

## New Faculty Academy 2024 Showcase and Celebration

**Date:** Wednesday, May 8, 2024

**Time:** 11:30 am - 1:30 pm

**Location:** 240 Capen Hall

The Office of the Vice Provost for Faculty Affairs in partnership with the University Libraries and the Office of Curriculum, Assessment and Teaching Transformation (CATT) invites faculty and staff to a celebration of the 2023/24 New Faculty Academy Fellows and a showcase of their innovative projects in the areas of teaching, scholarship and writing.

### Agenda

- 11:30 am Reception & Networking with Food & Refreshments
- 11:50 am Welcome by Robert Granfield, *Vice Provost for Faculty Affairs*  
Project Presentations from NFA Fellows
- 12:00 pm Parallel Sessions 1-2: Facilitation by Jeffrey Kohler, *CATT*, Jonathan Grunert, *University Libraries*, Maggie Grady, *CATT*, and Natalia Estrada, *University Libraries*
1. **Jessica Hollister**, *University Libraries*; **Opinder Kaur**, *Economics*; **Celine Krzan**, *Operations Management and Strategy*; **Cheryl Lucas**, *Rehabilitation Science*; **Alfredo Oliveros A.**, *Biological Sciences*; **Shannon Seneca**, *Indigenous Studies*
  2. **John H. Giamatteo**, *School of Law*; **Swathi Karamcheti**, *Environment and Sustainability*; **Kelin Luo**, *Computer Science and Engineering*; **Christine Marie**, *Media Study*; **Maura Sepesy**, *Chemical and Biological Engineering*; **Paris Wicker**, *Educational Leadership and Policy*
- 12:30 pm Networking Break
- 12:45 pm Parallel Sessions 3: Facilitation by Jonathan Grunert, *University Libraries*, and Maggie Grady, *CATT*
3. **Isabel Anodon**, *Sociology*; **D. Michael Applegarth**, *School of Social Work*; **Eloise Bihar**, *Materials Design and Innovation*; **William Sack**, *Media Study*; **Prashant Sankaran**, *Industrial and Systems Engineering*, (by proxy)
- 1:00 pm Closing Remarks; Awarding of Certificates and Group Photo: Robert Granfield, *VPFA*
- 1:30 pm Program End

**Isabel Anadon** (Sociology, CAS):

**“Not all policies are the same: Examining differences in sanctuary laws and policies across the United States”**

The context of providing a "safe haven" or sanctuary for individuals denied political asylum in the United States was born from a coalition of religious and political leaders in the early 1980s. Since these initial parochial missions, many governmental and jurisdictional entities have extended similar protections to their immigrant residents. Various governmental agencies inscribe these protections into adopted policies and laws. While no universal definition of sanctuary policy exists (AIC 2020), scholars identify broad categorizations to define the protections extended to immigrant residents. These protections generally fall within “don’t ask, don’t enforce, and don’t tell” categorizations, limiting information sharing and cooperation with federal immigration officials and local officials. Most research on sanctuary foregrounds and conceptualizes sanctuary by only what it provides, which limits insight into the variegated and contextual process involved in the adoption of these policies. This paper develops a typology to capture the stated motivations and intentions within legal documents whereby jurisdictions articulate the rationale for sanctuary policies in their locales. We draw on 432 existing sanctuary policies across the United States to identify types of protective domains found within policies and to compare their stated rationale for adopting these protective policies. Sanctuary policies vary across geographical coverage, including agency, city, county, and state levels. Moreover, distinct legal actors and policymakers adopt these protections, including law enforcement agencies, city councils, sheriff’s offices, and state legislatures. This paper provides a framework to capture the variation of protective benefits and the rationale for adoption. This paper will enable future empirical research on sanctuary to consider and account for these differences in protection and motivation within local jurisdictions.

**D. Michael Applegarth** (School of Social Work):

**“Parole Supervision, Specialty Caseloads, and Mandated Treatment for Individuals with Mental Illness”**

In 2022, nearly half a million individuals were released from state or federal prison, with an estimated 70% being placed on community supervision. Research has established that persons exiting correctional facilities have high rates of mental illness and substance dependence and face a host of challenges, such as finding employment and stable housing. Despite the knowledge surrounding these challenges, recidivism rates remain high. Interventions are needed that are responsive to the unique needs and circumstances of individuals with mental illness while also targeting known criminogenic risk factors. An important step in achieving this is obtaining a deeper understanding of how mental illness and recidivism are related to one another and what practices effectively address both criminogenic risk factors and mental health needs. Furthermore, prior scholars have lamented the lack of information on treatment attendance, the use of mandated mental health treatment, and interactions between community supervising officers and those they supervise. Many individuals are released on parole with a list of supervision requirements (e.g., mandated mental health treatment, substance use treatment), yet little is understood about the effectiveness of these practices. This study will examine a sample of approximately 25,000 individuals released on parole in a southern state with a three-to-five-year follow-up period. Multiple criminal legal outcomes will be examined, including rearrest, technical violation, and reconviction. This study will further examine the relationship between mental illness, criminogenic risk factors, and recidivism, as well as explore how mandated mental health treatment, placement on specialty caseloads, and supervising officer practices relate to criminal legal outcomes for persons on parole.

**Project Presentations (in alpha-order):**  
Teaching & Learning Track - Scholarship, Writing & Publishing Tract

**Eloise Bihar** (Materials Design and Innovation, SEAS):

**“Welcome to the inception of MDI 440 - Design and Function of Soft Materials”**

In this presentation, I'll walk you through the journey of creating this course, exploring the principles and applications of soft matter in cutting-edge technologies. We'll start by defining and classifying soft matter, understanding its rheological properties, and its behavior. From there, we'll dive into specific applications, such as biosensors, solar cells, biomedical devices, and energy storage, examining the role of soft materials in each. Together, we'll explore the design and fabrication processes, study performance in various applications, and gain hands-on experience in characterization techniques. Through case studies and discussions, we'll analyze the challenges and innovations in each field. Moreover, I'll share how I structured the course to foster critical thinking and communication skills, with assignments, quizzes, a midterm exam, journal clubs and a final project designed to evaluate student understanding. Join me in this journey as we craft a course that not only teaches but also inspires the next generation of materials scientists and engineers.

**John H. Giammatteo** (School of Law):

**“Prosecuting Discretion in Immigration Court”**

Beginning in 2011, the Obama Administration rolled out several prosecutorial discretion initiatives in immigration enforcement, ultimately increasing the menu of options immigration judges could choose from when deciding each individual case. This project aims to use the Obama-era prosecutorial discretion initiatives as a site to examine what happens when there is an injection of discretion into an adjudicatory system. Through in-depth interviews with former immigration judges, I will document whether the initiatives affected the work of immigration courts and each judges' views of discretion. In doing so, I hope that the project will add to scholarly understanding of judicial discretion, both broadly and in immigration law specifically. Participating in the New Faculty Academy's Scholarship, Writing and Publishing Track helped me refine my methodology and ensured I am fully prepared to launch the research phase of the project this summer.

**Jessica Hollister** (University Libraries):

**“Transitioning to a tenure-track faculty librarian: the experience and the research opportunity”**

Moving into a tenure-track faculty role presents new challenges for an academic librarian, but also new learning and research opportunities. One of those learning opportunities arrived in the form of the New Faculty Academy. NFA identifies and discusses topics faced by new faculty members conducting research at UB. This presentation explores the how the knowledge gained from the NFA can be used to inform a new faculty member's research and professional path.

**Swathi Karamcheti** (Environment & Sustainability, CAS):

**“Integrating AI into curriculum and teaching”**

Integrating the nuances of Generative Artificial Intelligence into the curriculum and teaching methodology of sustainability-related courses requires a special understanding of the theories and practices. As an innovative and first-of-its-kind approach in the Department of Environment and Sustainability, Gen. AI is integrated into the EVS 330 Sustainability and Communities (Spring 2024) course syllabus and module. Sustainable Communities entail a holistic approach to integrating economic, environmental, and social paradigms. These sustainable approaches include but are not limited to various capitals such as built, social, human, financial, relational, natural, and others. A sustainable community can be envisioned theoretically. However, generating or building a physical or realistic community takes ages or sometimes generations. But, using technology, one can create and generate images and realistic views of such sustainable communities. The idea was conceived while participating in the New Faculty Academy Teaching and Learning module in Fall 2023. With inputs

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from CATT, a collaborative effort was made between the Department of Environment and Sustainability, and the libraries to design a project entitled “Envisioning Sustainable Communities through Generative Artificial Intelligence”. Students were taught to shoot images using 360 cameras of a community that they would turn sustainable. These images were edited in Adobe Photoshop and elements of sustainable communities are generated using Gen AI. Students applied their theoretical knowledge to bring out a productive and practical project. The projects were successfully demonstrated in April 2024, which were attended and graded by representatives from EVS, CATT, Institute for Artificial Intelligence, Linkt libraries, Real Estate Agents, and other guests. With the help of the New Faculty Academy Research and Publishing track from Spring 2024, this project is being developed into a research paper and being enhanced for future funding opportunities.

**Opinder Kaur (Economics, CAS):**

**“Transforming Learning Experiences: Implementing Interactive Pedagogies in ECO 380”**

The project I developed as part of the NFA Teaching and Learning Curriculum focused on developing ECO 380 course – Economic Statistics and Data Analysis with the aim of fostering student excellence and success. By integrating Problem-Based Learning and Active Learning methodologies into the pedagogical approach, I aimed to create a dynamic and engaging learning experience for students. Problem-Based Learning provided opportunities for students to apply theoretical concepts to practical scenarios, promoting critical thinking and problem-solving skills. Active Learning strategies encouraged student participation and enhancing their understanding and retention of course material. Additionally, I conducted need-based assessments which allowed me to identify that students in the past have struggled conducting data analysis with Stata software. I designed the course to provide hands-on experience with Stata; proficiency in Stata is highly desirable by potential employers as it is one of the widely used statistical software in academic, research, and professional settings. As Eco 380 is a pre-requisite for Eco 480, curriculum mapping ensured me that the course content and activities were aligned with the overall goals and objectives, preparing students for subsequent coursework. Through a structured approach of introducing concepts and reinforcing them through data analysis using Stata, I aimed to optimize student learning and engagement. By employing both formative and summative assessments, I monitored student progress and adjusted instructional methods, ensuring that the course remained responsive to the evolving needs of the students. Moving forward, I plan to continue refining my teaching practices, including self-reflection on engagement strategies, introduction of a flipped classroom model, and soliciting feedback from students, colleagues, and experts with CATT.

**Celine Krzan (Operations Management and Strategy, SOM):**

**“Engaging Minds, Building Skills: Adopting Active Learning Strategies in MGO 199”**

The "Engaging Minds, Building Skills" project was inspired by UB's New Faculty Academy Teaching and Learning Track. This focus was to revitalize classroom engagement through a series of hands-on, skill-based learning sessions in an MGO 199 Course “Creativity in Entrepreneurship”. Throughout the semester, I was able to uniquely incorporate a variety of interactive experiences, including collaboration with UB's CoLab for improvisation workshops that enhance public speaking, teamwork, and problem-solving skills. Participants also had the opportunity to engage with UB BOLD fellows and partake in workshops that cover financial best practices and strategies for leading an abundant life. Further enriching the curriculum, the program includes innovation sprint projects in partnership with UB's Center for Entrepreneurial Leadership, specifically tailored for emerging entrepreneurs. This multifaceted approach not only makes learning more dynamic and enjoyable but also equips students with practical skills and insights necessary for real-world success.

**Cheryl Lucas** (Rehabilitation Science, SPHHP):

**“A Project- Based, High- Impact Assignment for Graduate Occupational Therapy Students Participating in a Global Health Leadership Course”**

Graduate occupational therapy students participating in a Global Health Leadership course, (OT 599 Occupational Therapy Without Borders) created six online patient education modules for people suffering with Long-Covid in Western New York and beyond. Utilizing the ADDIE Model of instructional design and Bloom's taxonomy, this semester long, project-based, learning assignment was developed to provide real world opportunities for knowledge translation of current occupational therapy and Long covid evidence and treatment. The project had multiple independent learning steps following the ADDIE method of Analysis, Design, Development, Implementation, and Evaluation. This entailed a literature review of newest research in a Long-Covid topic, integration and application of OT theory and techniques, utilization of best practices in health literacy, patient education, and online instructional design considering ADA accessible language and illustrations. Outcome assessment was completed utilizing the Online SUNY Quality Course Review rubric (OSQCR) and client review and feedback. Course objectives included the integration of OT education accreditation standards and completion of a complex, high impact, transformational learning, project requiring critical reasoning, teamwork, and creativity. Final course outcomes included student acquisition of a University at Buffalo micro-credential in Facilitating Learning in Allied Health Professions and a UB Occupational Therapy Webpage for Long-Covid sufferers to access.

**Kelin Luo** (Computer Science and Engineering, SEAS):

**“Course scheduling and evaluation in large classes”**

This project enhances learning experiences and academic assessment in large classes through strategic course scheduling and evaluation adjustments. We introduce a scheduling model that incorporates diverse weekly quizzes and biweekly assignments, aimed at continuously monitoring student progress and engagement. This model promotes an interactive and responsive educational environment, facilitating timely teaching adaptations and improved student learning management. The effectiveness of this revised course structure will be evaluated through comparative analysis of student performance and feedback, striving for an optimal balance between regular assessments and comprehensive exams.

**Christine Marie** (Media Study, CAS):

**“Exploring Depth Through Light: Stereoscopic Shadowgrams in Contemporary Art and Research”**

This abstract introduces my investigation into the fusion of traditional and Victorian art forms, with modern technology. The study delves into the realm of stereoscopic shadowgrams, Balinese wayang kulit and virtual reality. Stereoscopic shadowgrams are a novel approach wherein shadow play is transformed into a multi-dimensional experience using stereoscopic techniques. I have constructed an instrument that casts, up-to-40' stereoscopic shadows. As an artist, I've created numerous live, immersive installations and performances that reveal the depth and dimensionality of objects and performers when viewed through analog stereoscopic lenses. This research project aims to explore the correlation of z-axis depth when viewing stereoscopic anaglyph, analog, shadowgrams live and the perceived depth map within a virtual reality headset display. Through a combination of analysis and practical experimentation, the study seeks to elucidate the underlying principles of this unique visual effect and its implications for high tech visual displays. This research aims to contribute to a deeper understanding of the ways in which traditional art forms can be reimagined and revitalized in the digital age.



**Alfredo Oliveros A.** (Biological Sciences, CAS):

**“Evaluation of Emotive Dysfunctions Exerted by Cisplatin in Chemotherapy-induced Cognitive Impairments”**

Epidemiological incidence and survival data from the 2022 Surveillance, Epidemiology, and End Results (SEER) Program reports that in the United States, the number of cancer survivors is estimated to increase to 22.1 million by 2030. Despite the improvement in survival, chemotherapy induced cognitive impairment (CICI) has emerged as a persistent detriment to quality of life in patients, affecting up to 35-40% of cancer survivors. Clinical and preclinical studies of CICI have revealed off-target neurotoxicity resulting in deficits in attention and working memory which are accompanied by neurocellular impairments. Without known cures, novel therapeutic approaches are desperately needed. To elucidate the pathobiology and novel therapeutic mechanisms of CICI, my research program has previously implemented a mouse model resembling clinical cisplatin treatment. Cisplatin is a platinum-based chemotherapy widely used to treat ovarian, breast, testicular and prostate cancers. Our studies identified elevated expression of the adenosine A<sub>2A</sub> receptor (A<sub>2A</sub> R) in the hippocampus, a brain region critical for memory, and emotion. Importantly, these studies revealed that pharmacological A<sub>2A</sub> R antagonism prevented cisplatin induced memory dysfunction and deficits in hippocampal neuronal architecture. Notably, the A<sub>2A</sub> R is known to modulate synaptic function and emotive behavior in reward associated brain regions, such as the striatum, via interactions with dopamine receptor signaling. However, it is currently unknown whether cisplatin dysregulates dopamine-related pathways that control reward-motivated behaviors. Importantly, attentional deficits and mood/reward related impairments are commonly reported by cancer survivors experiencing CICI. Since pharmacological activation of dopamine signaling via methylphenidate (Ritalin) is a frontline clinical treatment of attention deficit hyperactivity disorder (ADHD), while increased striatal transport of synaptic dopamine is a known mechanism that controls reward motivated behavior, this proposal will test the hypothesis that cisplatin disrupts dopamine transport in the striatum, and administration of the dopamine reuptake inhibitor methylphenidate attenuates cisplatin-induced neurocellular dysfunction and mood/reward related impairments. Given that methylphenidate is FDA approved for treatment of ADHD and cancer related fatigue, the findings from this study will fundamentally advance our understanding of pathological mechanisms underlying mood-related dysfunctions in CICI, thus improving the quality of life for cancer survivors.

**William Sack** (Media Study, CAS):

**“Everyone should learn to code! ... or should they?”**

My presentation will focus on a course I've been teaching for three years in the Department of Media Study - "Programming for the Arts." The course is intended as a gentle introduction to coding taught through a general-purpose programming language, and until recently was required for DMS students who wanted to major in media production. I will explain how I've changed the course since my time with the Teaching Transformation Team, and look back on what worked and what didn't. I may even try to answer the titular question from the point of view of a musician who didn't even own a computer until they were nearly 40!

**Prashant Sankaran** (Industrial and Systems Engineering, SEAS):

**“A Course Developer’s Journey from Planning to Execution”**

In this presentation, I share my experience designing and executing a graduate-level course on introduction to deep learning for engineers. Specifically, I provide a behind-the-scenes look into my course planning process, guided by the course design principles, and share my experience executing them. Lastly, I close with key lessons learned.

**Shannon Seneca** (Indigenous Studies, CAS):

**“Fishing for Answers: Assessing Exposure to Indigenous Communities from Emerging and Legacy Contaminants in the Lower Great Lakes Watershed”**

Indigenous communities are working together to improve the health of their people by strengthening traditional ways of life which include practices in aquaculture, forestry, horticulture, and agriculture. As Indigenous Nations are increasingly returning to living close to their land and waters, exposure to environmental contaminants may have more direct impact on their health. Human well-being and community resilience improve by increasing food security in addition to developing food systems that also engage in growing community networks (Poe et al. 2015). While we work to characterize biological migration of contaminants and ascertain their presence in the food chain, we will also gain a better understanding of human’s exposure to carcinogens through consumption of fish. The primary contaminants of concern have historically been mercury, dioxin, and polychlorinated biphenyls (PCBs) but this list now also includes Per- and Polyfluoroalkyl Substance (PFAS); population-based review by Gui et al., 2022 showed that in addition to endocrine disruption and Hepatocellular Carcinoma, PFAS exposure increased risk of type 2 diabetes. Environmental risk factors and the connection to human health are of great concern among Indigenous communities but their concerns are also associated with the health of the fish and natural world therefor this work focuses on evaluation of the burden of exposure upon our freshwater relatives by PFAS and legacy organohalogenes in the lower Great Lakes.

**Maura Sepesy** (Chemical and Biological Engineering, SEAS):

**“Making Learning Fun: A Student-Centered Learning Approach”**

Group activities, gamification, and student feedback are three techniques in student centered learning approach. In this past semester I had the opportunity to create a new course “Coffee, Tea, and Cannabis Sci” where we explored plant-based separation methods and practices. Students had chances to participate in weekly polls; in-class group activities researching specific coffee extractions, new extraction methods for tea, and product-design for cannabis; and mid-semester anonymous feedback, so students were able to voice any concerns they had about the course, and I could adjust to meet their needs in the second half of the semester. Additionally, due to the eclipse, I had the opportunity to create an interactive, asynchronous lecture in the format of an escape room, where students could watch videos of the lecture, solve puzzles based off the short videos, and do activities to let them progress in the room. Overall, these techniques contributed to this course’s successful first semester and will contribute to the success of it being taught in the future.

**Paris Wicker** (Educational Leadership and Policy, GSE):

**“Black student well-being across the diaspora and culturally responsive teaching (CRT): Pedagogical lessons from Brazil and the United States”**

This international education participatory action project advances global perspectives on teaching and learning for well-being, especially considering postsecondary challenges and opportunities for well-being for Black university students across the diaspora. In a collaboration between two universities in the United States and Brazil, this project will first engage in participatory action research elements to build relations with Black university students as well as professors who work with students in culturally responsive approaches. The study will also initiate a collaborative research agenda that (re)defines well-being and determines what elements of the well-being experience would be useful to develop an equitable community of learning. Ultimately, we plan to build a full-scale multi-national research project that connects well-being to culturally responsive teaching (CRT), positions Black student well-being as a global goal towards equity in higher education, and develops a pedagogical framework that accounts for global perspectives.