-reviewed papers since 2002. His research is cited 1576 times, making him one of the most cited researchers at CMU. His research lab involves undergraduate, master's, and PhD level students who are highly active in conducting field research, presenting research results at conferences, and co-authoring publications with him. Many of his former students work in high-profile positions across academia, federal/state governments, NGOs, and the private sector or are working in freshwater mussel conservation. Because of his expertise, government agencies seek him for his research on freshwater mollusks, which are critically important to the Great Lakes ecosystem. Dr. Zanatta holds several leadership positions within academia, federal and state government, NGOs, and the private sector. He has been the Associate Editor for Freshwater Science since 2013, serves as the elected councilor-at-large for the American Malacological Society, serves as the co-chair for the Genetics Committee for the Freshwater Mollusk Conservation Society, and has several ongoing international collaborations with Canada, China, Germany, and Portugal.

CMU Faculty Posters

Naga Shilpa Alamuri, Department of Management

Shaping Applicant Experience: Cultural Insights on Biodata Questions

Applicant reactions to a label or a brief description of selection method in a national context yield limited guidance for organizations looking to enhance applicant experience. This novel vignette study shifts the focus to establishing the effect of a specific feature of a selection method – the propriety of biodata questions and understanding the influence of individual-level culture – power distance. Findings indicate appropriate biodata questions increase fairness perceptions, leading to better organizational appeal, and job acceptance, particularly for low power distance applicants.

Steven Bailey, Department of English Language and Literature

Target Hong Kong: A True Story of U.S. Navy Pilots at War

Professor Steven K. Bailey (English) describes the research that led to his most recent publications, which focus on the experiences of American naval pilots, army aviators, and merchant sailors at Hong Kong during the Second World War.

Anthony Chappaz, Department of Earth and Atmospheric Sciences

Molecular Evidence for a New Chromium Species in Sedimentary Rocks: A Better Tool to Study Earth's History Changes in oceanic and atmospheric oxygen concentrations have drastically impacted the evolution of life and biogeochemical cycles. The rise of oxygen in Earth's atmosphere facilitated the development of life and, later, the appearance of animals. Subsequent episodes of oceanic anoxia lead to mass extinction events. Presently, oxygen-depleted conditions (Hypoxia) threaten oceans and lakes. Determining how and when oceanic oxygen concentrations have co-evolved with life through geologic times is a paramount challenge. Given that direct measurements of oxygen in ancient systems are impossible, suitable proxies of past oxygen depletion are needed. Because many trace metals exhibit varying oxidation states and solubilities under natural conditions, they can record transformations between oxygenated and anoxic environments. Chromium (Cr) enrichments and isotope signatures have evolved as an effective paleo proxy for reconstructing global ocean-atmosphere oxygenation. Unfortunately, because Cr geochemistry in natural anoxic settings is largely unknown, the paleoenvironmental information associated with this proxy system cannot be fully exploited. A unique selection of ancient sedimentary rocks was analyzed for Cr speciation at synchrotron facilities in US and Japan. Using state of the art molecular techniques, a new Cr species was identified calling for a reinterpretation of prior studies based on Cr geochemistry.

Joydeep Chaudhuri, College of Medicine

Enhancement of Learning Practices in Human Cadaveric Dissection in a Medical Curriculum.

Curricular changes in medical education have curtailed human cadaveric dissection (HCD). This is detrimental as the cognitive and sensory experiences during HCD are critical for an appreciation of the intricacies of human structure. Hence medical schools are incorporating Point-of-Care Ultrasound (POCUS) in their curriculum. Further, students are also utilizing YouTube videos (YTVs) to prepare for HCD. Since the pedagogical utility of these approaches has not been fully investigated, two independent studies were carried out. The first study examined the perceptions of students regarding the feasibility of implementing POCUS in the anatomy curriculum. Based on student responses, the major concern was the increased cognitive load of interpreting POCUS images. Therefore, educators should focus on the controlled integration of POCUS for it to be an effective learning tool. The second study analyzed the general characteristics and utility of current YTVs in preparation for HCD. An analysis of YTVs revealed that they are limited in their capacity to assist students in the acquisition of anatomical knowledge. Therefore, YTVs need to be leveraged to provide appropriate avenues for student training. Hence, these studies present relevant information as changes are initiated in the medical curriculum.

Raju Chowdhary, Department of Physical Therapy

Preventing Falls in Community Dwelling Older Adults

Background: The risk of falling in older adults continues to be a public health concern as falling can lead to serious injuries, early death, and substantial healthcare costs. The Otago exercises program has been shown to reduce rates of falling by 37 to 43%. Purpose: To describe the implementation of Otago exercise protocol using a novel component: trained students as coaches. Methods: The STEADI screening tool for fall risk by CDC was used to screen interested participants in 4 adjoining counties. Collaborators included county level Commissions of Aging, local clinicians, and assisted living / retirement communities. Student volunteers were recruited, trained, and certified in coaching Otago exercises. Objective measures for balance and health interviews were conducted to ensure safety of participation. Results: 408 participants and 133 students

participated in this implementation, between 2019 and 2024. Most participants were able to complete 8 or more weekly sessions and experienced improvements in balance performance tests, consistent with prior research. Conclusions: Utilizing students in pre-health care professions for providing fall prevention programming to older adults is a feasible mechanism to promote service learning in conjunction with reducing fall risk amongst older adults.

Elaine Daugherty, Department of Theatre and Dance

Consent: A Foundational Tool for Theatre Practitioners

My research centers on the role of consent as a foundational element in the work of theatre artists. Centering consent means shifting away from the established hierarchical model of power in theatrical practice and moving toward a more equitable model which places primary importance on the autonomy of each person involved in the work. I have trained with the nation's top consent and intimacy professionals, conducted the exit project for my MFA degree on this topic ("Intimacy Direction: Emerging Pedagogy in Practice", University of Idaho), and have facilitated workshops at the state and national level. At CMU, I have developed a special topics course to bring this knowledge to our students, and have integrated consent practices and corresponding expectations into classrooms, rehearsal spaces, and department policy. In August 2024, *Consent Practices in Performing Arts Education*, which I co-authored with Heather Trommer-Beardslee, will be published by University of Chicago Press.

Jack Day, Department of Human Development & Family Studies

Not Just a Matter of Pride: Cultivating Spaces of Belonging Through LGBTQ-Focused School Policies My research investigates the impact of LGBTQ-focused policies and practices in schools aimed at enhancing the safety and inclusion of marginalized students. Across various studies, I explore how minoritized youth, particularly those identifying as LGBTQ+, contend with bias-based harassment, which heightens the risk of absenteeism, diminished academic performance, and elevated rates of mental health issues. The implementation of LGBTQ-focused policies and establishment of supportive organizations such as Gender and Sexuality Alliances (GSAs) are promising mechanisms for mitigating the adverse effects of discrimination and marginalization experienced by LGBTQ+ students. My research program therefore delves into the association between the adoption of LGBTQ-focused policies and students' overall sense of connection to schools and general wellbeing. By examining these relationships, my research underscores the importance of schools adopting inclusive practices that foster safer and more supportive educational environments for all students.

Kathryn Dirkin, Teacher and Special Education

Designing a Center-Based Mentoring Program to Foster Teacher Retention

The state of Michigan requires that all new teachers be assigned a mentor within their first three years of employment. Unfortunately, these policy efforts aimed at impacting teacher retention may need additional support. For the first time since 2016 the number of Michigan teachers exiting the field (6,553) surpassed the number entering the field (5,871)[2]. Many of the components of a successful induction program such as observation and feedback, time with colleagues, and a reduced load[3] are easier to implement when districts are not struggling to find teachers, let alone mentor teachers. In fact, researchers like Ingersoll & Tran (2023) suggest that the current situation should not be viewed as a teacher shortage but rather a "teacher staffing problem". On a national level we are producing enough teachers to cover increasing student enrollments and teacher retirements. During my sabbatical, I came to the realization that we can support formal mentoring programs with the establishment of a mentoring center. Research during my sabbatical contributed to the writing of the sections on mentoring and professional development on the \$15,000,000 Rural Hub Educator grant.

Elaina Erzikova, School of Communication, Journalism, and Media

A Drowning Effect on Social Media: Understanding the Forces Shaping Online Discourses What are the forces that shape online discourses? One such force may be the "drowning effect" defined as a process through which divergent themes from the main topic of a news story gain prominence on a social media forum. The drowning effect manifests in individuals' inclination to create their own narratives and derive their own meaning through participation in the conversation associated with a news story, effectively "drowning out" the intent of the original creator and the gatekeepers. This effect on social media often occurs due to several interconnected factors, including diverse perspectives (users with varied backgrounds and perspectives contribute to the proliferation of divergent themes); echo chambers (algorithms prioritize content that aligns with users' existing beliefs, creating echo chambers that amplify certain narratives and suppress others); crowdsourcing of information (rapid dissemination and sharing of information allow users to contribute insights and opinions, shaping the overall conversation); and desire for engagement (users seek validation, leading to the amplification of tangential aspects to promote interaction).

Samantha L. Hahn, College of Medicine

Describing Experiences of Weight Bias Among the Underrepresented Population of Rural Adolescents Background: Differences in socio-cultural environments impact amount and types of weight bias experienced in various populations. The aim of this ongoing study is to describe rural adolescent experiences of weight bias, which has yet to be explored. Methods: Preliminary baseline data come from the ongoing Rural Teens Health Study, which uses surveys and biomarkers to investigate longitudinal associations between weight stigma and cardiometabolic risk in rural high school students (Mage=15.4±0.9 years, 62% cisgender-female, 27% cisgender-male, 12% transgender-female, BMI range 18-41). Descriptive statistics determined prevalence of various forms of weight bias. Findings: In our sample, 65% of rural teens reported being teased by their peers because of their weight, and 35% reported being teased by their family. Of specific forms of weight-based teasing, 76% were left out of conversations or activities, 69% were gossiped about, and >40% were directly insulted and had their possessions ruined. Weight was the most common form of discrimination reported. Discussion: A majority of rural adolescents in our sample experienced weight bias, which was the most common form of discrimination reported. Data provide critical foundational understanding of weight bias among the underrepresented population of rural adolescents, which can inform culturally relevant interventions to reduce weight stigma.

JoDell Heroux, Kristina Rouech, Teacher and Special Education and Holly Hoffman, Human Development and Family Studies

Ungrading: A Practice to Facilitate Learning and Provide Equitable Assessment

Ungrading is an equitable approach to classroom assessment. It allows the instructor and the students to focus on feedback and learning rather than arbitrary points and letter grades. This presentation will focus on three professors' experience with implementing ungrading in a learning community of three linked courses. The same structures were used with all three courses to help develop an understanding of the process. Student feedback was overwhelmingly positive and showed a desire to focus on the learning. This topic is important to the field because it is an equitable practice that can remove arbitrary systems and focus on learning for all students. The purpose of this presentation is to share the benefits of ungrading: Focus on learning, Reducing student anxiety, Providing feedback, Holistic view of learning, Flexibility, and Student accountability. In addition, there are multiple reasons why ungrading is an equitable practice: Reducing bias, Inclusive assessment, Honors Diversity, Respects contributions from diverse backgrounds, Focuses on improvement, De-emphasizes high-stakes assessment, Allows for differentiation, and Increases student agency. All of these features depend on how ungrading is implemented. Professors must be thoughtful and clear about expectations and requirements for success in the course.

Rochelle Kopka, Department of Physical Therapy

Effective Simulation in PT Education on Student Perception of Diabetes Treatment

Purpose: Patient simulation has been underutilized in physical therapy programs. This study aimed to investigate whether simulations can assist in the education of students and improve student confidence in various clinical skills, including the assessment and treatment of patients with diabetes. Case description: Surveys were completed by students before and after the simulation to measure student confidence in knowledge and skills, patient education, assessment, and exam interpretation. Students were instructed to collect subjective history, perform a balance assessment, and administer a foot screen according to guidelines set by the Comprehensive Diabetes Lower Extremity Amputation Prevention Program (CDLEAP).³⁵ Students provided standardized patients with education on regular foot care and disease management to conclude each simulation. Outcomes: Eighty-nine percent of students (n=44) completed all study surveys before and after simulations were held. Student confidence in knowledge and skills, patient education, assessment, and exam interpretation significantly increased post-simulation (p < .001). All students agreed that patient simulation should be more widely used in the physical therapy curriculum. Discussion: Results demonstrate how patient simulation may facilitate physical therapy education and improve student confidence in various clinical skills, including the care and management of patients with diabetes.

Aiden Kosciesza, School of Communication, Journalism, and Media

The Trans Theory Functions of Transcultural Media

This project asks what transcultural media—media texts that are produced in one cultural location and consumed in another—mean for transgender and gender-diverse (TGD) people. Using the Japan-U.S. media relationship as a case study, I interviewed 44 non-cisgender people about their use of media produced outside their local cultural area and how these media representations figured into their own gender identification. Informants found local media texts unsatisfactory. They described media originating in their own cultural location as "bad" representation—sexist, stereotypical, or inadequate. These informants turned instead to media texts that originated elsewhere to find representations of gender that inspired them, supported them, or helped them to imagine gender differently. I argue that transcultural media texts serve a transgender theory function for TGD people. Trans theory foregrounds the materiality of trans existence and aims to disrupt static gender binarism without abstracting away gendered realities. In trans-informed media studies, texts are read for their utility—especially to trans people's material and social survival—rather than being categorized as "good" or "bad" representation. My research shows that consuming media transculturally enables audiences to find utility and pleasure in texts that, for local audiences, are irredeemably "bad," and this aids trans survival.

Kelly Murphy, Department of Religion

Biblical Themes in Science Fiction

What does a first-generation female robot have in common with the biblical figure of Eve? Or an intergenerational spaceship with Noah's ark? If a computer compiles a deceased person's photographs and digital activities into a virtual avatar, is that a form of resurrection? Such seemingly unlikely scenarios are common in science fiction—and science fiction writers often draw on people, places, and events from biblical texts, assuming audiences will understand the parallels. Co-edited by Kelly J. Murphy, *Biblical Themes in Science Fiction* is a journey from creation to apocalypse that outlines how the Bible and science fiction are both a part of the same creative impulse: the human desire to dream, to consider worlds unseen, and to speculate on what might be.

Jyotsna Pandey, College of Medicine

Community Involvement to Educate and Empower Older Adults' for Healthy Aging

We present three projects: (1) Project INCLUDE to reduce social isolation and loneliness which are serious, often underappreciated public health risks, for screening and alleviating loneliness and isolation for older adults in low income assisted living facilities. It as a comprehensive, social, integration support model. (2) Living FREE: Fall Reduction by Education and Empowerment addresses the need to reduce the risk of recurrent falls in "post fall" older adults by instituting a falls prevention program plan that includes fall risk reduction education to mitigate "fear of falling" and is based on patient preference empowerment by a systems' change approach employing care integration, regional collaborations, and education of health professionals in falls prevention care practices. (3) interprofessional experiential training for healthcare professions' students for creating healthy aging communities; in collaboration with the Isabella County Commission on Aging (CoA), implemented an Experiential Learning, Older-Adult Home Visit and Health Improvement Program where CMU student teams will conduct 100+ older-adult, home-based fall healthy aging assessments per year. Follow-up health improvement interventions are coordinated with the help of CoA staff, which is appropriately resourced to provide follow up as needed. We leveraged peer support and volunteer labor for low-cost solutions to factors that adversely affect healthy aging.

Eric Petersen, College of Medicine

Bioluminescent Sensors and Actuators

Neuronal and cellular signaling both have critical roles in cognition, physiological processes and diseases. While critically important, as researchers we currently do not have the tools needed to sufficiently study these processes. Our research focuses on the development of genetically encoded tools using rational protein design and protein evolution to report these processes. The tools we are developing can be used to either report or control cell signaling events, neuronal activity and toxin detection. Our lab is currently working to develop a variety of genetically encoded neurotransmitter sensors based on bioluminescent light emission. We are using these sensors to record neuronal activity based on specific neurotransmitters and report activity within deep brain regions of rodents. We have several ongoing projects that focus on reporting cell signaling, cell growth and regulation signaling. In both cases we are applying these light emitting sensor proteins to control light responsive optogenetic proteins for dynamically controlling cellular processes. We also have an ongoing project focused on developing these bioluminescent sensors into toxin sensors that can be used for environmental monitoring of water quality such as cyanotoxin contamination.

Matthew Redshaw, Department of Physics

High Precision Atomic Mass Measurements to Investigate the Nature of the Neutrino

The neutrino is a fundamental subatomic particle with no charge and a very tiny mass. It interacts only very weakly with matter, so is difficult to detect and study. Many experiments are underway to try and determine its mass as well as other properties, such as whether or not it is its own antiparticle. These experiments involve looking at the decay products from the beta-decay of various isotopes. The kinematics of these decays depend on the energy that is released. This, in turn, depends on the mass of the parent and daughter isotopes involved. The CMU mass spectrometry group has performed precise mass measurements on isotopes relevant for these experiments to aid in their analysis. Results from these measurements and prospects for future experiments will be reported in this poster.

Marco Schirripa, School of Music

Digital Dances: Marimba Music of Marco Schirripa

"Digital Dances" is a album of classical music for marimba, all composed and performed by Marco Schirripa. Each composition included in the project reflects the modern role of classical music, combining technical virtuosity and musical complexity with aural aesthetics aligning with popular culture. In a time when electronic pop music and video games are at peak popularity, while less than 10% of people in the United States attend a classical music concert each year, fusing classical music with other genres is an effective way to maintain relevance. All compositions and tracks included in "Digital Dances" are heavily inspired by video game and electronic dance music, combining concert music's instrumentation, notation, and compositional process with the harmonic language and rhythmic characteristics of more popular styles. Several of the included works have previously been performed in traditional classical recitals, at video game conventions, and for online streaming events in the video gaming community. Music spanning these genres reaches and connects with vastly different audiences, providing valuable outreach for classical music while encouraging concert musicians to adapt to changing times and offering a unique and fulfilling listening opportunity for the modern music and gaming enthusiast. "Digital Dances: Marimba Music of Marco Schirripa" is available on www.marcoschirripa.com and all major streaming platforms.

Jennifer Schisa, Department of Biology

What Makes a Good Egg? Investigating Causes of Infertility

Infertility affects 13% of couples when a woman is under 30 years of age and is more common as women age. The problems underlying infertility are complex and include poor-quality eggs as a major contributing factor. We do not yet have a complete understanding of the causes of poor-quality eggs, and this is the focus of our research. We and others have discovered that the formation of bio-condensates is tightly regulated as eggs develop. Bio-condensates form when RNA and protein in a cell undergo condensation, changing from a diffuse conformation to a more tightly packed/ condensed arrangement. We hypothesize that when bio-condensates are not regulated properly, egg quality decreases. Our laboratory is currently identifying the regulators of bio-condensates and exploring their function in eggs. We use genetics, cell and molecular biology, biochemistry, and microscopy to answer these questions. A team of 8 students in the lab is now leveraging the results of nearly 100 former students as we seek to identify causes of poor-quality eggs with the goal of ultimately assisting women with fertility.

Mohan Song, Department of Management

Dynamic Capabilities in Emerging Market Firms

The dynamic capability has become one of the most influential topics in the management field through different dimensions and has been linked with other research areas. However, within this literature, most related studies are grounded in the realities of more mature markets and their firms, ignoring the growing global presence of companies from emerging markets. Companies from these markets have been adept at developing different capabilities, and applying different and radically innovative business models, in pursuit of opportunities in their own home markets as well as in distant foreign markets. These emerging market companies have leveraged their entrepreneurial skills to craft and successfully implement global strategies that exploit and nurture their dynamic capabilities. This provided sufficient conditions to analyze dynamic capabilities in emerging market companies. Hence, my studies focus on how to assist emerging market firms to make better use of their resources and sustain their competitive advantages. Can we better understand the processes that allow all types of firms in emerging markets to develop these capabilities? Can dynamic capabilities serve as a reference for developed country firms whether they compete with EMNCs in advanced markets or they play the roles of investors and confront other emerging market domestic firms?

Sergey Soshnikov, School of Health Sciences

Public Health in the Shadows: Tracing Darknet Drug Trends

Background: Our study delves into the dynamics of online drug markets to understand their public health impact, with a particular emphasis on underserved communities. It examines the drug trade's digital transition and its challenges for health policy development. Methods: We applied advanced web scraping to collect detailed data on drug types, quantities, and their distribution by region, adjusting for population differences. The methodology included statistical analysis and geographical mapping to connect Darknet market operations and health outcomes. Results: The study uncovered that cannabis, amphetamines, and cocaine were the most available drugs, with proportions of 35%, 22%, and 18% of total listings, respectively. Opiates, though less common at 8%, had a pronounced presence in specific regions, making up 15% of local offerings. There was a significant correlation identified between drug availability on Hydra and public health issues, showing a 40% increase in overdose cases and a 25% hike in HIV rates in areas with high drug availability. Conclusion: The estimates demonstrate a direct correlation between the Darknet drug trade and significant public health challenges, advocating for policies that are informed by real-time data and tailored to the distinct needs of various communities.

Jessica Sullivan, Department of Physical Therapy

Simulated Escape Room Influence on Student Physical Therapists' Perceptions of Clinical **Background:** Clinical reasoning is a complex skill required to provide comprehensive care in a dynamic healthcare setting. Within healthcare programs, educators must facilitate the growth of this critical skill by creating meaningful and engaging learning experiences. Simulation can create realistic environments to enhance the development of clinical reasoning. Purpose: This basic interpretive qualitative research study aimed to understand physical therapy students' perceptions of clinical reasoning and its development, including the impact of a simulated escape room learning activity. Method: The students' perceptions of educational experiences were gathered through individual semi-structured interviews. Transcribed data was analyzed using open and axial coding to discover common themes. Results: The main themes identified as impacting the development of clinical reasoning by physical therapy students were *understanding the why, the graduate learning experience, the application of knowledge in practice,* and *growth*. The complexity of clinical reasoning was highlighted by student-identified interrelationships between themes. Conclusion: Meaningful, realistic, and engaging learning activities are crucial in developing clinical reasoning. Integrating a simulated escape room learning activity can facilitate clinical reasoning development by stressing the importance of adaptability and collaboration when applying knowledge and practicing skills in a safe environment.

Benjamin Swarts, Department of Chemistry & Biochemistry

Development of New Chemistry-Driven Diagnostic and Therapeutic Tools for Tuberculosis Tuberculosis kills 1.5 million people per year, making it the leading cause of death by infectious disease worldwide. Mycobacteria, which cause tuberculosis and related diseases, have distinctive cell envelopes composed of unique carbohydrates and lipids that contribute to bacterial growth and virulence. Our group develops chemical tools that "sneak" designer synthetic molecules into these cell envelope carbohydrates and lipids using a technique called metabolic labeling, which is akin to a Trojan horse strategy that targets bacterial cells. These tools have been used extensively for basic research to understand the mycobacterial cell envelope (e.g., imaging envelope components, probing envelope construction and maintenance, and identifying envelope proteins). The tools have also inspired new envelope-targeting diagnostic and therapeutic strategies that may help to address challenging-to-diagnose and -treat mycobacterial infections. This presentation explores our group's research toward creating improved tuberculosis diagnostics and therapeutics.

Alice Tait, Department of Journalism

The ALANA (African, Latino, Asian and Native -American) Project

As a Movement activist, I used my career to document the societal contributions of African Americans and other diverse groups and change institutions. I did not start out with a grand strategy to edit diversity publications, or create innovative diversity courses, or mentor students, or create high school journalism workshops. I had the passion, motivation, creativity, and eventually the skills to take advantage of any opportunity. And although I eventually discovered even this dispassionate approach would often meet resistance in the classroom and beyond, over a career of now more than 35 years I have not been deterred. My early original research focused on Profiles in Black, a program produced and directed from 1969-1979 by

the deceased Dr. Gilbert A. Maddox and aired and sponsored by then WWJ-TV (Detroit), specifically to counteract negative images of Detroiters and African- Americans in general. I co-edited(1990s) The Information Society and the African-American community with John T.Barber. In the 2000s, I collaborated with Guy T. Meiss on another broader look at media and diversity in the three-volume series which grew out of my teaching: Ethnic Media in America . My exhibit will consist of copies of my scholarly activities reflecting this philosophy.

Huda Tawfik, College of Medicine

Promoting Clinical Reasoning in Early Medical Education

The ability to formulate accurate, patient-centered diagnoses hinges on adeptness in clinical reasoning, widely acknowledged as a pivotal competency for clinicians. Clinical reasoning, defined as "the cognitive process essential for evaluating and managing a patient's medical concerns," stands as a cornerstone of medical proficiency and a primary objective in medical pedagogy. While there isn't a universally accepted standard for teaching or evaluating clinical reasoning, problem-based learning (PBL) emerged as a method to foster clinical reasoning skills by immersing students in clinical scenarios mirroring real-world practice. My research interest focuses on enhancing clinical reasoning within the pre-clerkship medical curriculum. My initial study was to investigate the development of first-year medical students' CR during PBL instruction using an assessment rubric. Currently, my project is centered on exploring the efficacy of utilizing concept maps as a tool for both training and assessing PBL within the medical curriculum. This student aims to inject creativity and depth into the training and evaluation of clinical reasoning skills. By harnessing the visual power of concept mapping, we aspire to empower medical students to navigate complex medical scenarios with agility and insight.

Jaeyoon Yu, School of Accounting

Does Internal Competition among Audit Partners Affect Audit Pricing Decisions?

This study examines whether competitive pressure from peers within a local office (i.e., internal competition) affects audit partners' audit pricing decisions. Using U.S. audit partner data from 2016 to 2022, we find that audit partners respond to internal competition by charging their clients lower audit fees. The effect is more pronounced for initial audit engagements, in more competitive local audit markets, and when peers share similar personal attributes, such as sex and experience. However, the effect is weaker for industry specialist audit partners. We also find evidence that internal competition is negatively associated with audit quality for non-Big 4 clients. Overall, this study provides initial evidence of the effect of internal competition among audit partners on audit outcomes.

Rene Zamarripa, Department of Economics

Does sentiment matter for forecasting? Forecasting performance of a small-scale DSGE model Recent literature suggests that psychological factors explain a substantial part of the fluctuations in the US business cycle. While these factors have started to be included in new empirical research, the forecast properties of these models are yet to be explored. This paper tests the forecast performance of a small-scale DSGE model with sentiment shocks. The assumption of rational expectations is relaxed, instead agents are assumed to behave in a near-rational fashion: every period they learn and update their beliefs using a constant gain learning algorithm. Sentiment shocks are captured by exploiting observed data on expectations and are defined as deviations from the model-implied expectations due to exogenous waves of pessimism or optimism. The forecast evaluation is accomplished by comparing the root mean squared prediction error of the benchmark 3-equation New Keynesian model at different horizons and under different expectation assumptions: rational expectations, learning, and learning with sentiment. The results show that the model with learning and sentiment shocks is not only able to compete with the other two alternatives, but it is generally better to forecast the output gap and the inflation rate.

David Zanatta, Department of Biology

Genomic Tools for Understanding the Evolution, Distribution, Ecology, and Conservation of Freshwater Mussels in the North American Great Lakes and Beyond

The use of genetic and genomic tools applied toward better understanding the evolution, ecology, distribution, and conservation of freshwater mussels (Bivalvia: Unionida) has advanced rapidly in the last 20 years. My presentation summarizes some of the conservation-oriented research done in my lab highlighting the use of these tools for understanding the patterns of genetic diversity and structure of freshwater mussels in the Great Lakes region, guiding hatchery propagation for species restoration and recovery, and environmental DNA for rare species detection.

Faculty and Staff Recognition Recipients of External Funding during 2022-2023

- John Allen, College of Science and Engineering
- Jocelyn Ang, College of Medicine
- Alison Arnold, College of Medicine
- Beth Bailey, College of Medicine
- AnnMarie Bates, College of Health Professions (with Daniel Drevon, College of Liberal Arts & Social Sciences)
- Danielle Bell, College of Medicine
- Ramona Borowicz, College of Education & Human Services
- Kristen Cares, College of Medicine
- Hunter Carrick, College of Science & Engineering
- Anthony Chappaz, College of Science & Engineering
- Sanjay Chawla, College of Medicine
- Chin-I Cheng, College of Science & Engineering
- Meera Chitlur, College of Medicine
- Roland Chu, College of Medicine
- Michael Conway, College of Medicine (with Maggie Williams, Rebecca Uzarski and Elizabeth Alm, College of Science & Engineering)
- Julie Cunningham, College of Education & Human Services
- Cynthia Damer, College of Science & Engineering
- John Daniels, College of Science & Engineering (with Mohamed Amezziane, College of Science & Engineering)
- Goksel Demirer, College of Science & Engineering
- Margaret Desormes, Emeriti (with Carrie Ludwig, Food Service)
- Peter Dijkstra, College of Science & Engineering (with Jonathan Kelty, College of Science & Engineering)
- Tanya Domina, College of Education & Human Services
- Natalie Douglas, College of Health Professions
- Daniel Drevon, College of Liberal Arts & Social Sciences
- Robert Dvorak, College of Education & Human Services
- Jesse Eickholt, College of Science & Engineering
- Bradley Fahlman, College of Science & Engineering (with Veronica Barone and Valeri Petkov, College of Science and Engineering)
- Megan Farrell, Clarke Historical Library
- Lyubov Fishman, College of Health Professions
- Marco Fornari, College of Science & Engineering
- Thomas Gehring, College of Science & Engineering
- James Gerhart, College of Liberal Arts & Social Sciences (with Reid Skeel, College of Liberal Arts & Social Sciences)
- Alexander Glaros, College of Medicine
- Hamza Gorsi, College of Medicine
- Colleen Green, Office of Indigenous Affairs
- Samantha Hahn, College of Medicine
- Samantha Hahn, College of Medicine (with Beth Bailey, College of Medicine)
- Jamie Haines, College of Health Professions
- Deborah Hamlett, Public Broadcasting
- Henry Meret, College of Medicine
- Troy Hicks, College of Education & Human Services
- Mary Hill, Finance & Administrative Services (with Carolyn Cardon, College of Health Professions)
- Ute Hochgeschwender, College of Medicine
- Ute Hochgeschwender, College of Medicine (with Julien Rossignol, College of Medicine and Gary Dunbar,
 - College of Liberal Arts & Social Sciences)

Holly Hoffman, College of Education & Human Services Holly Hoffman, College of Education & Human Services (with Margaret Desormes, Emeriti) Joseph Inungu, College of Health Professions Koblar Jackson, College of Science & Engineering (with Juan Peralta, College of Science & Engineering) Amrish Jain, College of Medicine Sanket Jani, College of Medicine Chanseok Jeong, College of Science & Engineering Primavera Jimenez, Student Success Erica Johnson, Student Affairs Theresa Jones, College of Health Professions Nirupama Kannikeswaran, College of Medicine Xantha Karp, College of Science & Engineering Beth Kennedy, College of Education & Human Services George Kikano, College of Medicine Larry Klaus, Police Aaron LaCluyze, College of Science & Engineering Roderick Lammers, College of Science & Engineering Deric Learman, College of Science & Engineering Choon Lee, College of Science & Engineering Choon Lee, College of Science & Engineering (with Rebecca Uzarski, College of Science & Engineering) Seung-Eun Lee, College of Education & Human Services Aimee Luat, College of Medicine Itzel Marquez, College of Science & Engineering Itzel Marquez, College of Science & Engineering (with Anja Mueller and Bradley Fahlman, College of Science & Engineering) Carrie Marsh, Clarke Historical Library (with Megan Farrell, Clarke Historical Library) Alissa Martin, College of Medicine Gina McGovern, College of Education & Human Services Katherine McVety, College of Medicine Kathleen Meert, College of Medicine Vinod Misra, College of Medicine Evan Montague, Student Success Evan Montague, Student Success (with Kori Burlager, Student Success) Sara Moslener, College of Liberal Arts & Social Sciences Janet Nunn, College of Medicine April Osburn, College of Medicine Jyotsna Pandey, College of Medicine (with Raju Chowdhary, College of Health Professions) Kevin Park, College of Liberal Arts & Social Sciences Kaleb Patrick, Innovation & Online Juan Peralta, College of Science & Engineering Georgios Perdikakis, College of Science & Engineering (with Alfredo Estrade Vaz, Matthew Redshaw, and Mihai Horoi, College of Science & Engineering) Juliette Perzhinsky, College of Medicine **Timothy Peters, University Libraries**

Eric Petersen, College of Medicine

Valeri Petkov, College of Science & Engineering

Joseph Pomerville, College of Health Professions (with Lyubov Fishman, College of Health Professions) Pavadee Poowuttikul, College of Medicine

- Karin Przyklenk, College of Medicine
- Neli Ragina, College of Medicine (with George Kikano, College of Medicine)
- Neli Ragina, College of Medicine (with Sethu Reddy, College of Medicine)
- Madhvi Rajpurkar, College of Medicine
- Matthew Redshaw, College of Science & Engineering
- Katherine Regling, College of Medicine
- Wendy Robertson, College of Science & Engineering (with Roderick Lammers, John Allen and Daria Kluver,
 - College of Science & Engineering)
- Peter Ryan, College of Science & Engineering
- Raya Safa, College of Medicine
- Sureyya Savasan, College of Medicine
- Jennifer Schisa, College of Science & Engineering
- Usha Sethuraman, College of Medicine
- Michael Sienkiewicz, Police
- Gautam Singh, College of Medicine
- Monaliza Sirbescu, College of Science & Engineering
- Bradley Swanson, Office of Research & Graduate Studies (with David Zanatta, College of Science & Engineering)
- Benjamin Swarts, College of Science & Engineering
- Stephanie Toll, College of Medicine
- Stephen Tracy, College of Business Administration (with Vishal Shah, College of Business Administration)
- Ksenia Ustinova, College of Health Professions (with Joseph Langenderfer, College of Science & Engineering) Donald Uzarski, College of Science & Engineering
- Donald Uzarski, College of Science & Engineering (with Thomas Gehring, Matthew Cooper, and Dennis Albert, College of Science & Engineering)
- Amanda Weber, College of Medicine
- Jennifer Weible, College of Education & Human Services
- Richard Westover, Public Broadcasting (with Amy Robinson, Public Broadcasting)
- Patricia Williamson, Honors Program
- Daelyn Woolnough, College of Science & Engineering
- Lauren Yagiela, College of Medicine
- Tao Zheng, College of Science & Media
- Gregory Zimmerman, College of Health Professions (with Debra Kimball-Christie, College of Health Professions)