Contact: Rachel Boon

PROFESSIONAL DEVELOPMENT ASSIGNMENT REPORTS FOR FY2024

Action Requested: Receive the professional development assignment reports submitted by the Regent universities for FY2024.

Executive Summary: Board Policy 2.1.R (a-e) directs the institutions to submit a yearly report of the completed professional development assignments, pursuant to the 2011 Iowa Code, Chapter 122 (HF 45).

In November 2022, the Board approved 109 professional development assignments for 2023-24. At ISU there were three approved PDAs for 2023-24 that are not included (2 deferrals, 1 withdrawn request). In addition, one PDA previously deferred took his in spring 2023. Seven faculty at SUI who previously deferred an approved PDA completed their assignments in 2023-24 instead, while five approved for 2023-24 deferred to a future year and five faculty members declined their PDA award.

The estimated cost of the professional development assignment program was $470,654 for 2023-24. Work done in by the faculty on these PDAs has already resulted in $16M in grants and external funding. Total grant proposals submitted because of this work have a cumulative value over $52M. Much of this grant money supports graduate students who engage with faculty on this work, funds associated travel, provides salary replacement for the researchers, support costs for research subjects, and is used to purchase equipment or other materials, often from Iowa businesses. Viewed strictly in terms of financial impact, for every dollar invested in a PDA in 2023-24, the one-year return on investment for the state of Iowa was $34.

Other outstanding results include patent applications, articles published or in review, many academic and public presentations, dozens of book chapters or entire books in development or submitted, creative works completed or performed, students mentored, and many courses updated or new courses developed.

A brief description of each professional development assignment completed in FY24 is available in this report, including information about the value added to the students, university, and state from the assignments. This report aligns the Board of Regents Strategic Plan emphasis on excellence in teaching and research, economic development and positive impact on the state of Iowa.

University of Northern Iowa

ABEBE, TILAHUN, Professor, Biology, 18 Years of Service, AY 2022-2023
Title: Improving the response of cereal crops to environmental stress
The two objectives in the Principal Investigator's (P.I.) PDA were to: (1) publish proteome data (entire protein) of drought-stressed barley plants based on the work of a former UNI graduate student and (2) test adaptation of tef [Eragrostis tef (Zucc,) Trotter], an Ethiopian cereal crop, under Iowa growing conditions. The P.I. reanalyzed data, rewrote the introduction, results and discussion sections, then reformatted it for submission to the journal Experimental Botany. The manuscript will be submitted before the end of fall 2024. For objective two, the project participants evaluated adaptability of 100 tef strains (accessions) to Iowa's growing conditions by planting at three different dates: first week of May, mid-May, and first week of June, 2024. The research group collected data on date flowering, plant height, and date of harvest on all three planting dates. They are currently collecting dry weight and seed weight data. The research team plans to complete the data analysis by the end of fall 2024. This is dependent upon availability of the seed cleaning equipment owned by the Tallgrass Prairie Center (TPC). If the equipment is in use, seed cleaning and dry weight measurements may go into spring 2025.

CASTILLO, JUAN CARLOS, Professor, Languages & Literatures, 22 Years of Service, AY 2022-2023
Title: The Quixotic Heroes of Spanish Sport Activities
During the PDA semester, the P.I. focused on three main tasks. First, in February 2024, the P.I. visited the Spanish National Library in Madrid, spending every day researching newspapers (1954-1975) and official sports bulletins from the National Delegation of Sports (1943-1975), collecting 3000 photographs of reference materials. The P.I. organized photographs taken from the reference materials, documenting their source, date, and page number, into folders organized by topic, source, and year. After returning to the U.S. in mid-March, the second task involved transcribing and organizing 800 pages of quotes by topic, facilitating the writing process. The third step, which began in late May, was writing the book. The P.I. completed chapters 4,5, and 7 and is now working on chapters 8, 9 and one introductory chapter, while seeking a publisher.

CUTTER, BARBARA, Professor, History, 22 Years of Service, AY 2022-2023
Title: Socialites, Sherpas, and Mountaineers: Gender, Race, Class, Nature and Citizenship in American Mountain Climbing, 1860-1996
The PDA project completed a section of a three-part book-length project. The book-length project examines mountain climbing, with its focus on autonomy, individuality, and self-reliance, as a key site to understanding past and present debates in the United States over who is and is not considered a fully autonomous and independent person, capable of being a full member of society. With the PDA, the research for part two of this project has been completed and a book chapter has been written on "Gender, Political Culture and Mountain Climbing in America: 1918-1933," which has been accepted for publication in an edited collection: Women on the Edge: American Women in Extreme Sports Past and Present, to be published by Rutgers University Press. A conference paper on another topic within the project will be presented at the Northern Great Plains History Conference in September 2024.

HURLEY, KIMBERLY, Professor, Kinesiology and Athletic Training, 5 Years of Service, AY 2022-2023
Title: Efficacy of Tai Chi for Rural Seniors' Balance Concerns
Sixteen Tai Chi for Arthritis and Fall Prevention sessions (progressive in difficulty) were delivered to a group of seniors (age 68-84 yrs.) in Manchester, Iowa by PI/PD faculty recipient. A total of

eight participants completed the pre- and post-assessments with the Tai Chi for Arthritis and Fall Prevention (TCAFP) 8-week/16 session intervention (attending a minimum of 11 sessions). Pre- and Post-assessments included two surveys (Activities-specific Balance Confidence Scale and Fear of Falling Avoidance Behavior Questionnaire), one measure of balance (4-stage Balance Assessment), and two assessments of mobility (Timed-Up and Go, gait mat tasks). All data were collected and organized into statistical software for further analyses.

LOU, SHANGZHEN, Professor, Mathematics, 18 Years of Service, AY 2022-2023
Title: Game Values and Equilibriums on Linear Diffusion Processes
In this PDA research project, a UNI team worked to solve an exit probability game between two players each of whom controlled a linear diffusion process. One player controlled its process to minimize the probability that the deference of the processes reached a low level before it reached a high level, while the other player aimed to maximize the probability. By solving the Bellman-Isaacs Equations, the project team found the sub-value and sup-value functions of the game's explicit forms. The PDA project used a wide spectrum of theories including probability, stochastic analysis, differential equations, risk management in actuarial science, and Black-Scholes Analysis in finance which provides interdisciplinary research problems and boosts collaboration for faculty and students at UNI. Many related courses at UNI can benefit from the new discoveries. The developments in this project also contribute to the game theoretic literature. The state of Iowa is home to many financial and insurance institutions (e.g. Principal Financial Group, Nationwide, Athene, EMC Insurance Companies, Transamerica, etc.). The research work is useful and can be shared among asset managers, actuaries, and data scientists to give insights for these companies on their business decision-making. It can also help the university serve as an innovative source, providing analytical tools for companies to help with on problem-solving.

PETROV, ANDREY, Professor, Geography, 14 Years of Service, AY 2022-2023
Title: Towards Sustainable Arctic Cities: Understanding Urban Transitions and Sustainability in a Rapidly Changing Arctic
The goal of this PDA was to advance understanding of sustainability and its policy options in remote urban communities, in particular the Arctic, amid rapid environmental and socioeconomic change. Although most Arctic residents live in cities and towns, from large to very small, there is a lack of comprehensive understanding of what characteristics and pathways exist to support sustainable development of these communities in the coming decades. This PDA was instrumental in completing research that linked the P.I's past work on sustainability and sustainable development with urban sustainability, in particular in Northern Canada and Alaska. The P.I. was able to conduct a field visit to Yellowknife, Canada (Oct. 2024), collect initial data and work on existing data to produce publications, conference presentation and a new NSF project proposal. Overall, this research phase made conceptual and methodological contributions in the body of knowledge about urban and remote-place sustainably in the Arctic and beyond.

RUMSEY, CHEPINA, Professor, Mathematics, 6 Years of Service AY 2022-2023
Title: Let's Grow Math Wonder in Young Mathematicians: A Playful Approach to Mathematical Argumentation
The P.I. used the PDA to write a book titled Nurturing Math Curiosity with Learners in Grades K–2, work with editors to revise, create a marketing plan, spend time in classrooms, submit a proposal for a second book, and write a related article. This work is valuable to UNI because the book will be marketed widely and will bring attention to the university. The P.I. will use the book in her courses. The book will enhance her teaching at UNI by bringing real life classroom vignettes and math content to the classes she teaches to prepare future educators. This book is focused on K-2 teachers so it can be used across the state of Iowa to bring mathematical argumentation and deep conceptual knowledge to both student and teacher learning.

SHEN, XINHUA, Professor, Earth and Environmental Sciences, 8 Years of Service AY 2022-2023
Title: Environmental Impacts and Lifecycle Cost of Hybrid, Electric, and Hydrogen Fuel Cell Vehicles in Iowa
The project evaluated the environmental and economic impacts of various vehicle technologies within Iowa's transportation sector. The research focused on hybrid gasoline cars, battery electric cars, hydrogen fuel cell cars, and heavy-duty trucks, assessing their lifecycle emissions. The AFLEET Tool was used to calculate the total cost of ownership for each vehicle type, with particular focus on the impact of varying hydrogen prices on hydrogen fuel cells and heavy-duty trucks. The results indicated that battery electric vehicles and hydrogen vehicles have lower lifecycle greenhouse gas emissions compared to conventional gasoline and diesel vehicles. The analysis also revealed that battery electric cars are currently the most cost-effective option for passenger transportation. Additionally, if hydrogen prices decrease, hydrogen-powered heavy-duty trucks could become more cost-competitive than conventional diesel trucks.

YOON, GUNWOO, Professor, Marketing & Entrepreneurship, 5 Years of Service AY 2022-2023
Title: Promoting Conservation Behavior through AI-generated Images of the Future Self Human behavior plays a crucial role in both driving and addressing climate change.
Previous literature explored key insights into the psychology of climate change, examining how and why people engage in climate actions. It was found that even those with the motivation to act often face mental obstacles that hinder their efforts, and many individuals view climate change as a distant and irrelevant threat, leading to a lack of immediate response. To address this issue, the research proposed a novel "mental trip" approach, which involved using AI-generated images of future selves to encourage people to think about their future. This approach aimed to make climate change and related issues appear more immediate and personally relevant. The research anticipated that reducing the temporal or psychological distance to one's future self could lead to greater environmental action. Through a series of studies, it was found that people who interacted with AI-generated future selves were more inclined toward conservation behaviors, as evidenced by changes in their knowledge, attitudes, and intentions. This research provided significant benefits to UNI and its broader community by deepening the understanding of climate change and offering potential solutions. The findings could inform the development of effective climate policies or strategies and enriched the educational experience by equipping students with advanced knowledge and skills for future leadership roles in addressing climate challenges.

University of Iowa

ASAY, SCOTT, associate professor, Business-Accounting, 10 years of service, Fall 2023
Title: Investor Decisions and Information Sources
Prof. Asay explored how investors make investment decisions, focusing on professional investors. Collaborating with coauthors and leveraging a unique database to gain insights into the information sources and decision processes of professional investors, he conducted two experiments, a survey, and archival analyses. This research resulted in two working papers: *Private Access and Professional Investor Judgments* and *The Superficial Precision of Point Forecasts*. The first paper examines the influence of private access on investment preferences, finding that preferences for private access diminish when investors consider the broader implications of firms' private access policies. The second paper challenges the assumption that point forecasts are the most precise form of management forecasts, showing that they are often used in periods of high uncertainty and are perceived as less credible and less informative than range forecasts. These findings significantly impact understanding investor behavior and informing policy. Additionally, the research enhances Prof. Asay's teaching in both undergraduate and PhD courses by integrating real-world insights and fostering critical thinking.

BARBUZZA, ISABEL, professor, CLAS-Art & Art History, 26 years of service, Fall 2023
Title: The Power Lies in Data - Visualizing Lithium
Prof. Barbuzza worked in her studio in Iowa, sorting materials and making sketches for the new art pieces she produced. She traveled to Jujuy, Argentina, to document the changes and impacts on the landscape of lithium extraction. She is interested in lithium extraction in the Lithium Triangle, Chile, Bolivia, and Argentina, as well as its impact on the landscape and the effects on Indigenous communities since water is used in its extraction. In September 2023, she traveled 1292.8 km through the Andes mountains from Mendoza to Jujuy, Argentina. She sketched, took notes, and photographed the mountains. She collected rocks from eroding mountains to make earth pigments to add to her work. In Jujuy, she witnessed the urgency of environmental issues and the Indigenous communities in Salinas Grandes, a vast salt flat, as people protested this practice. She will use the information collected to add new content to her undergraduate and graduate courses. One of her pieces is in a group show at the Shanghai Fengxian Museum in China. She will be a visiting artist at the Santa Barbara Museum of Art to discuss her new research.

BERRY, VENISE T, professor, CLAS-Journalism & Mass Communications, 32 years of service, Fall 2023
Title: Samsara, a Novel
Prof. Berry worked on three projects bringing two of them to completion. First, research was conducted surrounding mental health issues for her new novel *Samsara* (cycle of life). It is the story of a mother and her teenaged daughter who are both struggling with mental health problems. The basic plot was developed, the main characters established, and the storyline for the project worked through. The manuscript should be finished by late 2025. Second, editing and structural development for her anthology, *The Black Superwoman and Mental Health: Power and Pain* was completed. This book now has a signed contract to be published by Peter Lang in Spring 2025. Third was the completion of a 58-minute visual documentary related to Prof. Berry's book *Racialism and the Media*. The book was published in 2020 based on 25 years of research about the images of and messages surrounding African Americans in the media. All three projects represent important examples of Prof. Berry's continued productivity and expertise. They also add to her national and international recognition in the area of African Americans and the media.

BUCHHOLZ, JAMES H J, associate professor, Engineering-Mechanical Engineering, 15 years of service, Spring 2024
Title: Data Analysis and Machine Learning for Estimation of Fluid Flows
Prof. Buchholz used this PDA to advance his research program by establishing a new area of research, submitting white papers and proposals for externally funded research projects, and preparing conference and journal publications. White papers were submitted to the Air Force Office of Scientific Research, the Army Research Office and the Office of Naval Research. The latter will be funded, establishing a new program at UI in submarine research. Preliminary investigation, conducted during the PDA, into novel configurations for bio-inspired swimming vehicles will form the basis for new inquiry-driven projects in Prof. Buchholz course, ME:4125 Biomimetic Fluid Dynamics, and establish a novel line of research. These new areas of research in swimming and submarine hydrodynamics will provide opportunities for undergraduate and graduate students to learn about marine engineering and establish career paths with the Navy through UI's undergraduate certificate in Naval Science & Technology, led by Prof. Buchholz.

BUREK PIERCE, JENNIFER, associate professor, Graduate-Library & Information Science, 18 years of service, Spring 2024
Title: More Than Rooms with Books: US Public Libraries in the Atomic Age, 1941-1965
Prof. Burek Pierce did archival research supporting two long-term projects: 1) the history of mid-century public library innovations, and 2) the history of a prominent Iowan, Mary Ellen Solt, who was recognized as one of the world's leading contemporary poets during this same time. These histories intersect in important ways. This research contributes both to the history of library and information science during a critical yet understudied period and to the history of the State of Iowa. The work undertaken thus far has produced a grant from the State Historical Society of Iowa and an article-in-progress for its journal, *Annals of Iowa History*; three conference presentations; and an invitation to submit a book proposal to an international publisher. The PDA resulted in demonstrable scholarly work while also creating a foundation for future projects.

BURER, SAMUEL, professor, Business-Business Analytics, 22 years of service, Spring 2024
Title: Improving the Entire Optimization Process
Prof. Burer advanced a new research stream focused on integrating machine learning with optimization, resulting in several academic publications and seminars at prestigious institutions like UC Berkeley, INSEAD, and HEC Paris. His work promises to enhance decision-making processes in various industries by utilizing complex predictive models. This research will directly benefit students at UI, particularly through updated content in courses on data and optimization, preparing them for careers in AI-driven decision-making. Additionally, the work holds societal value by improving pricing models and logistics, benefiting Iowa's economy and businesses.

CASTELLANOS, HORACIO, associate professor, CLAS-Spanish & Portuguese, 12 years of service, Spring 2024
Title: A Fiction Novel: El Salvador 1972.
Prof. Castellanos completed his novel set in El Salvador in 1972, a year of great political upheaval in that country, because the military regime did not recognize the opposition's victory in the presidential elections. The novel includes three facets of the main character: his work as an activist for Alcoholics Anonymous, his involvement in the struggles within the military groups that are for and against a coup d'état, and his private life marked by adultery. The research and writing of the novel allowed Prof. Castellanos to shed light on relevant aspects of the Salvadoran political situation, and it also allowed him to recreate everyday life in a middle-class family of that time. The historical aspect of the research and the experimentation with narrative literary techniques has had a positive impact on Prof. Castellanos' work as an instructor in courses on Latin American literature, and in the fiction and nonfiction workshops that he teaches at UI.

CHOU, CYNTHIA G, professor, CLAS-Anthropology, 8 years of service, Spring 2024
Title: Fieldwork and Publication of Anthropological Ethnographic Study on Sea Nomads in Southeast Asia
Prof. Chou completed her research project on sea nomads in Southeast Asia to explain that modern civilization is not an inevitable progression towards statehood. Her work resulted in the publication of a volume of co-edited papers in a special journal issue. Over and above her original aim to complete and publish a volume, she has a second volume in progress. Her research has enhanced the international profile of UI. She was invited by the National University of Singapore to deliver a keynote address at an international conference on maritime heritages. During her PDA, she presented a paper, chaired a panel and co-convened a roundtable discussion on sea nomadism at the 13th International Convention of Asia Scholars at University Airlangga, Indonesia. Her research forms new instructional material for her undergraduate and graduate courses. She also successfully extended external funding for her next project on breast cancer among Malay women. Additionally, she served as reviewer for Nomadic Studies Journal and promotion applications for Full Professorships in Anthropology at Trinity University, San Antonio, Texas and the National University of Singapore.

COELHO, BENJAMIN A, professor, CLAS-Music, 25 years of service, Spring 2024
Title: Bassoon: Pratica quotidiana: An Introduction to Diversity of Sounds
During his PDA, Prof. Coelho focused on curating musical materials from all six inhabited continents: Asia, Africa, Europe, North America/Central America, Australia/Oceania, and South America. His research incorporated various musical styles, including classical, popular, indigenous and folkloric genres. He analyzed, adapted and arranged these pieces for the bassoon, using new scale patterns and rhythmic exercises to enhance the instrument's expressive and technical capabilities. These arrangements will result in the revised edition of his method book, *Pratica Quotidiana*, offering educators and students a significant resource highlighting musical diversity. The updated edition will be integrated into his bassoon courses.

COLBERT, AMY E, professor, Business-Management & Entrepreneurship, 16 years of service, Spring 2024
Title: Need Fulfillment across Life Domains: Promoting Physical and Psychological Well-Being
Prof. Colbert began a new research stream that investigates how the fulfillment of needs in multiple life domains impacts overall employee well-being. In one project, she found that work and nonwork relationships both contribute to employee outcomes at work, but that organizations benefit by facilitating supportive relationships at work. In a second project, she investigated how employees make sense of disruptive life events in ways that allow them to continue to find fulfillment and maintain a positive identity. This research advances understanding of strategies to maintain employee well-being and will be shared with the academic community through presentations and research articles. The research also has practical implications for employees and organizations. Prof. Colbert will integrate these insights into her MBA leadership course and translate them to share with Tippie's network of external partners, including at roundtable events sponsored by Tippie's Social Impact Community and through executive education.

COMERON, JOSEP M, professor, CLAS-Biology, 22 years of service, Fall 2023
Title: Causes and Consequences of Recombination
Recombination is a fundamental cellular and evolutionary process, but little is known about why recombination rates vary across genomes or its impact on genomic regions that are rarely studied due to methodological difficulties. Prof. Comeron investigates recombination rates and distribution across genomes with a multidisciplinary approach that includes genomics, bioinformatics, population genetics and modeling. Building on earlier work, research during this PDA developed

into 1) a new method to characterize the three-dimensional (3D) structure of genomes that will be invaluable for studying the impact of 3D structures on recombination rates, 2) the generation of novel recombination maps in Drosophila species, and 3) the examination of recombination's impact on telomere dynamics. These results will be crucial components of two new grant proposals. The research developed during this PDA also directly impacts teaching and mentoring activities in his laboratory, benefiting both graduate and undergraduate students. More generally, this new knowledge is also incorporated into the undergraduate courses at UI.

DIAMANTIS, MIHAILIS E, professor, Law-Faculty, 7 years of service, Fall 2023
Title: People Are Corporations, Too
Prof. Diamantis is a lawyer-philosopher who writes about analogies between corporations and natural people. He used his PDA for three projects: 1) He completed a draft of his book, *Law and Philosophy of the Corporate Person*. The book draws together lawyers and philosophers who work on overlapping issues but rarely exchange ideas and research. The current draft is the main text for a seminar he is teaching in the College of Law this year. He will submit the book to *Cambridge University Press* for publication later this year. 2) He wrote an article on regulating corporations whose artificial intelligence harm consumers and society. His proposed intervention would incentivize corporations to develop safer algorithms. The article will be published in the *Vanderbilt Law Review* early next year. 3) He wrote an unrelated article about mental health in police officers. It argues that ending unjustified police violence will require more attention to police wellness. The article includes a detailed case study of the Iowa City Police Department and its mental wellness initiatives. The *Iowa Law Review* published the article earlier this year.

DOWLING, DAVID O, professor, CLAS-Journalism & Mass Communications, 12 years of service, Spring 2024
Title: News, Inc.: Brand Journalism Across Media
Prof. Dowling completed research for his book on brand and advocate journalism across media, along with conference presentations, journal articles, and edited volume chapters. The book manuscript addresses the impact of political and commercial interests on the evolutionary trajectory of digital narrative journalism toward richer production standards. At stake is the journalistic principle of editorial autonomy and potential threats to democracy, notwithstanding clear advantages to advocates. Publications during the PDA include two books, *Podcast Journalism: The Promise and Perils of Audio Reporting*, and *The Art of Fact in the Digital Age: An Anthology of New Literary Journalism*, two journal articles, and two edited volume book chapters. The PDA enabled Prof. Dowling to prepare a graduate course he has not taught before titled *Humanistic Approaches to Communication*. It also informed the development of new material for his undergraduate course, *Introduction to Journalism and Strategic Communication*, which deals with the ethical, social and economic impacts of advertising's convergence with news.

DUARTE, ARMANDO S, professor, CLAS-Dance, 30 years of service, Fall 2023
Title: O Samba no Corpo de um Brasileiro – Volume 1
During the PDA, Prof. Duarte worked on his manuscript, *O Samba no Corpo de um Brasileiro - Volume 1*, *the Mestre-Sala, and Porta-Bandeira*. He contacted the *Editora Autografia*; practiced *Samba de Gafieira* (Social Dance); presented lectures; attended samba conferences; visited libraries, archives and museums in São Paulo and Rio de Janeiro, Brazil. He engaged in extensive editorial work, while fostering specific information on samba dance and the performative body in carnival, and the tradition of the schools of samba as reference. He remains confident that his first manuscript is an invaluable contribution to the field of popular culture. The PDA fostered his competence to continue developing scholarly research related to the culture of samba and carnival in Brazil and enhanced courses he teaches at Iowa (Brazilian Culture and Carnival and

Brazilian Social Dance, the Samba). Additionally, he is currently revising the finished chapters; editing chapter 3; and writing chapters 2 and 5, all bilingually (Portuguese and English).

ESPINOSA, MARIOLA, associate professor, CLAS-History, 10 years of service, Spring 2024
Title: Sensational Cures: Medicine, Politics, and Popular Culture in the Spanish-Speaking World
Prof. Espinosa used her PDA to advance archival research in collections in Puerto Rico for a book project that will look at how Puerto Rican doctors addressed the practice of asuerotherapy--a fleeting yet global and controversial medical phenomenon--by defining the relationship between scientific knowledge, medical ethics, and the practice of medicine. The PDA also facilitated a project with local archivists to preserve the collection of the Puerto Rico Medical Association, an archive at risk. This research will be incorporated in coursework that explores medical history in Latin America, breaking the usual west vs traditional medicine story that is often told about the region. Experience in these archives will also serve for mentoring future graduate students in the field of medical history, history of empire, and Caribbean history.

FARRIN, LAUREL, professor, CLAS-Art & Art History, 25 years of service, Fall 2023
Title: Weird O
Prof. Farrin completed work for her ongoing project *WeirdO*. She produced a series of 50 hybrid sculpture/paintings using found materials (fabric, paper, wood) repurposed into painting with sculptural bodies, some of which were used as props in short digital videos that will be exhibited alongside the sculpture/ paintings. Both projects followed a structure similar to that of a comedian aiming for the surprise that comes from incongruity while allowing space for improvisation. The work was produced during two prestigious artist fellowship residencies: Siena Art Institute, in Siena, Italy, and an artist residency at Yaddo, Saratoga Springs, NY. The new work produced through Prof. Farrin's international and national residencies has benefited her teaching of UI undergraduate and graduate painting students. Prof. Farrin will present the results in a public lecture, participate in a group exhibition at Olsen Larson Gallery in Des Moines, and present in a two-person exhibition at the Wege Center for the Arts, Fairfield, IA.

FINE, DANIEL S, associate professor, CLAS-Theatre Arts, 7 years of service, Spring 2024
Title: Projection Mapping and Beyond
Prof. Fine created a new course for UI undergraduate and graduate students in the emerging field of architectural projection mapping with a five-year plan to grow the course's culmination into a public projection mapping section of Open Air Media Festival in Iowa City. Entitled *Digital Graffiti: The Art of Architectural Projection Mapping*, will run for the first time in the Spring of 2025. He received a Fellowship at the Obermann Center and met bi-weekly with other fellows and the Center director. He received an International Programs grant and funding from Theatre Arts to attend the Bright Festival in Florence, Italy. He participated in workshops on AI/VR/AR/Motion Capture, viewed new multi-media works, and made international connections, which aided in the initial research into developing two new courses in VR & Motion Capture. Prof. Fine achieved two significant goals, beyond his original proposal: submitted the final draft for the 2025 second edition of his co-authored book, *Digital Media, Projection Design & Technology for Theatre*; and premiered a new work, *Shimmer POP!* at the Open Air Media Festival.

FRISVOLD, DAVID E, associate professor, Business-Economics, 10 years of service, Spring 2024
Title: Understanding the Influence of Menu Labeling on Restaurant Purchases
Consuming meals in restaurants is linked to the rise in obesity, and consumers have difficulty in accurately determining the nutritional content and number of calories of menu items. As a result, the Affordable Care Act (ACA) requires chain restaurants to post calorie information on menus and menu boards. Prof. Frisvold conducted research on the impact of this information on what

consumers purchase in restaurants. Consumers did not change how frequently they visited different types of restaurants but purchased foods with fewer calories and nutrients in fast-food restaurants. He will incorporate his research into his undergraduate course in the spring, *Health Economics*. This project will inform policymakers whether the calorie posting mandate in the ACA influences the amount of calories purchased and has the potential to impact obesity rates.

GHOSH, JOYEE, associate professor, CLAS-Statistics & Actuarial Sciences, 13 years of service, Spring 2024
Title: Bayesian Variable Selection for Streaming Data
Prof. Ghosh carried out research on methods for selecting important variables and prediction in regression problems. Specifically, she 1) developed fast methods for online variable selection and prediction for streaming data, when data arrive continuously in batches, causing traditional methods to become prohibitively slow, and 2) supervised her PhD advisee on developing methods for variable selection, when there are extreme observations in the data, such as data on salaries. One paper is under review from the first project, and another paper is in preparation with her advisee. Based on the second project, one paper has been accepted for publication, and another is under review--both with her advisee. Prof. Ghosh has been invited to multiple conferences to present this work. Streaming data can be used in analyzing data on computer-based learning to aid in better assimilation of knowledge and forecasting weather related extreme events. Some of the topics will be added to courses on *Applied and Bayesian Statistics*.

GIDAL, ERIC, professor, CLAS-English, 27 years of service, Spring 2024
Title: Public and Digital Environmental Humanities
Prof. Gidal worked on two collaborative projects in environmental humanities: one related to publicly engaged graduate education at UI, the other related to geographical and computational approaches to literary history. In consultation with faculty and staff from the College of Engineering and the Iowa Initiative for Sustainable Communities, he prepared materials gathered and produced by a team of graduate students during the previous summer as part of the NSF-funded BlueGreen Action Platform, a cross-disciplinary, multi-institutional collaboration between UI and the University of South Florida that connects communities across watersheds to improve nitrogen management. At the same time, he planned for the following summer with a second team of graduate students. He also worked with a colleague at the University of South Carolina on an on-going project in environmental geography and corpus analytics. These two projects connect public and digital environmental humanities through collaborative pedagogy and scholarship.

GLASS, LOREN D, professor, CLAS-English, 19 years of service, Fall 2023
Title: Cities of Literature
Prof. Glass used his PDA to complete three chapters for his current book project, *University of Literature: Charisma, Celebrity, and Creative Writing in Iowa City*, based on research in the Paul Engle Papers in the UI Special Collections library. The first two chapters cover the history of the Iowa Writers' Workshop up through 1986, and the third chapter covers the history of the International Writing Program under the leadership of Paul and Hualing Engle. The manuscript is currently about 2/3 complete. This research enriches Prof. Glass's teaching, especially in his course on *Iowa City, "City of Literature,"* as well as his courses on the *Program Era* at both the undergraduate and graduate levels. Portions of his work have already been published and contribute to the reputation of UI as the Writing University.

GREWAL, ANDY S, professor, Law-Faculty, 12 years of service, Spring 2024
Title: Political Accountability and EITC Enforcement
The PDA enabled Prof. Grewal to write and publish a law review article, *The President's Criminal Immunity*. The article was discussed in *The Des Moines Register*, through an interview with Prof.

Grewal about the pending Supreme Court case, *Trump v. United States*. The article was cited in the former President Trump's briefs. Prof. Grewal's displayed expertise in the article also led to media quotations in other publications, like *USA Today*, and a scheduled presentation at Case Western Reserve University Law School.

HARRIS, CHRISTOPHER, associate professor, CLAS-Cinematic Arts, 6 years of service, Spring 2024
Title: Experimental Cinema and Speculative Approaches to the Archive and African American Media Histories
In addition to researching the absence of African Americans from the visual historical record in Chicago-area film archives as proposed in his original application, Prof. Harris completed a previously in progress film, *Speaking in Tongues: Take One* that drew from the Chicago-area film archives. He also completed pre-production for two other films which also drew on the film archive holdings. *Speaking in Tongues: Take One* has resulted in screenings at major venues with several more forthcoming.

HAZELTINE, ELIOT E, professor, CLAS-Psychological & Brain Sciences, 20 years of service, Spring 2024
Title: How do Task Representations Guide Cognitive Control
Prof. Hazeltine, 1) wrote NSF and NIH grants to support his research program on the task representations underlying flexible goal-based behavior, 2) completed multiple manuscripts with graduate students in his lab and other co-authors, and 3) co-chaired CogSci24, the conference of the international cognitive science society conference, increasing the visibility of UI. As a result of the time to dedicate to these endeavors, Prof. Hazeltine co-authored five manuscripts published in strong journals with a sixth in progress. Two grants were submitted. The grant to the NSF was not funded, but the reviews were sufficiently encouraging that it is being revised. The NIH grant is still under review. CogSci24 was successful, setting a record in attendance for the conference and Prof. Hazeltine was able to initiate research collaborations with attendees.

HOLLINGWORTH, LIZ, professor, Education-Educational Policy & Leadership, 18 years of service, Spring 2024
Title: A Program Evaluation of the Role of Education in Mexican and Belizean Mayan Communities
Prof. Hollingworth studied state policies on elementary education and leadership in Yucatán, Mexico. She conducted program evaluation field work to assess new state-wide school programs on safety and disaster preparedness post-COVID19, which builds on her earlier research and teaching. Activities included site visits to four elementary schools to research government-funded school improvement initiatives on school safety and disaster preparedness. Prof. Hollingworth conducted this research with faculty and staff from the Universidad Autonoma de Yucatán (UADY) at the request of the state Ministry of Education. Importantly, the PDA resulted in an academic presentation in the UADY school of education, several journal articles, submissions for international conference presentations, a potential for a new study abroad course for UI undergraduates to study at UADY, and new material for Prof. Hollingworth's graduate course on program evaluation methodologies across cultural contexts. The evaluation work improved the state-wide programs in the schools, including educator training in both disaster preparedness as well as restoration of peace after a crisis.

HOOKS, ADAM G, associate professor, CLAS-English, 14 years of service, Spring 2024
Title: Making Shakespeare's Poems
During the PDA, Prof. Hooks worked on a new edition of Shakespeare's Poems under contract for the leading textbook publisher in the discipline. It will be the first born-digital edition of

Shakespeare's works. This book builds on recent cutting-edge research in Renaissance studies which seeks evidence about the printing, publishing and early reception of Shakespeare by attending to individual original copies. It also explains and interprets all the non-dramatic texts for twenty-first-century readers, including students, scholars and the general public, by providing narrative introductions and comprehensive annotations. The PDA allowed for extensive consultation with the general editors and publishers and the submission of sample materials that include complicated content and formatting. Work also proceeded on a companion digital project, shakespearecensus.org, which catalogs and describes every early copy of Shakespeare's works in print. The PDA will directly impact the Shakespeare and book studies courses taught to undergraduate and graduate students and will enhance UI's commitment to public scholarship.

JAYNES, ALLISON N, associate professor, CLAS-Physics & Astronomy, 6 years of service, Spring 2024
Title: Exploring Earth's Space Environment with a VLF Receiver Network
Prof. Jaynes chose to relocate to the University of Otago, New Zealand, during her PDA where she worked closely with the space physics group under the invitation of Prof. Craig Rodger. She embedded with the group, attending group meetings and met one-on-one with a host of researchers, students and postdocs. She invited her second-year graduate student to visit for a 3-week period during this time. Her student was able to network and vastly expand her skillset by interfacing with these researchers. Prof. Jaynes and her student began several new projects during this time that are continuing and expect to have collaborations in place with this group for years to come. During Prof. Jaynes' time at Otago, she completed several papers, initiated new paper drafts, was invited to give several seminars on this topic, and helped formulate the science case for an upcoming spacecraft mission proposal. This PDA allowed Prof. Jaynes to strengthen ties between the two research groups and grow collaborations that will continue to benefit her research program and UI for the foreseeable future.

KOCHANSKA, GRAZYNA, professor, CLAS-Psychological & Brain Sciences, 32 years of service, Spring 2024
Title: Understanding Early Origins of Young Children’s Diverse Developmental Paths
Prof. Kochanska's research addresses a key question of developmental psychology, with profound implications for individuals, families and the society: Why do some children become prosocial, rule-abiding and conscientious, but others become callous, disruptive and antisocial? She recently obtained a large 5-year grant from National Institutes of Health for her research on 200 Iowa children, mothers and fathers, who entered a longitudinal study when the children were infants and have been followed to preschool age. New funding will support three more assessments through middle childhood. The study examines early parent-child relationships and child biologically based characteristics as key factors that determine future developmental paths. During her PDA, Prof. Kochanska launched that highly logistically complex enterprise. She trained a large team, designed new assessments, and implemented massive data collection. Her research will continue to benefit Iowa's parents and the society at large by informing evidence-based prevention and intervention programs. It will also benefit students in her lab by fostering careers at all levels in a vibrant research environment.

LEVINE, MARK A, professor, CLAS-Creative Writing, 24 years of service, Fall 2023
Title: New Book of Poems
Prof. Levine used his PDA to make substantial progress towards the completion of his seventh book, writing dozens of new poems that elaborate the shape and scope of concerns of his new project. Prof. Levine's new poems explore the concept of "quotation" as a complex dialogue between tradition and innovation, form and openness, interiority and social engagement, and interrogate the construction of poetic "voice." Prof. Levine is preparing to place groups of

individual poems in literary magazines en route to completing and publishing the final manuscript. The research and writing Prof. Levine undertook during his PDA are crucial to his ongoing pedagogy and mentorship in the Writers' Workshop and to the furthering of his influence on contemporary American poetry and were of immediate relevance to a new course that Prof. Levine developed and taught in the Stanley Museum of Art.

LI, TONG, professor, CLAS-Mathematics, 30 years of service, Fall 2023
Title: Nonlinear Partial Differential Equations and Their Applications
Prof. Li is interested in nonlinear partial differential equations (PDEs) modeling of combustion, traffic flows, water waves, blood flow, and chemotaxis. Research in these directions involves many challenging problems in nonlinear analysis and applied sciences. Prof. Li and her collaborators solved physiologically relevant problems in blood flow, important traffic problems and mathematical modeling of chemotaxis. The PDA also benefitted the current and future teaching and development of new interdisciplinary courses.

LONGFELLOW, BRENDA, associate professor, CLAS-Art & Art History, 18 years of service, Spring 2024
Title: The Religious Activities and Networks of Women in Ancient Pompeii
Prof. Longfellow edited her book on the lives of women in the ancient Roman city of Pompeii according to the feedback she had received from two external reviewers. She also finalized the supporting materials accompanying the text and submitted the book to the press, where it is now in production. The book will be published in June 2025. Prof. Longfellow teaches undergraduate and graduate courses on ancient Roman art history, including a course specifically on the city of Pompeii. Her work during the PDA will directly inform UI undergraduate and graduate discussions in her classes about the social networks and public-facing activities of ancient Roman women involved in family businesses, religious activities, and the funerary realm. By analyzing the economic and social roles of the women outside the domestic sphere, Prof. Longfellow's research will nuance our society's general understanding of the historical roles held by women.

LYNN, FREDA B, associate professor, CLAS-Sociology & Criminology, 15 years of service, halftime for academic year
Title: A Sociological Study of the Curricular Hierarchy and Math Anxiety
Prof. Lynn used this PDA to expand her basic science research program on status and inequality and develop two large collaborative research projects with other units on campus. One collaboration is with UI public health researchers who study caregiving journeys in the context of Alzheimer's disease and related dementias. Prof. Lynn applied her methodological expertise to develop new insights about four distinct types of caregivers in Iowa and why this typology matters for the design of effective interventions aimed at improving caregiver well-being. A second collaboration is with educational scholars and campus partners to study eight-semester transcripts of UI undergraduates. Prof. Lynn developed a new measure of course-taking homogeneity in majors and documented the connection between path-rigid majors and student retention. Across these lines of research, Prof. Lynn's PDA resulted in four published articles, a fifth manuscript currently under review, two grant applications to NSF and NIH, one invited talk, three conference presentations, and new content for her undergraduate and graduate courses in quantitative methods, stratification and networks.

MAGSAMEN-CONRAD, KATE C, associate professor, CLAS-Communication Studies, 5 years of service, Spring 2024
Title: Evaluating the Intergroup Communication Intervention: A decade with community
Prof. Magsamen-Conrad organized and analyzed data, wrote journal articles, and collected new data for a grant-funded project. She negotiated a book deal and advised graduate students on

dissertations related to health, technology and community-engaged research design. She presented at conferences, organized a mentoring pre-conference and a mini-grant review, was a keynote speaker at the Theta Tau Midwestern Regional Conference, and made virtual appearances at two universities. Her graduate students worked on diverse projects, including public opinion in Kenya, invisible disabilities, medical drone technology in Ghana, and healthcare for transgender individuals. The award enabled her to advance many projects, including her advisees' dissertation work. She submitted three articles for review, started a new article, and had a book chapter proposal accepted. She signed a contract to edit a handbook on interpersonal communication theory. Her efforts influenced her teaching, leading to a restructured course with interactive learning activities. She continued developing her capstone course, using active learning techniques to support student learning and build practical experience.

MANAK, JOHN R, professor, CLAS-Biology, 16 years of service, Fall 2023
Title: Exploring the Genetic Basis of Mendelian Disorders: Connecting DNA Alterations with Congenital Malformations (Birth Defects).
During his PDA, Prof. Manak revamped a previous grant submission focused on epilepsy genetics and contributed to two additional grants. A second task revolved around interfacing with a bioinformatics expert at John Hopkins University (Dr. Nara Sobreira) to learn how to access private and public patient databases that catalog mutations identified in patients with specific genetic disorders. Since Prof. Manak's research involves identifying new genes associated with genetic disorders, access to these databases is critical since it can provide confirmation that mutations in a particular gene cause a particular genetic disorder. Finally, Prof. Manak was able to learn how to navigate the Online Mendelian Inheritance In Man (OMIM) database that catalogs all genetic disorders in humans. These collective efforts led to Prof. Manak bolstering his expertise in the porphyrias (rare severe genetic disorders of heme biosynthesis), and Prof. Manak was appointed to the American Porphyria Foundation scientific advisory board. Prof. Manak shared his expertise in porphyria genetics in a webinar that went live around the world.

MARGULIS, CLAUDIO J, professor, CLAS-Chemistry, 20 years of service, Spring 2024
Title: Physical Chemistry of Ionic Systems
Ionic Liquids (ILs) and molten salts (MSs) are exciting materials for energy applications including batteries, capacitors, and nuclear energy. Work done during this PDA significantly helped advance science in these areas. Two scientific articles were submitted or published during the period. One of these was associated with the prestigious Spiers Memorial Lecture Award that Prof. Margulis received during the summer. Prof. Margulis co-organized the symposium on Physical Chemistry of Ionic Liquids at the National American Chemical Society Meeting in New Orleans. The students most closely impacted by the PDA are in the Margulis group who have been able to interact closely with him and several of whom are co-authors in said articles. Societal impact of basic research is often seen in the longer term; in this case, studies are on systems that could have wide application for the generation of electricity or the storage of energy.

MATTES, TIMOTHY E, professor, Engineering-Civil & Environmental Engineering, 19 years of service, Spring 2024
Title: Investigating Nitrogen Cycling in Marine Oxygen Minimum Zones by Sulfur-oxidizing Bacteria and Associated Viruses
Prof. Mattes traveled to Africa and participated in a 14-day research cruise, where he collected seawater samples in the Northern Benguela Upwelling System in the South Atlantic Ocean off the coast of Namibia. Prof. Mattes brought frozen seawater samples back to the University of Washington (Seattle, WA USA) and performed a high-throughput microbial culturing experiment. Prof. Mattes isolated and ultimately sequenced 24 complete genomes. Prof. Mattes also learned new data analysis techniques with the high-performance computing facilities at UI. Learning new

laboratory and data analysis techniques will have a significant impact on Prof. Mattes' research program and graduate students. This work will benefit the state of Iowa by potentially attracting more research funding and new talent to UI. A better understanding of nitrogen cycling in oceans could also be useful for environmental research in Iowa, which suffers from decreased water quality because of nitrogen pollution.

MENNINGA, ELIZABETH J, associate professor, CLAS-Political Science, 8 years of service, Spring 2024
Title: Cooperation in Civil Wars
As a result of Prof. Mennniga's PDA, she has drafted three manuscripts that will be submitted to peer-reviewed academic journals in the coming year. Prof. Menninga has presented one of manuscripts at an invited workshop at Vanderbilt University and will present another of these manuscripts at the Peace Science Society (International) Annual Meeting. Furthermore, she has overseen a substantial data collection effort funded, in part, by the National Science Foundation. Prof. Menninga's research on when, how, and to what effect, rebel groups cooperation with the governments they are fighting will shape future academic work on civil conflict dynamics. Additionally, understanding the cycles of cooperation in the shadow of conflict has substantial implications for international mediators, humanitarian organizations or peacekeepers.

MUBEEN, SYED, associate professor, Engineering-Chemical & Biochemical Engineering, 9 years of service, Fall 2023
Title: Towards a Renewable Hydrogen Ecosystem for Iowa
During his PDA, Prof. Mubeen made significant strides in advancing decarbonized hydrogen production technologies by collaborating with leading researchers from the University of Tokyo, University of Michigan, and the National Renewable Energy Laboratory (NREL) and submission of an H2 hub proposal. These efforts have resulted in securing a Sponsored Research Agreement grant and an NSF ECO CBET grant, both aimed at developing innovative solar hydrogen production systems that enhance efficiency and sustainability. Prof. Mubeen also worked closely with industry partners such as First Solar, CTF Solar and SunHydrogen, fostering valuable connections that have already led to new research opportunities and industry collaborations. These achievements will benefit UI students through the development of interdisciplinary courses on hydrogen production, storage and safety, offering hands-on learning experiences. The PDA outcomes support Iowa's economic growth by creating industry partnerships and new jobs, advancing green technologies, and contributing to a sustainable hydrogen economy for the future.

OATES, THOMAS P, associate professor, CLAS-American Studies, 11 years of service, Spring 2024
Title: Crossover: How Playground Basketball Became Mainstream Entertainment
During the PDA, Prof. Oates completed work on a book, which will be submitted to *Rutgers University Press* this fall. He also completed work on a book manuscript, co-authored with his Iowa colleague Prof. Frank Durham, to be published by the *University of Illinois Press* in December. Prof. Oates wrote an essay for the public facing outlet *The Conversation*, which prompted a live interview with KCBS radio in San Francisco a few days later. He also completed two book chapters for edited collections. This research benefitted UI students by aiding in the development of a new course, titled *Staging the World's Game: Soccer and Media*. The course will be a regular offering in the Sport Media and Culture major. The research benefits society generally by helping us better understand the central role of contemporary sports in our culture and politics.

PETTYS, TODD E, professor, Law-Faculty, 24 years of service, Spring 2024
Title: Campus Conflicts: Hostile Learning Environments and the Freedom of Speech
Prof. Pettys used his PDA to begin a book tentatively titled *Campus Conflicts: Hostile Learning Environments and the Freedom of Speech*. Although the book will touch upon a variety of speech-related species of controversy, its primary focus will be on situations in which students or instructors at public colleges or universities speak in ways that other students find unacceptably toxic. The crosscurrents that administrators face in such circumstances can be exceptionally difficult to navigate. On the one hand, public institutions have strong, mission-driven reasons to protect their community members' freedom of expression, both in and out of the classroom, even when others find the expression offensive or alarming. But those institutions also have strong, mission-driven reasons to create learning environments that attract and retain the students whom they wish to enroll. Focusing particularly on the First Amendment and on federal antiharassment legislation, the book will describe and resolve tensions between those two important areas of the law. The book will be useful for students, faculty and administrators at the UI and at all public postsecondary institutions.

PLUMERT, JODIE M, professor, CLAS-Psychological & Brain Sciences, 33 years of service, Fall 2023
Title: A Parent-Based Intervention for Enhancing Children's Road-Crossing Safety
Child pedestrian injuries and fatalities have risen in recent years, leading to calls for increased efforts to prevent collisions with vehicles. Parents play a primary role in teaching children how to cross roads, yet almost nothing is known about the kinds of guidance parents provide to their children while crossing roads together. This PDA leveraged immersive virtual environment technology and wearable pedestrian recording technology to study how parents and their 6- to 10-year-old children individually and jointly cross virtual and real roads. UI undergraduate and graduate students involved in the research gained valuable skills in coding virtual environment scenarios and testing parent-child dyads. Prof. Plumert incorporated the research findings into her undergraduate course on applied psychology. This also provided the basis for a newly funded NSF grant that will further examine parent-child road crossing interactions, with the ultimate goal of identifying successful parental strategies for teaching children how to cross roads safely and determining which children might need additional guidance when learning to cross roads.

POWERS, TED, associate professor, CLAS-Anthropology, 9 years of service, Fall 2023
Title: Decolonizing Austerity: Health, Economy, and Inequality in South Africa
Prof. Powers published a co-authored peer-reviewed article, developed two new research partnerships, and continued the development of an existing research program. The outcomes produced via this PDA will benefit students by supporting their learning process via the introduction of new research findings on how the transnational circulation of heterodox conceptions of health and medicine can produce divergent outcomes in social settings with differing cultural and historical influences. The outcomes produced will benefit the State of Iowa or society generally by contributing to ongoing efforts to understand the relationship between policy, health, and social inequality. The State of Iowa and society generally will also benefit from the research undertaken by supporting the training of undergraduate students who develop critical thinking skills and go on to become active citizens, who are the backbone of a strong democracy.

PRIEST, RICHARD T, associate professor, CLAS-History, 11 years of service, Spring 2024
Title: Oceans of Oil: The Epic Struggles Over Offshore Drilling in the United States
During the PDA, Prof. Priest finished drafting a book manuscript, now titled *Offshore Oildom: The Politics of Extracting Energy from the American Seabed to 1978*. He completed three of eight chapters, revised the remaining five, and drafted a new introduction and conclusion. This book is the first in a two-volume history that narrates the legal, political, and policy dramas over offshore

oil in the U.S. Prof. Priest also began discussions with three university presses for submitting the manuscript for review. The research and writing for this project will help him revise lecture notes, presentations and assignments in three undergraduate courses he teaches on oil, energy and the environment. The book, and its sequel, are the first studies to incorporate voluminous research into government archives, manuscript collections, oral histories and other original primary sources to provide a comprehensive narrative of the politics, policies and people involved in creating and governing the American offshore oil industry, which supplies a substantial portion of domestically produced energy to American society.

PRUSSING, ERICA, associate professor, CLAS-Anthropology, 19 years of service, Fall 2023
Title: Storytelling With Numbers: Humanizing Statistics Through Pro-equity Data Science
Prof. Prussing used this PDA to expand upon her ongoing research about pro-equity initiatives in data sciences. Such initiatives aim to integrate concerns with justice into scientific and statistical methodologies. As they do so, many illustrate new ways to integrate humanistic with scientific ways of knowing, and to better convey the richer human stories that are often embedded within statistical data. Prof. Prussing successfully prepared and submitted grant proposals for new studies that will examine how such integrations are shaping racial justice and related equity initiatives in U.S. epidemiology. She successfully prepared and submitted grant proposals to the National Science Foundation and the National Endowment for the Humanities, to conduct fuller ethnographic studies of how these initiatives make a case for broadening conventional understandings of evidence and methods in epidemiology. Prof. Prussing will incorporate insights from this project into her interdisciplinary graduate and undergraduate courses in cultural anthropology, medical anthropology and global public health.

SCHLUTTER, MORTEN, associate professor, CLAS-Religious Studies, 20 years of service, Spring 2024
Title: The Platform Sūtra and the Evolution of Chinese Zen Buddhism
During his PDA, Prof. Schlutter did additional research for, and significantly advanced, his book project which is based on several rare book manuscripts of a key Chinese Chan (Jpn.: Zen) Buddhist text known as the *Platform Sutra of the Sixth Patriarch*. By examining changes that took place over time in the *Platform Sutra*, the project seeks to trace crucial changes in Chinese Chan-Buddhist doctrinal thought and meditation practices over more than 500 years. Prof. Schlutter caught up on recent scholarship in Chinese and Japanese language and have near-complete drafts of most chapters. He expects to submit the book manuscript to *Hawai'i University Press* for peer review at the end of the 2024-25 academic year. Although based on original research, the book is designed for a wide audience of non-specialists and will be useable in upper-level college courses. The research and writing of the book will help enhance Prof. Schlutter's teaching at both the graduate and the undergraduate levels.

SCHNIEDERS, MICHAEL J, associate professor, Engineering-Biomedical Engineering, 11 years of service, Fall 2023
Title: Chemical Theory to Understand Non-Coding Genetic Variants and Formulate Therapeutics
Prof. Schnieders spent the PDA as a visiting professor at UC San Diego in the lab of Prof. Michael Gilson. Prof. Schnieders led the completion of three collaborative projects resulting in peer-reviewed journal articles, two of which were selected to be featured as journal covers. The first publication entitled *Crystal Polymorph Search in the NPT Ensemble via a Deposition/Sublimation Alchemical Path* describes a computational method that predicts how pharmaceuticals crystallize into tablets. The second publication entitled *Constant-pH Simulations with the Polarizable Atomic Multipole AMOEBA Force Field* describes a simulation method that predicts the acid/base behavior of proteins, which are the building blocks of cells. The third publication entitled *Force Field X: A computational microscope to study genetic variation and organic crystals using theory*

and experiment describes a computational microscope that produces the most accurate atomic resolution models of diseases available at UI. Students at UI learn how to use this computational microscope by taking the course *Computational Biochemistry*.

SHILL, GREGORY, professor, Law-Faculty, 6 years of service, Spring 2024
Title: Unpacking the Car
Prof. Shill used his PDA to widen and deepen his research in two areas. The first is transportation policy. Prof. Shill pioneered the legal dimension of this field in 2020 in the *NYU Law Review*, and during his PDA completed work that will become part of his book project, *Unpacking the Car*. He drafted the bulk of a law review article (with a co-author) on transportation policy; on its connection to aging, he wrote a chapter for a volume edited by Yale professors and drafted (with UI co-authors) two scholarly articles. He is incorporating feedback on a draft book proposal. The second research thread emphasizes market structure. For one article he created a novel dataset to document changes in the geographic clustering and other characteristics of one type of business--law firms--following the Great Chicago Fire of 1871, during an era when Iowa contributed greatly to Chicago's rise. He also drafted sections of a law review article applying a leading theory in corporate governance (the common ownership hypothesis) to a novel context (fixed-income markets). Research in both these areas will enhance Prof. Shill's teaching.

STIPP, CHRISTOPHER, associate professor, CLAS-Biology, 20 years of service, Spring 2024
Title: Establishing a Genome-wide Method to Identify Protein-Protein Interactions in Living Cells
Prof. Stipp used his PDA to advance research projects in his lab focused on breast cancer and prostate cancer progression and metastasis. Some of these experiments also utilized genome-wide genetic screens in a prostate cancer model, keeping intact the hypothesis-generating, forward-leaning aspects of the original PDA proposal. In addition, the PDA was used to finish a hypothesis-driven breast cancer project that had been unfinished in Prof. Stipp's lab. The outcomes of Prof. Stipp's research have advanced knowledge of breast and prostate cancer metastasis, contributing to potential new strategies for interventions that might counter breast and prostate cancer progression and creating new avenues for UI students with interests in biomedical research to explore.

THOMAS, GEB W, professor, Engineering-Industrial Engineering, 26 years of service, Fall 2023
Title: Advancing Inventions to Commercialization in Medicine and Occupational Health
Prof. Thomas used this PDA to advance his work in medical simulation, workplace hazard detection, and technology development for education. Specifically, the PDA provided time for Prof. Thomas to focus on the technical aspects of hardware, electronic and software development, enriching his practical engineering experience, and advance the projects towards their successful conclusion. It also provided more time to work with his graduate students and colleagues on proposal development and research production. The outcomes of this award are: 1) dissemination of an Iowa-developed simulator for training surgeons; 2) development of a new simulator; 3) refinement of wireless sensor systems into a product for the Department of Defense, among other markets; 4) conference papers and journal articles on development and testing of the technologies; and 5) an NSF proposal to refine a training system for an undergraduate class. Students will benefit from the new real-world design examples and challenges as well as the in-class tool. Iowans will benefit from more skillful surgical residents, reduction of workplace hazards, and the higher skill level of our graduates.

TOLBERT, CAROLINE J, professor, CLAS-Political Science, 17 years of service, Spring 2024
Title: Building a Resilient Democracy: Modernizing and Updating U.S. Elections
Existing data are not granular enough to measure the full range of barriers people face in voting because existing measures of election administration are available only at the state level. Over

reliance on state data can conceal important substate variation in election practices, as U.S. counties administer elections. People should be more likely to vote when they live in places with better managed elections. Prof. Tolbert develops the county election administration (CEA) index ranking every county nationwide as very high, high, average, low, or very low in terms of their capacity to conduct elections using an interval-level scale. The CEA is validated by comparing it with the available state-level data over time (2016-2020). Results show that more urban areas generally have lower performance levels in conducting elections, but not in all cases, and less affluent and high Latino and Black communities generally have lower performance. The empirical results expose significant inequalities in election administration quality based on demographics and wealth, as well as improvement in the conduct of elections over time, counter to claims of electoral irregularities in 2020.

VOYCE, STEPHEN C, associate professor, CLAS-English, 12 years of service, Spring 2024
Title: Dark Worlds: Culture, War, & the National Security State
Prof. Voyce made significant progress on his book, *Dark Worlds: Culture, War, & the National Security State*. During the award period, he completed drafts in progress for the book's foreword, introduction, and chapter 2, while he completed a draft of chapter 5. Additionally, the PDA, in conjunction with an AHI grant, gave Prof. Voyce extensive opportunities to complete all remaining research at museums, archives, and other research facilities. A partial list includes the Imperial War Museum and Tate Modern in London, the Whitney Museum and Pace Gallery in New York, the CIA Museum in Washington D.C, and the Getty Center in Los Angeles. This critical research will shape the remaining chapters of the book. Because the project requires such extensive travel to unpublished papers and art objects, the PDA was invaluable to the progress of this project. It also contributed greatly to Prof. Voyce's courses, 3520: Lit. and Culture of the 21st Century, 3155: Literature and Art, and 7700: Media Histories of the Avant-Garde.

WALKER, ELIZABETH A, associate professor, CLAS-Communication Science & Disorders, 8 years of service, Spring 2024
Title: Ecological Momentary Assessments for Adolescents with Hearing Loss
For her PDA, Prof. Walker completed research on a pilot study to determine feasibility of using ecological momentary assessments (EMA) in adolescents with and without hearing loss. The outcome included completing data collection with 20 adolescents (10 with hearing loss, 10 with hearing) using EMA in natural listening environments during the school year and summer. These data provide evidence that hearing technology reduces listening effort and fatigue in the real world for adolescents who are deaf or hard of hearing. Improving outcomes for teenagers with hearing loss benefits society in general and supports educational planning decisions for Iowan students with disabilities. The PDA directly benefitted UI undergraduate and graduate students who participated in study design, data collection, and research dissemination. Three students have presented on the study findings at three different national conferences and are all co-authors on a manuscript that is currently under review in a high-impact journal.

WANG, LIHE, professor, CLAS-Mathematics, 30 years of service, Fall 2023
Title: Theory and Applications of Partial Differential Equations
Prof. Wang introduced a notion of local capacity which has been shown to classify symmetries of domains in the space. He has one research article published, two in the review process, and submitted two papers on the regularity theory of partial differential equations and on equations of fluid dynamics. A new compactness result has been proved along the regularity theory and several new results are along the pipelines. During this PDA, he has delivered research talks at Princeton University, University of Michigan, Seoul National University, Shanghai Jiaotong University and Scuola Normale Superiore, Italy. The mentioned results have received international recognition.

WINDSCHITL, PAUL D, professor, CLAS-Psychological & Brain Sciences, 26 years of service, Fall 2023
Title: Minimizing Bias in How People Interpret Risk Information
Prof. Windschitl started a new line of research and began the development of a grant proposal that has now been submitted to the National Science Foundation. The work involves the development of a novel intervention to aid in people's decision making in multi-attribute contexts, such as when a person needs to choose among a set of health-treatment options. A new computerized application, which will be made public, builds a visualization that represents a person's decision task and component evaluations, while guiding people toward optimal solutions. The intervention will also be used for educational purposes in courses on judgment and decision making. Prof. Windschitl also collaborated on a new project on decision making about hearing aids, now with major funding to an international team led by a UI colleague with Prof. Windschitl as co-PI. Meanwhile, several other experiments were conducted during the PDA, which advanced Prof. Windschitl's other lines of research and provided important training experiences for two PhD students and several undergraduates. The work resulted in three publications in high-quality journals in psychology and decision sciences.

ZHU, XUEYU, associate professor, CLAS-Mathematics, 7 years of service, Fall 2023
Title: Towards Robust and Reliable scientific Machine Learning Algorithms
Prof. Zhu leveraged this PDA to advance his research program in scientific machine learning (SciML), an emerging field of artificial intelligence. His primary focus was developing robust uncertainty quantification methods for machine learning models, a crucial aspect of the reliability of predictions across diverse applications. Prof. Zhu fostered interdisciplinary collaborations to expand the application of SciML methodologies, particularly in domains such as oil and gas exploration and quantum sensing. The outcomes of these efforts yielded multiple journal articles and successful grant applications, with the potential to transform problem-solving capabilities in various sectors. Furthermore, the integration of these insights into Prof. Zhu's new graduate course will equip students at UI with practical knowledge and skills vital for navigating the evolving landscape of this research direction, contributing to STEM workforce development. The impact of the PDA extends beyond academia, benefiting the state of Iowa and the broader society by advancing technological capabilities and addressing pressing challenges through the newly developed algorithms.

Iowa State University

AL SHIHABI, DIANE, Associate Professor, Interior Design, 12 years of service, Fall 2023
Title: The Pedagogy of Cultural Diplomacy: Interdisciplinary Design Studios as Sites for Innovative Experimentation in Preservation and Cultural Heritage.
Professor Al Shihabi and colleagues made substantial progress on a book that provides students with studio experiences in historic international sites owned by the U.S. State Department, to expand their perspectives about preservation and cultural heritage. Al Shihabi also completed a book chapter on a separate project, led students on an interdisciplinary design studio in Paris, and developed new materials for her graduate courses.

BARAN, EVRIM, Associate Professor, School of Education, 7 years of service, Spring 2024
Title: Human-Centered Design as a Frame for Teachers' Digital Transformation
Professor Baran, an educational technology expert, developed digital competencies for creative problem solving and human-centered design to enhance K-12 teacher education. This work led to the preparation and submission of three manuscripts and seven invited presentations, and will be incorporated into Iowa State's teacher education and educational technology programs.

BEST, JEREMY, Associate Professor, History, 9 years of service, Spring 2024
Title: Recovering Holocaust Memory in Popular Culture: Military Boardgames and the Final Solution, 1945-1975
Professor Best made substantial progress on his book project detailing the history of World War II military themed war games and their role in creating Holocaust ignorance in both countries. Best traveled to New York and German to support his assignment, conducting research that will also support his history courses at Iowa State.

CAI, YING, Professor, Computer Science, 21 years of service, Fall 2023
Title: Authentication of Rank-aware Query Results
Professor Cai worked with a colleague at Princeton University to develop authentication data structures for rank-aware queries, which are used in a wide range of applications, including third-party cloud systems. Results include course materials and new projects for Iowa State graduate students, submission of a research paper, $237,707 in funding from the Air Force Research Laboratory, and an NSF funding proposal for $600,000.

COTOS, ELENA, Associate Professor, English, 9 years of service, Fall 2023
Title: Genre Studies and Technology: Expanding the Territory for Move Analysis of Research Articles
Professor Cotos' assignment focused on a book project demonstrating how linguistic analysis in research articles can be enhanced through technology, which in turn may improve the teaching of scientific writing. The book, currently under contract with the Cambridge University Press Applied Linguistics series, will benefit scholars investigating scientific writing and will be shared with Iowa State graduate students. Additional outcomes included six conference presentations, and new materials for Iowa State courses.

ERDIM, FIRAT, Associate Professor, Architecture, 8 years of service, 2023-2024 academic year
Title: Making Together: Architectural Instruments and their Social Assemblies
Professor Erdim's project sought to foster cross-cultural engagement and collaborations with students and faculty in Turkey through the fabrication of 15 new sonic architectural instruments. Erdim also gave numerous lectures and performances, published a journal article, and established research collaborations with colleagues abroad.

I, JI YEONG, Associate Professor, School of Education, 9 years of service, Fall 2023
Title: Extending the Potential of Effective Mathematical Pedagogy for Emergent Bilinguals
Professor I's assignment focused on math education for English learners, including data collection for her active National Science Foundation CAREER award. Outcomes included the submission of two manuscripts, three conference presentations, new course materials, and international research collaborations.

JEONG, EUNHA, Associate Professor, Apparel, Events, and Hospitality Management, 9 years of service, Fall 2023
Title: Reducing Food Waste Through Upcycled Food Promotion: The Impact of Celebrity Endorsement
Professor Jeong's work explored how restaurants can adopt sustainable practices like upcycling, converting food leftovers into new products, can address the $52 billion challenge of food waste. Results include additional material for Iowa State restaurant management courses, three papers and conference presentations, and support for graduate students.

JIANG, SHAN, Associate Professor, Materials Science and Engineering, 8 years of service, Fall 2023
Title: Develop Janus nanoparticles for next generation coating materials and additive manufacturing
Professor Jiang's assignment focused on Janus nanoparticles, new materials that produce high-quality coatings and inks without using organic solvents, in large quantities. Jiang's work with colleagues in Europe resulted in seven invited presentations and $253,000 in external research funding.

KAISER, MARK, Professor, Statistics, 33 years of service, Fall 2023
Title: Completion of Textbooks for Statistical Methods Courses
Kaiser's assignment focused on converting lecture notes and other course materials into formal textbooks for statistical methods courses, which can be used both at Iowa State and in other graduate statistics programs. Kaiser also delivered a conference presentation in Peru.

KIM, JAE-KWANG, Professor, Statistics, 16 years of service, Fall 2023
Title: Innovative applications of data integration
Kim used the assignment to develop innovative methods and applications for data integration, which are expected to have broad impact in areas such as epidemiology or marketing. Outcomes included work on a new textbook on survey sampling, two publications, and new material for Iowa State statistics courses.

KULIC, VLADIMIR, Professor, Architecture, 6 years of service, 2023-2024 academic year
Title: Architecture and Geopolitics: The Cold War and Beyond
Professor Kulic made progress on a book exploring the relationship between architecture and geopolitics in Yugoslavia, as well as an exhibition to be shown in Belgrade, and at Vanderbilt University. Additional outcomes included book projects and book chapters with colleagues in the discipline, and eight guest lectures and conference presentations.

LENCE, SERGIO HORACIO, Professor, Economics, 31 years of service, Spring 2024
Title: Predicting Market Stress and Modeling Productivity for Agricultural Commodities
Professor Lence studied the predictability of stress in commodity markets during periods of extreme volatility. The assignment resulted in the preparation of six journal articles, and the development of state-of-the-art models that may be used to improve the pricing of crop insurance.

LI, TONGLU, Associate Professor, World Languages and Cultures, 15 years of service, 2023-2024 academic year
Title: Beyond the Secular Imagination of Modernity: Religion and Literature in Post-socialist China
Professor Li's assignment examined how various literary interpretations of religion allow people in post-socialist China to construct their cultural identity and imagine their spiritual life. Outcomes of this work included two journal articles, an essay, seven invited talks, and a proposal for a new Iowa State course on Chinese calligraphy.

LIU, PENG, Professor, Statistics, 18 years of service, Fall 2023
Title: Development of Statistical Methods for Integrative Analysis of Biological Omics Data
Professor Liu developed new statistical methods for analyzing biological omics data (such as transcripts, proteins, metabolites, etc.), in support of precision medicine and agriculture. Outcomes include the submission and/or publication of eight research papers, five conference presentations, three new software programs, and more than $7.5 million in external funding proposals.

LU, CHAOQUN, Associate Professor, Ecology, Evolution, and Organismal Biology, 9 years of service, Fall 2023
Title: Cost-effective controls for mitigating agricultural soil N2O emissions: Opportunities and uncertainties
Professor Lu's assignment addressed the challenge of balancing food, energy and water production with limited resources. Results include the preparation of two manuscripts, two international conference presentations, materials for Lu's courses on geographic information systems and ecosystem modeling, and new research collaborations.

MACKIEWICZ, JO, Professor, English, 10 years of service, Spring 2024
Title: Shop Floor Smarts: Communication as Knowledge Production in Welding and Metal Fabrication
Professor Mackiewicz used the assignment to write a book, *Learning Skilled Trades*, which is based on her experience as a novice welder and explores how spoken and written communication is used to produce knowledge in skilled trades work. The project contributes to pedagogy in the skilled trades, supports Iowa State's relationships with fabrication businesses and manufacturers, and enhances Mackiewicz's teaching.

MARTIN, STEVE, Professor, Materials Science and Engineering, 38 years of service, Spring 2024
Title: Investigation of Lithium Metal Interfaces with Li+ Ion Conducting Glassy Solid Electrolytes: A Collaboration with Oxford University, University of Muenster, Oak Ridge National Laboratory, and Johnson Energy Storage
Professor Martin used his assignment to work with colleagues around the world to improve lithium ion batteries. Outcomes of this work include four publications, eight invited presentations, one new patent, and one record of invention, new projects for graduate students, a $200,000 funding award, and a $640,000 funding proposal.

MCCULLOUGH, JASON, Associate Professor, Mathematics, 7 years of service, Spring 2024
Title: Commutative Algebra at the Simons Laufer Mathematical Research Institute
Professor McCullough's assignment included participating in the semester-long Simons Laufer Mathematical Research Institute special program on Commutative Algebra. The program, which attracts global experts, advanced McCullough's work on a textbook on this subject, which will be

used in Iowa State graduate courses. Other outcomes included the submission of two research papers, a $278,000 NSF grant, and two external funding proposals totaling $2.6 million.

MEILLEUR, MAURICE, Assistant Professor, Graphic Design, 5 years of service, Fall 2023
Title: Constructing Letters
Professor Meilleur used his assignment to work on several projects related to constructed scripts, a specialized genre of lettering and type design, including two books. Other outcomes included two invited presentations and enhancements to Meilleur's Iowa State course in advanced typography.

MUECKE, MIKESCH, Associate Professor, Architecture, 29 years of service, Fall 2023
Title: The Pedagogy of Cultural Diplomacy: Interdisciplinary Design Studios as Sites for Innovative Experimentation in Preservation and Cultural Heritage
Professor Muecke and colleagues made substantial progress on a book that provides students with studio experiences in historic international sites owned by the U.S. State Department, to expand their perspectives about preservation and cultural heritage. Muecke also edited, designed, and published 14 books through Culicidae Press, completed an exhibit in the College of Design, and led a studio for Iowa State students in Paris.

MEYERS, RACHEL, Associate Professor, World Languages and Cultures, 10 years of service, Spring 2024
Title: Display and Dedication in Roman Hispania
Professor Meyers used her assignment to develop a book project focused on marble statues in the ancient Roman world; specifically, how the statues were visual cues that informed citizens about interpersonal relationships and power dynamics between them and their rulers. Outcomes also include additional content for courses on Roman archaeology and ancient Mediterranean culture, and the submission of three manuscripts.

POPLIN, ALENKA, Associate Professor, Community and Regional Planning, 9 years of service, Summer 2024
Title: Expanding Game Studies, Research, and Teaching at Iowa State University
Professor Poplin's assignment focused on expanding game studies in support of Iowa State's new undergraduate program in game design, a "Degree of the Future" approved by the Iowa Board of Regents in 2024. Additionally, Poplin's work resulted in $15,000 in external funding, $95,000 in internal funding, a $400,000 external funding proposal, and several conference presentations.

REDDY-BEST, KELLY, Associate Professor, Apparel, Events, and Hospitality Management, 8 years of service, Fall 2023
Title: 21st Century Queer and Trans Fashion Brands
Professor Reddy-Best examined emerging brands' histories and product offerings in this trans fashion market. Outcomes include a book on the subject, expected to be published in 2025, as well as interviews and analysis, and material for Iowa State courses on fashion history and culture.

REUEL, NIGEL, Associate Professor, Chemical and Biological Engineering, 8 years of service, Spring 2024
Title: Prospecting Thermophilic and Biofilm Enzymes for Conventional Plastic Degradation
Professor Reuel used his assignment to identify new enzymes to safely degrade plastic waste for reuse or disposal. Outcomes of this work included $1.5 million in external funding proposals, three invited presentations, and term projects for Iowa State's chemical engineering product design course.

SPENCER, DOUGLAS, Associate Professor, Architecture, 6 years of service, Spring 2024
Title: Architecture and the Ends of Capitalism: Scenes from a Crisis
Professor Spencer's book project, expected to be published in 2025, is the third in sequence of critically acclaimed publications that analyze how architecture is employed in responding to contemporary environmental, economic and political crises. Additional outcomes include seven essays and journal articles, support for graduate students, and additional material for Spencer's Iowa State courses.

STINGA, PABLO RAUL, Associate Professor, Mathematics, 9 years of service, Fall 2023
Title: Analysis of nonlocal models: viscoelastic materials and boundary conditions
Professor Stinga's assignment included developing a new class of mathematical tools, called nonlocal models, to help describe how objects, people and local communities are influenced by others who are physically far away. Outcomes included finalizing a textbook on the subject, $42,000 in funding from the Simons Foundation, and a $288,633 NSF funding proposal.

VALENTINE, OLIVIA, Associate Professor, Art and Visual Culture, 8 years of service, 2023-2024 academic year
Title: Groundwork: Izmir after the 2020 Earthquake
Professor Valentine documented changes to Izmir, Turkey, due to a 2020 earthquake, profiling the creation of new works in the areas of textiles, sculpture, and drawings. This research resulted in new materials for Valentine's Iowa State courses in textiles, as well as eight lectures, exhibitions and public art performances. Valentine received a grant of $6,550 from Iowa State's Center of Excellence for the Arts and Humanities to support her work.

VELA-BECERRA, JAVIER, Professor, Chemistry, 15 years of service, Spring 2024
Title: Advancing Next Generation Nanotechnologies for Clean Energy and Sustainability
Professor Vela-Becerra developed lead-free semiconductors made of abundant and biocompatible elements for use in energy conversion. Outcomes include four peer-reviewed publications, new material for Iowa State courses, a patent application, and $5.3 million in funding proposals.

VOGEL, DAVID, Professor, Psychology, 24 years of service, Fall 2023
Title: Increasing Acceptance of Mental Health Services for Rural Cancer Survivors
Professor Vogel's assignment focused on reducing mental health stigma and increasing the use of mental health services for cancer patients. Results of this work included six peer-reviewed publications – three of which were co-authored with Iowa State graduate students – as well as a book chapter on mental health communication, new research collaborations, $10,000 in funding from the University of Virginia Medical Center, and submission of a $50,000 external funding proposal.

WANG, YU, Associate Professor, Political Science, 10 years of service, Spring 2024
Title: Clean Energy Technology Adoption in Rural Communities to Enhance Energy Justice and Climate Resilience
Professor Wang's analyzed the social, community, and behavior factors affecting adoption of clean energy technologies in rural areas during her assignment. Results from this work included two manuscripts, an invited talk, a new survey instrument for assessing climate risk, new materials for Iowa State courses on energy policy, and a $3 million NSF funding proposal.

WEBER, MICHAEL, Associate Professor, Natural Resource Ecology and Management, 12 years of service, Fall 2023
Title: Unraveling the mysteries of fish movements and population dynamics in Midwestern lakes and rivers to guide management decisions
Professor Weber used the assignment to engage in field work on several projects with Iowa State undergraduates, graduate students, and state and federal partners; and develop scholarship related to acoustic telemetry. This work resulted in six journal articles, leadership of a research symposium, $1.7 million in new external funding, and an additional $1.96 million in funding proposals.

WENINGER, QUINN, Professor, Economics, 24 years of service, Spring 2024
Title: Empirical measurement in coupled human-natural systems
Professor Weninger studied coupled human-natural systems – how humans interact with the environment, for example – that requires calibration of both biological and human (economic) elements. Outcomes of this work include two papers, a research presentation to the Northwest Fisheries Science Center, and new material for Weninger's graduate courses in economics.

WESTORT, CAROLINE, Associate Professor, Landscape Architecture, 12 years of service, Spring 2024
Title: Designing a Demonstration Farm for Climate-Positive Best Management Practices in Limpopo Province, South Africa
Professor Westort used her assignment to develop a book proposal on demonstration farm design and implementation. Research to complete the proposal has also been incorporated into Westort's Iowa State courses in landscape architecture, as well as funding proposals for future work.

WOLTERS, TIMOTHY, Associate Professor, History, 14 years of service, 2023-2024 academic year
Title: Tragedy at Sea: Marine Navigation, Radio Technology, and the Point Honda Disaster
Professor Wolters completed primary source research for his book on the Point Honda disaster and similar incidents around the globe, addressing how new maritime technologies are adopted, as well as decision-making at sea, and the development of systems that incorporate resiliency and redundancy. Additional outcomes include two conference presentations, and materials for Iowa State courses on military history and global innovation.

XIANG, CHUNHUI, Associate Professor, Apparel, Events, and Hospitality Management, 12 years of service, Spring 2024
Title: Development of High Performance Functional Textiles
Professor Xiang used their assignment to develop new textiles that can minimize exposure to hazardous conditions in the workplace. Outcomes include $275,000 in external funding, a conference presentation, and new material for two Iowa State textile science courses.

ZHANG, SUNING, Associate Professor, Accounting, 7 years of service, Fall 2023
Title: The Wisdom of the Mob: Is Robinhood Trading Informative to Capital Markets?
Professor Zhang examined retail investors' trading patterns during the assignment, including how advances in technology have changed the way these investors participate in capital markets. Results of this work include a journal article presently under review, six conference presentations, and additional material for Zhang's accounting classes in the Ivy College of Business.