

Contact: Rachel Boon

PROFESSIONAL DEVELOPMENT ASSIGNMENT REQUESTS FOR FY26

Action Requested: Recommend approval of the professional development assignment requests submitted by the Regent universities for FY 2026.

Executive Summary: The Board of Regents must annually approve faculty professional development assignments as specified in Iowa Code §262.9(14) and Board Policy §2.2.R. For 2025-26, the University of Iowa, Iowa State University and the University of Northern Iowa request approval of 104 faculty professional development assignments. Guidance to the institutions permits them to request PDAs for a maximum of 3% of eligible faculty in a year. The requests for 2025-26 represent 2.4% of eligible faculty.

A brief description of the work planned for each proposed assignment is available below. This report addresses the Board of Regents Strategic Plan priorities tied to supporting innovation, economic development, human capital development, and advancing the teaching to support evolving workforce needs. The Board office recommends approval of the professional development assignment requests for FY 2026.

**NUMBER OF PDA RECIPIENTS AND PERCENT OF TOTAL FACULTY
FY 2021 – FY 2025**

	FY 2022	FY 2023	FY2024	FY 2025	FY 2026
SUI	43 (1.3%)	52 (2.1%)	59 (2.4%)	65 (2.7%)	56 (2.3%)
ISU	29 (1.6%)	38 (2.2%)	41 (2.3%)	38 (2.3%)	43 (2.8%)
UNI	0 (0.0%)	8 (1.4%)	9 (1.7%)	3 (0.9%)	5 (2.0%)
REGENT TOTAL	72 (1.2%)	98 (2.1%)	109 (2.3%)	106 (2.4%)	104 (2.4%)

Background

Educational excellence can be obtained only with a vital faculty that actively pursues new developments in knowledge and teaching. A period of sustained time for special projects is essential for maintaining faculty vitality. These projects impact the educational mission and involve research in a wide range of fields of value to the university. An assignment of time for such projects enables faculty members to improve individually and to achieve institutional educational objectives. Valuable outcomes of this program continue to be an increased visibility and prominence of our faculty and departments in some of the newest and advanced areas of research and scholarship, and the direct application of expanded knowledge to students and constituents in Iowa, the nation and the world.

Eligibility. Each university has academic policies that describe the process and requirements for professional development assignments (PDA), and which guide the selection of faculty.

University of Iowa. Full-time faculty members (i.e., tenure or clinical-track) with academic year appointments who have completed a minimum of 10 semesters of full-time academic service are eligible for an initial one-semester PDA. Full-time tenure-track and clinical-track faculty members with fiscal-year appointments are eligible for their first PDA of 4.5 months (i.e., one semester) in

length after they have completed a minimum of four years of full-time academic service or the equivalent (i.e., prorated for part-time faculty). Alternatively, fiscal-year faculty members who have completed eight or 11 years of full-time academic service or the equivalent (i.e., prorated for part-time faculty) are eligible for a PDA of nine months (i.e., two semesters), or a full 12 months, respectively. To become eligible for a subsequent award following a PDA, faculty members with academic-year appointments must complete 10 semesters of full-time service; faculty members with fiscal-year appointments must complete four years of full-time service.

Iowa State University. All members of the faculty employed half time or more are eligible to apply for faculty professional development assignment. There is no restriction on length of service in order to qualify for a faculty professional development assignment, however priority is given to accomplished senior faculty; to those faculty who are seeking competitive fellowships (e.g., Fulbright Award); and to faculty who have not received a faculty professional development assignment in the past five years.

University of Northern Iowa. Policies and procedures relating to Professional Development Assignments at UNI are defined in the Faculty Handbook. Only tenured faculty members are eligible to apply. A recipient of a PDA is ineligible for a subsequent assignment during the six academic years of active service following an award. Assignments are competitive and a campus-wide committee ensures that only those projects meeting the established criteria (e.g. context, significance and objectives, methods and timetable, and plans for dissemination and long-range importance) in the application are considered and reviewed for overall quality.

Review process. The universities each conduct a rigorous review process for each proposed PDA. Peer review and recommendation are the basis of selection at the department and college levels at each university and final approval by the provost. Criteria considered include quality of the application, the feasibility of the plan of work, the likelihood of success, the past record of productivity of the applicants, the criticality of the timing of the leave, and the developmental impact of a leave.

Length of assignments. Professional development assignments are usually for one semester, although they may be up to a year. For a PDA that is two semesters in length, compensation is limited to the amount of compensation a faculty member would receive during a semester-long assignment. Salary savings generated from faculty members on assignment for a full year offset the replacement costs for other faculty members.

Obligation to institution. Iowa Code §262.9(14) requires that a faculty member return to the institution for twice the length of time of the professional development assignment or to repay the costs associated with the PDA if the faculty member does not return to the institution. Following a PDA, faculty members are responsible for reporting the results of their assignments as specified by Board Policy 2.1.4.R. and institutional guidelines.

Value of professional development assignments. The PDA provide direct application of expanded knowledge to students, Iowans, the nation and the world. Recipients often compete successfully for external grants and awards that benefit the professors, the programs, the universities and the state by generating revenue for core university activities and research opportunities for undergraduate and graduate students.

Proposed activities. Faculty members engage in a variety of productive activities during their PDA. For example, faculty members perform intensive research, write scholarly books and articles,

create new works of art and composition, compile patent applications, present papers, work in industry, prepare grant proposals, mentor graduate students, and develop modeling systems, software, course materials and multimedia resources for their discipline.

Faculty replacement costs. Costs noted in the table below will be reduced, where possible, by having colleagues cover courses or deferring non-required courses to a later time.

BUDGETED REPLACEMENT NET COSTS

FY 2024 – FY 2026*

	FY 2024	FY 2025	FY 2026
SUI	\$176,071	\$205,443	\$251,385
ISU	\$217,702	\$27,464	\$0**
UNI	\$76,881	\$33,561	\$33,001
REGENT TOTAL	\$470,654	\$266,468	\$284,386

*Calculation reflects net costs (estimated costs minus salary savings)

** ISU costs would be \$348,550, but because several requests are for full year PDA, the salary savings are \$349,762.

University of Iowa

ADRIN, JONATHAN M, professor, CLAS-Earth & Environmental Sciences, 26 years of service, Spring 2026

Title: Coordinated Shallow Marine Species Turnover During the Early History of Animal Life on Earth: Was Early Animal Evolution Regulated by Astronomical Forcing?

Prof. Adrain will investigate the possible effect of astronomical forcing on the early evolution of animal life in the oceans. Fossil trilobites across what was then the northern tropical coast of North American (the present-day Great Basin region) show a remarkable pattern of periods of essential evolutionary stasis through time punctuated by sudden rapid and almost wholesale turnover. This phenomenon persists through nearly 20 million years and has a periodicity corresponding to the ~400,000-year cycle of changes in the eccentricity of the Earth's orbit around the sun. Such a link has never previously been demonstrated and if borne out will rewrite the textbooks of early animal evolution. The project is expected to result in several peer reviewed papers and monographs, a grant from the National Science Foundation, and multiple new findings and examples of cross-disciplinary work that will be integrated into all of Prof. Adrain's course offerings.

AMINZARE, ZAHRA, associate professor, CLAS-Mathematics, 7 years of service, Spring 2026

Title: Bridging Disciplines: Integrating Mathematics, Neuroscience, and Robotics for Enhanced Understanding of Locomotion

Prof. Aminzare's interdisciplinary research program aims to integrate math into neuroscience and robotics to study movement more effectively. This PDA project focuses on developing mathematical models of neural networks and integrating them into robotics, bridging the gap between neuroscience and engineering, and advancing our understanding of locomotion. By dedicating a semester solely to research, Prof. Aminzare will expand her current research program on mathematically modeling neural networks generating locomotion patterns, initiate a new collaboration with UI faculty to implement mechanical rules into robotics platforms, and concentrate on developing grant proposals and pursuing funding opportunities from diverse sources to sustain her research program. Additionally, she will redesign two math courses to ensure accessibility not only to math students but also to those from engineering and life sciences backgrounds. By providing a platform for training a diverse spectrum of students through co-advising on joint projects and classroom settings, Prof. Aminzare will foster interdisciplinary learning opportunities for many students across the campus.

ARNDT, MATTHEW, associate professor, CLAS-Music, 14 years of service, Fall 2025

Title: How Polarity Yields Five Codes of Music

Prof. Arndt is creating a posthuman musical poetics that does not strictly separate signs and things, meaning and matter. It will take the form of a series of seven videos and a book, serving to improve upon the humanist poetics of music put forward by Leonard Bernstein in a series of six videos and a book starting in 1973. Prof. Arndt accounts for another half century of linguistic and music theoretical research, and he innovates by translating Roland Barthes's five literary codes into musical terms with reference to epistemological principles. Unlike Bernstein, for accessibility's sake Prof. Arndt uses no jargon or musical notation. The poetics outlines the five codes of music, thematizing the Sun, the Moon, the Great Pyramid, and the rainbow from Pink

Floyd's 1973 album *The Dark Side of the Moon* and culminating in an examination of *The Dark Side of Oz*, the virtually non-human synchronization of this album with The Wizard of Oz. Prof. Arndt will complete the videos and the book manuscript, both of which are in progress. The book will serve as a text in his *Theoretical Approaches to Music* class, and the poetics will edify a wide audience of music lovers.

BELLI, MERIAM N, associate professor, CLAS-History, 17 years of service, Fall 2025

Title: Book Manuscript: *Death in Transit*

Prof. Belli will complete her book manuscript, entitled *Death in Transit*, derived from the research that she initiated in 2016-2017. Now building on recent publications in the field of MENA death studies, Prof. Belli will be substantially restructuring her earlier conception for this project. The proposed outcome of this PDA is the submission of a book manuscript for publication. This project is also expected to result in a related article and materials for undergraduate and graduate courses that will serve both CLAS students and health professionals. Prof. Belli's research benefits not only students but also the larger public, as it engages reflections on historical, ethical and philosophical issues about death but also socio-political inclusion, religion and politics, national identity, etc. Prof. Belli's work contributes to an understanding of modern identities, and global and transnational connections among various and different cultures, societies, communities and religions. Understanding transcultural identities is important for the interrelation among the members of our Iowa community.

BENNETT, DAVID A, professor, CLAS-Geographical & Sustainability Sciences, 25 years of service, Fall 2025

Title: The Provenance of Complex Spatiotemporal Dynamics

Climate change and the sustainability of natural, social, and economic systems that promote human wellbeing are widely recognized as grand challenges of the 21st century; challenges that can only be addressed by considering integrated human and natural systems (i.e., socioenvironmental systems) and must be addressed at local to global scales. Actions and, therefore, decisions must be taken. Simulation models provide a tool to explore plausible outcomes of alternative decisions made; however, such models produce huge, complex spatiotemporal datasets that present their own set of challenges as researcher and decision-makers analyze and interpret them. In this proposal, an argument is put forth for new analytical tools capable of investigating theories about socioenvironmental system dynamics and supporting decision-making in the context of uncertainty, adaptive behavior, and complex interacting processes. Prof. Bennett will investigate the application of machine learning to the analysis of results produced by models of socioenvironmental system dynamics in the context of climate change and sustainability, develop novel AI tools, and prepare a proposal for NSF funding.

BORK, ROBERT, professor, CLAS-Art & Art History, 27 years of service, Spring 2026

Title: Designing French Gothic Architecture, 1130-1280

Prof. Bork's current book project considers Gothic architecture in France from 1130 to 1280, a period that produced Notre-Dame in Paris and the cathedrals of Chartres, Reims, and Amiens. More specifically, this project involves using computer-aided geometrical analysis of laser-scanned churches to show in detail how Gothic builders used simple geometrical operations to

develop their complex designs, and how they addressed technical challenges as they competed to develop increasingly audacious structures for their clerical patrons. Most of the research for the project has been completed, thanks partly to Arts and Humanities Initiative funding that allowed Prof. Bork to take a scanning team from Iowa to France in 2018. During a PDA period, therefore, Prof. Bork should be able to substantially complete the book manuscript. The book proposal has already received a provisional green light from Brill, the publisher of two books that he has recently edited. Its publication will enhance his international reputation, and that of the UI in general, while the research behind it has already informed his teaching and his mentoring of students on both the undergraduate and graduate levels.

BROTON, KATHARINE, associate professor, Education-Educational Policy & Leadership, 8 years of service, Fall 2025

Title: Understanding the College Experiences of Students Struggling to Make Ends Meet: Insights from New National Data

Over the past decade, there has been growing awareness of the problem of basic needs insecurity among college students. However, our understanding of the ongoing college experiences of students who are struggling to make ends meet remains limited due to a lack of high-quality data. Prof. Broton aims to address this gap by leveraging new, longitudinal, nationally representative survey data from the U.S. Department of Education. The objective is to create a descriptive portrait across several domains, shedding light on the later lived experiences of students who encountered basic needs insecurity early in their college career. Findings from the project will be incorporated into her graduate courses, *Finance in Higher Education* and *Survey Research and Design*, and result in a peer-reviewed presentation and manuscript, disseminating knowledge across the broader educational community.

BROWN, MATTHEW P, associate professor, CLAS-English, 24 years of service, Spring 2026

Title: Learning Murdoch: Character, Composition, and *A Fairly Honorable Defeat*

Prof. Brown will draft, revise and submit for publication a research essay on Iris Murdoch (1919-1999), the twentieth-century novelist and intellectual whose presence continues to shape both moral philosophy and fiction writing. Prof. Brown's study emerges from intensive work with holdings in the UI Library's Special Collections department: UI owns almost all of Murdoch's composition notebooks, where she drafted her novels longhand. The notebooks are a laboratory for understanding how literary creativity works, with results that are both specific to Murdoch and translatable to other creative endeavors. The research essay is the seed for a longer book project on Murdoch, creativity and literary reading. The project will inform Prof. Brown's teaching at the undergraduate and graduate level, providing new material for courses in nonfiction writing, prose style and scholarly editing. It will benefit the State of Iowa by highlighting unique, world-leading resources in Iowa City: on the one hand, the Writing University and, on the other, the UI Special Collections department.

BUCKLEY, JENNIFER A, associate professor, CLAS-English, 12 years of service, Spring 2026

Title: Act Without Words: Speechless Performance on Modern Stages

Prof. Buckley will complete the final two chapters of her monograph, *Act Without Words*. The first is the introduction, which includes a historical overview of theories and systems of movement,

gesture and expression. The second focuses on the Orientalist pantomimes of successful twentieth-century directors Max Reinhardt and Oscar Asche. While the secondary research for this chapter will have been completed, Prof. Buckley will conduct archival research at the Harry Ransom Center UT-Austin. Prof. Buckley intends for this interdisciplinary work, which connects English, Theatre Arts, Dance, and Cinematic Arts, to result in a new cross-listed class. The book, when published, will draw significant attention to fields of study and practice that are historically crucial to UI's national and international reputation.

CAMPBELL, ANN M, professor, Business-Business Analytics, 25 years of service, Fall 2025

Title: Optimization for Fifteen Minute Cities

Fifteen-minute cities (15MC) represent an ideal where citizens can access their daily needs, including medical offices, grocery stores and access to public transit within a 15-minute walk from their homes. While the idea of 15MC is a popular topic and being given consideration by cities around the world, there is very little academic work on this topic from an operations research (or problem solving) perspective. Most work is based on case-studies and evaluating different metrics for those case-studies. Prof. Campbell will use metrics and knowledge about urban planning to derive recommendations for cities towards achieving the 15MC goal. These recommendations will be based on using mathematical optimization and related analytics tools. Prof. Campbell will use real data from cities, including cities in Iowa, to help drive real, actionable insights for improved urban planning and better quality of life for those living in cities. This project, done in conjunction with students, will yield research papers and conference presentations, as well as create opportunities for outreach with planners in cities, including Cedar Rapids, Dubuque and Iowa City.

CANIN, ETHAN A, professor, CLAS-Creative Writing, 27 years of service, Fall 2025

Title: Untitled Novel

Prof. Canin will work on a novel that focuses on the life of one man. The novel will begin in the 1960s and continue into the 2030s and will be constructed around this man's yearly excursion to the wilderness. We will see him on his first trip, as a young boy camping boisterously with his parents, and on his last, as a man in his 80's who must be helped along the trail by his granddaughter. In between, we'll see him as a teenager, as a young man, as a new husband, as a father, as a divorcee, as a grandfather, as a remarried man, as a sick one, as a widower. This structure will allow Prof. Canin to explore the issue that is perhaps the most persistently puzzling to his own students: how to manage time in fiction. The Writers' Workshop is the most renowned writing program in the world, in part because it allows its faculty time to write the kind of fiction that attracts serious students. The Workshop's stature is a source of pride for every Iowan, and its reputation has attracted to the area not just writers themselves but an entire creative industry.

CARREL, MARGARET, associate professor, CLAS-Geographical & Sustainability Sciences, 14 years of service, Spring 2026

Title: Impacts of Increased Heat and Extreme Temperatures on Rural Health

While the U.S. is projected to experience higher daily and nighttime temperatures in the coming decades, the Upper Midwest will be particularly vulnerable to rising heat as rural populations engage in outdoor professional activities and reside in older housing stock with lower rates of air

conditioning. Utilizing data from the Veterans Health Administration, Prof. Carrel will integrate health records with environmental data via geographic analysis to understand how changing residential exposure to heat impacts both non-infectious (renal, cardiovascular) and infectious (S. aureus, E. coli) outcomes. The project will result in pilot data to enhance grant applications to NIH and other funding agencies and in publications and presentations at research conferences. The methods and data used by Prof. Carrel will also improve the training of graduate students in health geography and will enhance the spatial health course offered by Prof. Carrel to undergraduate and graduate students in all colleges. The findings will also improve understanding about how rural health outcomes may change in the coming decades and indicate opportunities for prevention or intervention.

CHOI, HYAEWEOL, professor, CLAS-Religious Studies, 7 years of service, Fall 2025

Title: Food and the Life Politics of Domesticity in Global Korea

Prof. Choi's project focuses on food as a useful lens for reexamining gender history and culture in Korea in the context of modernity, colonialism, industrialization, and globalization. Focusing on the food stories of ordinary people--mothers, peasants, nuns, housewives, adoptees, and street vendors--Prof. Choi examines the changing nature of cooking labor in the private and public spheres, and community-based networks and organizations that promote ethical eating and living in the face of environmental challenges. Prof. Choi will conduct fieldwork in Korea while preparing journal articles and a book manuscript. The PDA will benefit the UI and the state of Iowa in the form of curricular enrichment, interdisciplinary research collaboration, and outreach efforts through public lectures and a symposium.

CICHELLA, VENANZIO, associate professor, Engineering-Mechanical Engineering, 7 years of service, Fall 2025

Title: Enhancing Disaster Response through Autonomous Drone Navigation: Bridging Theory and Practice

As part of this PDA, Prof. Cichella aims to enhance disaster response through the development of an autonomous drone navigation system. This project will enable drones equipped with range sensors to quickly locate victims in disaster scenarios such as avalanches and earthquakes. The focus will be on crafting a sensing system that maximizes the precision of victim detection and devising motion planning algorithms to ensure the most efficient path to those in need. These efforts will result in the creation of a versatile software package designed for experimental validation and broader academic use. The resultant software will not only enhance the educational experience of students in Prof. Cichella's courses but also provide valuable research tools for undergraduate and graduate scholars at UI. Beyond its academic and practical merits, this project stands to benefit society at large by setting a new standard in disaster response efficiency, underscoring the university's commitment to innovation and community service.

COHEN, MARY L, professor, Education-Teaching & Learning, 18 years of service, Fall 2025

Title: Songwriting with a Purpose: Research Investigating Select Songwriting Programs that Support System-Impacted Youth and Adults and Survivors of Crimes

Prof. Cohen will complete research on a few key songwriting projects that occur with system-impacted populations including youth in detention, adults in prison, and crime survivors. She will

investigate the characteristics and qualities of effective songwriting programs through qualitative data collection including interviews, site visits and exploration of material. This award will benefit music and criminology students at UI by providing them with innovative approaches to teaching, music-making, and applications of generative justice. It will benefit the state of Iowa by providing key insights into relationship-building and self-expression for people who are impacted by crime.

CONRAD, AISLINN, associate professor, CLAS-Social Work, 10 years of service, Fall 2025

Title: Redefining Household Economic Hardship

Prof. Conrad aims to redefine economic hardship beyond just income. She will consider factors like material hardship, debt and financial stress. By analyzing data and conducting a literature review, Prof. Conrad will explore how these factors impact families. The findings will be used to improve social work courses at UI, equipping students to better assess client needs. Additionally, the research will establish Prof. Conrad as an expert in this area and inform future grant proposals to expand knowledge on economic hardship and its impact on families, ultimately benefiting society's most vulnerable populations.

COWAN, MICHAEL J, professor, CLAS-Cinematic Arts, 5 years of service, Spring 2026

Title: The Kulturfilm: Cinema and Public Knowledge in Weimar Germany

Prof. Cowan will start a new research project on the German Kulturfilm (culture film), a category encompassing various types of films with educational aspirations produced during the Weimar Republic (1919-1933). The first in-depth study of its kind, the project will make important contributions to the areas of documentary history, studies in sponsored film history, Weimar studies and contemporary studies in so-called "edutainment." Prof. Cowan will conduct research at the Berlin State Library and the German Federal Archives in Berlin, which will allow him to map out the eventual book, create a roadmap for research and writing during the years after the PDA, and complete a draft of an initial chapter on filming the cosmos in the 1920s. Building on Prof. Cowan's extensive publications on early German cinema, this research will directly enhance his teaching, including his signature course on Weimar Visual Culture and a new course to be created on "Useful Cinema." It will also consolidate his international reputation as a leading scholar of Weimar film and visual culture, thereby enhancing the reputation of UI.

CURTIUS, ANNY D, professor, CLAS-French & Italian, 22 years of service, Fall 2025

Title: Tidalectical Archives: The Rememory of Slavery in Museums, Memorials, Performances, and Visual Arts

Prof. Curtius's interdisciplinary book project explores how museums, memorials, contemporary performances, multimedia productions and literature engage imaginatively with the intergenerational trauma of slavery. She examines how the silences on transoceanic slave trades and slavery foster creative and critical dynamics for curators, artists, architects, writers and visitors in the US, Europe, Africa, the Caribbean and the Indian Ocean. She argues that these artistic and performative productions along with these museum interventions tackle the complexity of the present, interrogate the limits of the archives and constitute innovative ecosystems for new encounters and narratives on the entanglements of memory. Ultimately this book explores how global memory communities are formed, and how subjectivities are impacted, tested and challenged through transformative experiences. Prof. Curtius's teaching regularly features

elements of her book. Her project is the subject of collaborative and public outreach initiatives at UI, contributes to the university's international mission and cultivates relational dynamics between the Global South and the U.S.

DAVIDOVIC, JOVANA, associate professor, CLAS-Philosophy, 13 years of service, Spring 2026

Title: Beyond Killer Robots: Ethical Risk Management of AI-Enabled Weapons

There is growing concern among scholars, states and policy makers that AI-enabled weapons will be used without human oversight and thus unethically. This has led to increased governmental and scholarly focus on assuring human control over the use of AI weapons. This focus on human control over weapons' use has however neglected important issues regarding how these weapons are developed and tested. Prof. Davidovic will co-author a book (with Prof. Regan, Georgetown Law) that will fill this gap by providing a careful ethical analysis of the entire lifecycle of an AI weapon. After a year of interviews with weapon developers and document review, Prof. Davidovic will present the findings at conferences and complete two chapters of the book *Beyond Killer Robots*. This research will allow Prof. Davidovic to continue teaching modules on ethics of AI weapons in her classes. Furthermore, Prof. Davidovic will also create an industry toolkit based on the research, intended as a start-up tool for defense developers to build risk management practices for the development, testing and fielding of AI-enabled weapons.

DEDEAUX-NORRIS, TJ, associate professor, CLAS-Art & Art History, 8 years of service, Spring 2026

Title: By(e), Tameka!

Prof. Dedeaux-Norris uses media including, video, performance, installation, sculpture and painting to explore performative identity, racial discrimination and art world infrastructure. Within this framework Prof. Dedeaux-Norris examines time in the rap music industry in Los Angeles, their family's experiences in the aftermath of Hurricane Katrina, graduate education at Yale, and now life as an artist and professor working in Iowa City. In videos Prof. Dedeaux-Norris often performs distinct components of their identity, enacting personas from various periods in their life. In installations and wall works, they combine fabrics sourced from family and neighbors onto which they either print or paint scenes of homes they've previously inhabited, images of the social media profiles of friends and family, among other source material. The work constantly presents elements of personal history, a history that they deliberately obscure and reconstruct as part of their artistic process. *By(e), Tameka* is an experimental ongoing film/ digital quilt that in the post-production required editing down to three episodes. Prof. Dedeaux-Norris will work with Triad Productions of Des Moines for post-production editing.

DIPIETRO, STEPHANIE M, associate professor, CLAS-Sociology & Criminology, 5 years of service, Spring 2026

Title: Exploring the Criminogenic Effects of Military Service

Although criminologists have long regarded military service as a positive turning point in the life course, which can redirect individuals away from crime by instilling discipline, a sense of purpose and providing opportunities for education and employment, recent empirical evidence suggests that military service may have adverse consequences, including an increased propensity for criminality post-service. Prof. DiPietro will complete and submit a research manuscript and grant

proposal to examine the military experiences of American combat veterans who served in the post-Gulf War period (from 1990-today). The primary objectives of this work are to examine the relationship between military service and subsequent criminality, and to identify risk factors within military culture/environments that may contribute to criminal behavior post-service. The societal benefit of this work stems from its potential to identify protective factors/interventions that may mitigate the criminogenic effects of military service. This project is expected to result in several journal articles, and new material for Prof. DiPietro's undergraduate and graduate courses.

EKDALE, BRIAN R, associate professor, CLAS-Journalism & Mass Communications, 14 years of service, Spring 2026

Title: Investigating User and Platform Vulnerabilities to Strategic Information Operations

In recent years, there has been an increase in influence campaigns organized by foreign actors to spread propaganda, disinformation and manipulative content on social media. Prof. Ekdale seeks to understand how foreign actors exploit social media users and platform algorithms to increase the reach and effectiveness of influence campaigns. Prof. Ekdale will lead an interdisciplinary, multi-university research team in identifying user and platform vulnerabilities and proposing feasible mitigation strategies. This research has national and state-level security implications as it seeks to reduce foreign influence in local politics. This project will include graduate student researchers at UI, and the findings from this research will be incorporated into Prof. Ekdale's undergraduate and graduate teaching.

FAN, PATRICK, professor, Business-Business Analytics, 7 years of service, Spring 2026

Title: Research in Visual AI for Business Applications

Prof. Fan will continue his research in visual AI, which leverages advanced AI technology to understand the scenes of the video, identify objects and their emotions, actions, behaviors, and their states (if applicable), and trigger business notifications as needed to different stakeholders involved. For example, a retail store could use visual AI to alert staff for product reshelving or open a new register with many customers in line based on the footage from the in-store surveillance cameras. A nursing home could use visual AI to alert family members, staff members or medical staff if an elderly person falls in the room. Prof. Fan will work with his students and colleagues in Europe and China to develop cutting edge technologies for this important area. Upon return, Prof. Fan can use the knowledge from the project to seek more sponsored research projects from industry partners through Tippie Analytics Cooperative and use the funding to fund more students in AI research.

FARAJZADEH TEHRANI, MOHAMMAD, associate professor, CLAS-Mathematics, 7 years of service, Spring 2026

Title: Divisor and Moduli

Prof. Tehrani will complete his work supported by an NSF grant and expand his research in new directions based on research collaborations with C. Frohman et. al. He will work on unfinished papers towards publication in prestigious journals, complete his monograph based on several lecture notes produced for graduate courses, and work on new projects/ideas for sustaining his success in securing external fundings. These efforts will result in new opportunities for graduate students including possible research assistantships and new projects for research. They can also

bring more funding to sustain the positive impacts of the current grant in the mathematics department. Prof. Tehrani has been running a Math Club for middle and high school students in the past three years that has helped elevate the status of Iowa students in math competitions. He will revise Math Club and start educating a new generation of students.

FORBES, ANDREW A, professor, CLAS-Biology, 15 years of service, Spring 2026

Title: Why Can Some Parasites Attack Many Host Species While Others Can Only Attack One?

Prof. Forbes will study parasite communities, with a goal of determining why some parasites attack many host species while others are limited to just one host species. He will focus on oak gall wasps and their parasites, a system he developed during his previous PDA and that has already led to several strong research outcomes. Oak gall wasps induce growths on oak trees ("galls") and many different parasitic wasp species attack each type of oak gall wasp. There are more than 600 species of oak gall wasp in North America and collectively several thousand parasite species. Forbes will collect oak galls from around the U.S.; study the interactions of oak gall parasite species with the oak galls and with each other; generate genetic data for parasites; and develop new teaching modules for his undergraduate entomology course. The resulting work will lead to new publications, collaborations and funding opportunities for Prof. Forbes' research lab, will benefit undergraduate students via the improvement of his Entomology course, and will contribute to general understanding of parasitic wasps as critical biological control organisms.

GILLAN, EDWARD G, professor, CLAS-Chemistry, 28 years of service, Fall 2025

Title: Design and Investigation of Metal Phosphide and Metal Boride Electrocatalysts and Photocatalysts for Renewable Energy and Sustainability Applications

This PDA will free up significant time for Prof. Gillan to mentor his research students to succeed with their research projects, to master new research techniques, and to write articles for publication. He will develop new research directions and establish collaborations that will advance his renewable energy and sustainable catalysis research. These new directions will support and strengthen new grant proposal submissions to external federal funding agencies. Prof. Gillan will work with his research students to design novel metal phosphide and boride composites with earth abundant metals that perform useful catalytic transformations, such as activation of inert nitrogen gas to make ammonia, which is an Iowa regional and national chemical of agricultural importance, and it is energy intensive to produce. Successful development of new group expertise in catalysis for nitrogen or carbon dioxide conversion, will increase our program's external visibility. Research advances in renewable energy will inspire development of new course topics in important related areas for several UI undergraduate and graduate level courses.

HAN, WEIMIN, professor, CLAS-Mathematics, 34 years of service, Fall 2025

Title: Efficient and Effective Numerical Methods for Hemivariational Inequalities in Fluid Mechanics

Hemivariational inequalities (HVIs) are highly challenging mathematical problems with important applications in sciences and engineering. Due to the nonsmoothness and nonconvexity of the problems, it is very difficult to develop and analyze efficient and effective numerical methods. Prof. Han has done pioneering and systematic work for the numerical analysis of HVIs arising in solid mechanics. In this project, he will develop a comprehensive mathematical theory for the numerical

solution of HVIs for viscous incompressible fluid flows in fluid mechanics, with a focus on time-dependent problems. Because of the complications from the incompressibility constraint and the time dependence, new methods and techniques will be developed for the numerical studies of time-dependent HVIs in fluid mechanics. The results from the project will be published in four or more journal papers, be incorporated in a planned book on the numerical solution of HVIs with applications, be used in proposals for external funding, and become part of course materials.

HOFFMAN, LESA, professor, Education-Psychological & Quantitative Foundations, 7 years of service, Spring 2026

Title: Second Edition of Longitudinal Analysis: Modeling Within-Person Fluctuation and Change
The term longitudinal data refers to information collected repeatedly over time from the same persons, organizations or other individual entities. Such data are critical to measuring change over time (and prediction of individual differences therein) in many fields, such as in education, human development, organizational behavior and medicine. Prof. Hoffman will enhance graduate research and training at UI in statistical models for the analysis of longitudinal data by producing two primary outcomes. First, Prof. Hoffman will finish the largest revisions to the second edition of the 2014 book, *Longitudinal Analysis: Modeling Within-Person Fluctuation and Change* (Routledge / Taylor & Francis), which will expand the book's coverage of newer models for so-called intensive longitudinal data (i.e., in which multiple measures are collected per day over multiple days from many persons). Second, Prof. Hoffman will update the book's online electronic materials to add the increasingly popular R software, thus expanding the reach of the audience who will benefit from these resources at UI and beyond.

HUCKLEBERRY, ALAN, professor, CLAS-Music, 21 years of service, Fall 2025

Title: The Other 50% - Tackling Problems in Piano Pedagogy from Different Perspectives
Prof. Huckleberry will undertake research for and begin writing a book, *The Other 50% - Tackling Problems in Piano Pedagogy from Different Perspectives*, exploring three main areas of the field: pedagogy, performance and technique. His book will offer new solutions to old and new problems in classical music in general, and piano teaching and performance more specifically. He will offer perspectives and research from adjacent fields, including but not limited to kinesiology, physiology, semiotics, general education, and early childhood development. His research will provide a new understanding of piano pedagogy, informing his seminars, courses and lessons at UI. Through lectures and presentation on his research, as well as through his graduate students who are the piano teachers of tomorrow, it will also contribute to the field of piano pedagogy in general, enhancing the level of piano teaching across the state and nation.

KELLY, DONIKA, associate professor, CLAS-English, 5 years of service, halftime for academic year

Title: Fluke: A Poetry Collection

Prof. Kelly will complete a full-length poetry collection titled *Fluke*. This poetry collection has two strands. The first interrogates how a mother's death, resuscitation, and memory loss destabilizes a family. The second strand interrogates the effects of human activity on whales and dolphins, focusing specifically on family structures, changes in habitat, and the importance of memory. The two strands are woven together and connect personal loss to large scale environmental changes.

This poetry collection will model for readers and students that the personal is connected to the global, the human to the animal, and will encourage writing practices that explore this connection. This project will result in a draft of a full-length manuscript, with several individual poems published in journals and magazines, which will contribute to Iowa's prestige for excellence in creative writing; it will also support the creation of two new undergraduate courses.

KERNS, ROBERT J, professor, Pharmacy-Pharmaceutical Sciences & Experimental Therapeutics, 23 years of service, halftime for calendar year

Title: Advancements in Computer-Aided Drug Design

Prof. Kerns will engage in learning how to use and apply new state-of-the-art software for computer-aided drug design. Throughout the process of learning new software and new computational capabilities in drug design he will be applying the software to design new molecules for drug targets for ongoing and new research projects. Newly learned computational methods will be employed to design new small molecule therapeutics that will form the basis of preliminary data for new grant applications to federal funding agencies. At least one grant will be prepared and submitted during the award period. Becoming expert in the principles and application of state-of-the-art drug design software is important for Prof. Kerns to incorporate the newest methods and techniques into his didactic courses and to teach student researchers in his laboratory how to use the software toward their own research goals. Time made available to focus on learning and writing during the award period will also be utilized by Prof. Kerns to complete research manuscripts comprised of data that bridges between different student's primary work.

KUSIAK, ANDREW, professor, Engineering-Industrial Engineering, 37 years of service, Spring 2026

Title: Extreme Engineering

The phenomena and their applications in engineering evolve in time. This path of progress faces limits in technology, applications and theory. To address these limitations, the concept of extreme engineering was established. The proposed research will focus on extreme engineering aspects of product development and manufacturing. New technologies are likely to be adopted by promising applications involving tolerable risks. Over time, some application domains become saturated with new technologies. This naturally occurring market phenomenon and the progress in the technology itself, are likely to lead to new developments in technology for applications that normally would not be considered as worth addressing. The science of extreme engineering will be researched. Models and algorithms will be developed. The proposed research will lead to the development of solutions needed in engineering design and manufacturing. New collaborations and projects will be developed. The research outcomes will be disseminated in high quality publications and incorporated into existing courses. A textbook on extreme design and manufacturing and a new class are envisioned.

LAMUTA, CATERINA, associate professor, Engineering-Mechanical Engineering, 7 years of service, Fall 2025

Title: Development of Soft Robots with Human-like Intelligence and Human-like Motion

The goal of the project is to bridge the gap between human and robotic systems by integrating recent advances in the field of artificial muscles with advances in modeling and controls of robotic

systems. To achieve this goal, Prof. Lamuta, an expert in artificial muscles, will collaborate with Prof. Palli, University of Bologna, Italy, an expert in the design and controls of intelligent robots. This collaboration will lead to the development of next generation robotic systems with not only human-like intelligence but also human-like motion. The results will be integrated in an advanced course that Prof. Lamuta currently offers and will have a tremendous impact on the use of soft robots for medical applications. These results will increase the research portfolio of Prof. Lamuta and create new collaborations with the Carver College of Medicine. These collaborations will pave the way for new funding opportunities in the field of assistive robotics and position UI as one of the leading institutions in the emerging field of soft robotics for medical applications.

LLOPART, ANA, associate professor, CLAS-Biology, 17 years of service, Spring 2026

Title: Are Transposable Elements Speciation Facilitators?

Speciation—a key process that explains the diversity of life on Earth—occurs when populations gradually accumulate genetic differences that ultimately make them reproductively incompatible. Prof. Llopart's research focuses on understanding speciation and hybrid dysfunction (i.e., sterility and lethality), particularly the gradual accumulation of genetic incompatibilities that lead to reproductive barriers. While studies have extensively explored hybrid male fertility in *Drosophila*, revealing a complex genetic architecture, hybrid female sterility, which seems to have a simpler genetic basis, has been neglected. To address this gap, Prof. Llopart will investigate the genetic basis of hybrid female sterility by characterizing RNA populations in sterile and fertile hybrid females. The results will be published in high-impact scientific journals and used as preliminary data in a grant proposal for NIH or NSF. Additionally, this research will enhance the education of UI students, as new knowledge will be incorporated into undergraduate courses and support graduate research, contributing to the prestige of UI's educational mission and ultimately benefiting Iowa.

LOVAGLIA, MICHAEL J, professor, CLAS-Sociology & Criminology, 33 years of service, Fall 2025

Title: A Theory of Legitimacy, Race, and Exclusivity in Higher Education with Application to Public Universities

Why have prestigious universities been unable to increase the enrollment and graduation rates of Black students despite forty years of sincere and persistent attempts to do so? Prof. Lovaglia's project uses research and theory from several branches of social science to answer the question and to develop evidence-based remedies that public universities can adopt to increase both diversity and student learning. Results will also be useful to improve the quality of his teaching as well as that of colleagues for the benefit of all students. The project is expected to produce several scholarly articles culminating in a book to be completed in residence at UI during the PDA.

MCGUIRE, STEVE, professor, CLAS-Art & Art History, 35 years of service, Spring 2026

Title: Design, Build, Ride – How to Design & Build a Titanium Bicycle

Prof. McGuire will travel to the University of California Santa Barbara and the University of North Dakota to conduct two-week long workshops at each institution to help them establish and build out a handmade bicycle curriculum, a curriculum pioneered at UI that has received national and international recognition. Prof. McGuire will create and produce a two-hour video, *Let's Build Your*

Bicycle, on how to build a titanium bicycle, using the two workshops to anchor the film. This film will be used for instruction at UI and other colleges and universities. It will be premiered at *Bespoked*, the international handmade bike show, in Dresden, Germany, alongside the exhibition of the titanium bicycle built during the workshops. This project will initiate both future exhibitions and workshops for Prof. McGuire.

MUNOZ, KRISTINE L, professor, CLAS-Interdisciplinary Programs, 30 years of service, Spring 2026

Title: After Havana: Oral Histories of Teenage Motherhood in Colombia

Prof. Muñoz will collect oral histories from teenage mothers in a historic neighborhood of Medellín, Colombia, a continuation of ethnographic research she has conducted for 40 years. Global health research describes teen motherhood as a problem, even a crisis, assuming that young mothers are less likely to have healthy babies, be able to care for them appropriately, or achieve educational or professional goals because of the responsibilities of motherhood. Ethnographic and narrative analyses paint a more nuanced picture, in which problems of motherhood come more from stigma and social and economic exclusion than from age. This study will contribute stories from a community not represented in current research on teenage pregnancy and motherhood at a delicate time in Colombian history: after the Havana Peace Accords and decriminalization of abortion, amid protests that challenge social class arrangements in place since the Spanish conquest. This will in turn illuminate the impact of historical moments on public health in Iowa and elsewhere. This work will be the basis for several articles and a new Global Health Studies course: *Cultural Maladies and Considered Intervention*.

PETERSEN, ISAAC T, associate professor, CLAS-Psychological & Brain Sciences, 9 years of service, Spring 2026

Title: Precision Phenotyping of the Externalizing Spectrum on a Developmentally Informed, Common Metric Across Infancy to Adolescence

Externalizing problems, including aggressive and rule-breaking behaviors manifest differently across development. Trajectories to externalizing psychopathology remain poorly understood because available assessments do not consider their developmental changes in manifestation. Until such an approach exists, identifying pathways to externalizing psychopathology will be unattainable. In this PDA, Prof. Petersen will create a new assessment system that evaluates externalizing problems in comparable and developmentally sensitive ways from infancy to adolescence (ages 1-18 years) with scoring procedures that link scores across ages. Some items will be common across ages to capture the core externalizing phenotype. Other items will be unique to particular ages to capture age-specific manifestations. Prof. Petersen will validate scores with performance on cognitive tasks. This work will enable earlier identification and better prevention of externalizing psychopathology. It is expected to yield several publications, provide preliminary data for an R01 grant from the National Institute of Mental Health (NIMH), and provide new material for Prof. Petersen's undergraduate and graduate courses.

RAHMATALLA, SALAM F, professor, Engineering-Civil-Environmental Engineering, 19 years of service, Spring 2026

Title: A Book titled: Health Monitoring and Damage Detection of Structural and Mechanical Systems

Prof. Rahmatalla plans to write a book in the area of health monitoring and damage detection of structural and mechanical systems. The proposed book will be based on his teaching notes from the class *Structural Modeling and Health Monitoring*, which he has taught since 2009. The book could be used as a textbook for courses in structural health monitoring for junior and senior students in civil and mechanical engineering, as well as a reference book for other engineering courses that include vibration, finite element and structural analysis. Prof. Rahmatalla recently published the book *Prehospital Transport and Whole-Body Vibration* (1st Edition, Elsevier, Academic Press, 2022), has published a number of peer-reviewed papers about structural health monitoring and damage detection of structures, and has supervised many postdoctoral research scientists and many graduate students toward their MS and PhD degrees. Through his teaching and research, Prof. Rahmatalla has accumulated a significant amount of knowledge and has produced a book, reports, articles, and presentations that provide the basis for a new book.

ROSADO MARZAN, CESAR, professor, Law-Faculty, 5 years of service, Spring 2026

Title: Good Faith and Innovation: A Study on Contract Law, Organizations, and Political Economy
Research has shown a close connection between contractual good faith, firm collaboration, and innovation. Prof. Rosado Marzan's project aims to map the content and diffusion of contractual good faith in the U.S. and Germany, and particularly in high-tech industry, to understand whether good faith is, indeed, related to firm-led collaborative innovation in each country. Other conditions structuring collaborative innovation will also be explored, including social norms, standardized contracts, the role of firm associations in consolidating norms, other bodies of law, such as patent doctrine, and strategic litigation. Building on previous findings that highlight the facilitative role of good faith in collaboration and innovation and recognizing Germany's superior enforcement of good faith and support for interfirm collaboration compared to the U.S., the article anticipates uncovering additional factors contributing to superior US innovation metrics. Alternatively, it anticipates the possibility of the U.S. and Germany converging in their approaches to good faith and promoting collaborative innovation, offering valuable insights for the field of contract law, sociology, and law and political economy.

ROZENCOHN, RONALD M, associate professor, CLAS-Art & Art History, 34 years of service, Fall 2025

Title: Motion and Change in the Unmoving Image

Prof. Rozencohn proposes a semester residence in Paris where he will make an intensive study of key French Modernist Painters. Prof. Rozencohn will study Bonnard, Vuillard, and other artists whose paintings convey change and passing time in an inherently static medium and will produce a series of original paintings that build on his discoveries. He will exhibit the new work in museums and galleries where he has had shows (NYC, Dallas, Florence) and in new venues. Prof. Rozencohn's on-site study will benefit his professional development and his students as he deploys newly developed painting techniques in his own work and in his classes. The UI painting program has high national ranking in part because its professors cover a wide range of interests

and styles. Prof. Rozencohn, the sole representational painter, anchors figurative drawing and painting at UI. His knowledge of historical techniques is a great resource for current students and attracts graduate candidates eager to study with him at UI. Prof. Rozencohn's new work will engage pressing issues of representation and modernism in contemporary painting.

SHEA, CHRISTINE E, associate professor, CLAS-Spanish & Portuguese, 13 years of service, Spring 2026

Title: Language Attitudes: Expanding the Data

When we hear a person speak, we listen through ears that hear much more than just words. Listeners activate a set of preconceptions, or attitudes, about who the speaker is, based solely upon their way of speaking. These preconceptions are rooted in language attitudes. Not all speakers engender the same language attitudes - some are positive while some are negative, depending upon the dialect and preconceptions linked to the particular community of speakers. Prof. Shea will expand this body of research and examine how language attitudes manifest in Brazilian Portuguese. Prof. Shea will create a survey to capture how Brazilians perceive and judge different accents and dialects from around their country. This study will contribute to the fields of sociolinguistics and phonetics, two of Prof. Shea's areas of research and teaching. The study will benefit the UI community because the techniques used in this study are those that Prof. Shea will employ for a graduate/undergraduate level course taught in Fall 2026. The results will benefit society more broadly because it will increase our knowledge of language attitudes in languages other than English.

SIMS, BENNETT B, associate professor, CLAS-English, 7 years of service, halftime for academic year

Title: The Archive

Prof. Sims will finish researching and writing his novel, *The Archive*, a sci-fi novel in which world governments have disclosed the existence of alien craft on Earth. One country opens its Archive of extraterrestrial materials to researchers, and the novel follows two characters who have been granted access to it: a writer, who surveys its library of close-encounter records—abductee interview transcripts, witness testimonials, etc.—in order to compile a report concerning alien contact; and an artist, who studies its collection of anomalous objects—allegedly retrieved from alien crash sites—in order to make a sculpture series inspired by their physically impossible properties. *The Archive* explores questions of alien life, nonhuman consciousness, conspiracy theorizing, rational skepticism, and the cultural study of UFOs/UAP. Prof. Sims's PDA will result in the publication of this novel, contributing to UI's reputation as The Writing University and to English and Creative Writing's reputation as a destination major. It will also generate material for Prof. Sims's creative writing course *Other Minds*, which includes a unit on imagining alien intelligence.

SOLT, FREDERICK, professor, CLAS-Political Science, 13 years of service, Spring 2026

Title: Comparable Measures for Cross-National Research

Social scientists frequently encounter a dilemma: the available data measuring our concept of interest are either sparse, that is, only infrequently observed, or incomparable, measuring related but distinct aspects of the concept, or both. Though a common, indeed well known, problem

across many research designs, this dilemma is particularly acute in cross-national comparative work. In any context, however, to accept sparsity discards much available information; to ignore incomparability warps results in unknown ways. Neither, in short, is acceptable; each represents a weakness in the foundations of social scientific research. During the PDA, and drawing on years of experience in this field, Prof. Solt will write a book advising researchers to confront the dilemma head-on by using statistical models to make the most of the available data while addressing their incomparability and unlock new insights through better measurement. In doing so, the resulting work will provide citizens of Iowa, the U.S., and beyond with better-grounded understandings of the social processes that shape their lives.

SONG, SUYONG, associate professor, Business-Economics, 10 years of service, Spring 2026

Title: Machine Learning and Text Analysis in Social and Interfirm Networks

Prof. Song will examine the effects of peers on individual or firm decisions, using data from social and interfirm networks. Building on machine learning and text analysis, Prof. Song will provide network models that can be easily adapted by practitioners. Prof. Song will also develop sentiment indexes from social media and address how they are correlated with stock markets. He will develop a website that reports various sentiment indexes and incorporate his findings into his courses in Economics. The results will provide implications for public policies on information transmission through social and interfirm networks.

SOSALE, SUJATHA, associate professor, CLAS-Journalism & Mass Communications, 22 years of service, Fall 2025

Title: Mobile Phones, Electronic Media, and Connectivity Off the Grid: Adaptive Modernizations in Remote Rural Communities in India

Modernizing society is important for many developing countries. Change facilitators such as the state, corporations, and development organizations are seldom able to deliver satisfactorily on the promise of modernization. Meanwhile, struggling remote rural communities adapt to changes in high-context ways that, if researched and understood, might enable more responsive and effective programs for change. Prof. Sosale conducted oral history-based in-depth interviews in the field to understand how community members in one such rural outlier in South India saw mobile and electronic media contributing to social change and their self-defined quality of life. The book resulting from this research will be useful for development studies scholars in re-thinking modernization theories and may also be useful for development practitioners in the research process for designing intervention programs. Prof. Sosale will integrate the findings of this study in two undergraduate courses - on global media and research methods.

SPEARS, YOLANDA D, clinical associate professor, CLAS-Social Work, 9 years of service, Fall 2025

Title: Grandparenting in Multigenerational African American Families

Prof. Spears's PDA begins to address the gap in the research in the examination of non-crisis co-parenting in multigenerational African American families by building and disseminating knowledge about co-parenting relationships in African American multigenerational families. Grandparents often take active roles in providing emotional support, guidance and practical assistance in the upbringing of children. A large amount of research on African American families focuses on

multigenerational parenting that occurs out of necessity or coercion. Three products will result from this PDA: review of portrayal of African American grandparenting in social work textbooks published since 2015, findings from focus groups of African American social workers who identify as a grandparent in a co-parenting relationship and focus groups with the adult children (parents of grandchildren) of African American social workers regarding the impact of the co-parenting on family members, and a report summarizing the prospect of developing the first Iowa chapter of the National Association of Black Social Workers as a means to recruit and support students and faculty to the UI School of Social Work.

SULLIVAN, SEAN P, professor, Law-Faculty, 8 years of service, Fall 2025

Title: Market Definition

Prof. Sullivan proposes to devote one semester of awarded leave to work on a new book entitled *Market Definition* that would be published by an academic press by fall 2026. The novel contribution of this book is a clear, administrable, and internally consistent method of defining markets in antitrust cases. The intended audience for the book includes judges (who must define relevant markets when deciding antitrust cases), antitrust attorneys (who must predict and be able to persuade judges about how markets should be defined), and students and antitrust scholars (who must master market definition before they can think coherently about many other subjects in antitrust law and practice). The book builds upon published research that Prof. Sullivan has been conducting since 2017. No comparable resource to this book exists today. The social value of this book as a correction to deficient market definition practices is substantial.

TAI, JUNE, clinical professor, Law-Faculty, 6 years of service, Spring 2026

Title: Designing the Experiential Law Course: Storytelling, Reflection, and Other Considerations

Prof. Tai will advance experiential learning pedagogy through three interrelated facets of her research project. First, she will serve as co-editor of the fourth edition of *Learning from Practice*, published by West Academic. This is the primary textbook used in experiential programs at U.S. law schools. Second, she will serve as one of the researchers for the Center for the Study of Applied Legal Education (CSALE)'s triennial survey of experiential programs. Finally, she will conduct research on the use of storytelling skills to encourage reflection in experiential courses. The third facet of her research will be published in a law journal article. This article will advance the literature on pedagogical considerations that faculty should consider when teaching reflection. Collectively, the three interrelated facets of Prof. Tai's PDA research agenda will further experiential learning programs in legal education. In addition, because she plans to incorporate findings into the design of the Field Placement Program in the College of Law, the work will benefit the university, Iowa Law students, and Iowa residents who depend on Iowa Law alumni for legal services.

THOMAS, EMILY B K, clinical associate professor, CLAS-Psychological & Brain Sciences, 6 years of service, Fall 2025

Title: Neuropsychiatric Predictors of Perinatal and Infant Health

Prof. Thomas will prepare an R01 proposal for submission to NIH that aims to determine risk and protective factors that predict maternal and child health outcomes during pregnancy and the postpartum period. The proposal will integrate psychiatric, neuroimaging and parent-child

interaction measures to comprehensively assess the changes that occur during this critical period. Pilot data collection is underway and will support the feasibility of the proposal. The U.S. President has prioritized women's health research through funding for interdisciplinary work that investigates female-specific conditions, like pregnancy. This interdisciplinary proposal integrates expertise of multiple faculty and their laboratories at UI, providing opportunities for graduate, post-baccalaureate and undergraduate trainees to participate in cutting-edge science in an understudied area. Findings have the potential to transform maternal mental health and early childhood research. If successfully funded, the proposed project could identify UI as a premier institution for collaborative study of maternal and child health, attracting faculty and trainees with relevant expertise.

VASI, ION B, associate professor, CLAS-Sociology & Criminology, 12 years of service, Fall 2025

Title: The Road to Net Zero. How Corporations Manage Climate Change Risks

This project examines corporate management of climate risks because a growing number of businesses (as well as countries and cities) are working to reduce their emissions to net zero by 2050. Prof. Vasi used an NSF grant to hire four undergraduate research assistants who started collecting and preparing three distinct data sets: (1) a dataset of Fortune 1000 companies that includes all corporate communications related to net zero and climate change mitigation goals during the 2015-2024 period; (2) a dataset of Fortune 1000 companies that includes all corporate activities related to decarbonization; (3) a dataset of firms' financial performance and media coverage. This project will contribute to all the courses taught by Prof. Vasi (*Energy, Sustainability and Society, Organizations and Modern Society, Corporate Social Responsibility and Sustainability, Future of Energy*). This project will benefit society by identifying how business can contribute to the clean energy transition.

WARREN, STEPHEN A, professor, CLAS-History, 11 years of service, Fall 2025

Title: Mino Bimadiziiwin: Rediscovering the Indigenous Foodways of the Great Lakes

Mino Bimadiziiwin: Rediscovering the Indigenous Foodways of the Great Lakes pushes beyond diminished survivals and the trope of the "three sisters": corn, beans, and squash, to gain a fuller appreciation of the range and sophistication of Indigenous foodways. Through archaeological, archival, and ethnographic research, Prof. Warren seeks to understand how the Anishinaabe-speaking peoples of the Great Lakes achieved "Mino Bimadiziiwin," or "life in the fullest sense, life in the sense of longevity, health, and freedom from misfortune" immediately before, and after the massive land cession treaties (1795-1836) ravaged their subsistence economies. The good life was a byproduct of their foodways, enabling them to receive help from and cooperation with both human and other-than-human persons. Prof. Warren's research seeks to recover a holistic understanding of the Indigenous subsistence economies of the Great Lakes region in an era of profound change.

WOOD, SUSANNAH M, professor, Education-Counselor Education, 19 years of service, Fall 2025

Title: The Role of Videogame Play in the Development of Helping Professionals

College students and young adults in Iowa are engaged in videogame playing. Many of these young adults are also engaging in some form of self-help, utilizing the expertise of helping

professionals such as psychologists, social workers and counselors. Helping professionals may not be prepared to work with clients who game if they have not been exposed to the possibility in their undergraduate majors or graduate programs. The purpose of Prof. Wood's PDA is to investigate how gamers who are planning on a career in a helping profession (ex: counseling) utilize game play in their future helping. In addition, Prof. Wood will examine how videogame play, journaling, and engagement in small discussion groups effects these future helping professionals' identity development, cultural awareness, ethical decision-making, empathy, perspective-taking, moral positioning, communication style, sense of belonging, and leadership. Findings from this study can inform the various higher education programs in the state, (including UI which has at least 5) that train helping professionals and help current professionals work with young adult gamers.

WORTHINGTON, KRISTAN S, associate professor, Engineering-Biomedical Engineering, 8 years of service, Fall 2025

Title: Future Biomanufacturing: Enhanced Mammalian and Microbial Biomanufacturing Through Simulated Microgravity Culture

The use of living systems to create valuable products, known as biomanufacturing, is an emerging national and state priority due to its potential to increase manufacturing safety and sustainability. Culturing living cells, mammalian or bacterial, is a potential approach to enhance biomanufacturing. Thus, building understanding of the mechanisms that dictate cellular response to low gravity could improve yield and increase the economic feasibility of biomanufacturing for a wide range of useful products. To this end, Prof. Worthington plans to spend her PDA establishing expertise and intellectual infrastructure at UI and across the State of Iowa at the cross-section of biomanufacturing and simulated microgravity. Her primary activity will be developing a large, collaborative, and multi-disciplinary National Science Foundation proposal in biomanufacturing. During proposal development, Prof. Worthington will also deepen her expertise in biomanufacturing through collaborator laboratory visits and hands-on learning. Furthermore, Prof. Worthington will enrich the Biomedical Engineering curriculum at UI by incorporating biomanufacturing learning modules into core and upper-level courses.

XIAO, SHAOPING, professor, Engineering-Mechanical Engineering, 22 years of service, Fall 2025

Title: Enhancing Learning-based Decision-Making through Human-AI Interaction

To ensure that decisions and recommendations provided by Artificial Intelligence (AI) systems are transparent, trustworthy, and ethical, human involvement is essential. It is crucial not only to supervise AI systems during their learning process but also to consider human learning from AI, fostering mutually beneficial decision-making processes. Prof. Xiao's project aims to pioneer a novel human-AI interaction algorithm and integrate it into the learning-based decision-making framework. Collaborating with a mechanical engineering graduate student and colleagues from Marketing and Sociology, he seeks to tackle this sociotechnical challenge comprehensively. Additionally, Prof. Xiao plans to incorporate the research findings into his AI-related course curriculum. The team will also apply the developed method to address agricultural management and flood migration problems. This research holds particular significance for Iowa, an agricultural

state that frequently suffers from flooding. By addressing these challenges, the research will benefit the state of Iowa and society as a whole.

YAO, TONG, professor, Business-Finance, 17 years of service, Fall 2025

Title: A Deep-learning Approach to Extracting Stock Selection Information from Mutual Fund Portfolios

Several thousand U.S.-based mutual funds collectively manage over \$30 trillion in assets, with half of these funds actively managed aiming to surpass market performance. Nevertheless, true investment expertise is limited to a subset of the fund managers, and only a fraction of the securities they select yield significant outperformance. Expanding on his prior research, Prof. Yao intends to construct an advanced deep-learning model designed to extract and aggregate the security-selection information produced by active mutual funds. The model's inputs encompass a range of information, including the stocks held within funds, historical fund performance, and fund characteristics like size, fees, and investment styles. Its output consists of return predictions for individual stocks. Using the model's results, Prof. Yao aims to conduct a comprehensive analysis to understand the underlying nature and origins of the stock selection information possessed by fund managers. This research is anticipated to yield tangible benefits for investors, providing them with valuable insights, and for finance students at UI seeking to enhance their understanding of investments.

University of Northern Iowa

FLEMING, WILLIAM, Associate Professor, Family, Aging & Counseling, 18 Years of Service, Fall 2025

Title: Engaging Parents of Adolescents in Efforts for Violence Prevention Understanding Barriers, Facilitators and Messaging

Interpersonal and dating violence among youth is a major public health concern due to the lasting impact on young people. It is estimated that 22% of females and 15% of males experienced some form of bullying or intimate partner violence for the first time between the ages of 11 and 17 years. The most recent national prevalence estimate suggests that 10.8% of U.S. high school students experienced sexual violence perpetrated by anyone, 8.2% experienced sexual dating violence, and 8.2% experienced physical dating violence in the past year (Basile et al., 2020). The proposed project for this PDA is the first component of a multi-stage approach to examine messaging about dating violence that occurs between adolescents, their parents and school systems. The overall project will help identify facilitators and barriers between parents and adolescents regarding communication around these issues, as well as supporting a multilevel prevention program implemented in Iowa known as the Mentors in Violence Prevention. By empowering parents with knowledge and strategies for communicating healthy positive parent relationships the initiative seeks to create a more cohesive approach to violence prevention that spans across school, family, and community settings. This integrated approach is crucial for creating lasting positive impacts on youth development and reducing interpersonal violence.

HARLOW, RANDALL, Associate Professor, School of Music, 12 Years of Service, Fall 2025

Title: Edited Volume: Hyperorgan Art, the Organ as a Voice for our Time

Over the past decade a growing community of musicians, artists and scholars has emerged across Europe and globally around the notion of “hyperorgan”: a term that has come to denote pipe organs incorporating new digital technologies affording previously unrealizable expressive capacities, but also revolutionary new ways of making musical art with acoustic organ sound in order to contend with urgent social and political issues of our time. Since 2014, new hyperorgan music festivals have been initiated in Europe and North America, innovative concerts and albums by hyperorgan artists have received critical acclaim and attracted large audiences, and hyperorgan-related scholarship has appeared in significant international academic journals. The principal investigator will serve as co-editor of the upcoming volume, *Hyperorgan Art: The Organ as a Voice for our Time*. This project will present the first, comprehensive account of the history, current state and trajectory of the hyperorgan movement. Leading a team of three collaborative editors working with more than four dozen contributors, project participants will show how the hyperorgan movement has developed over the past decade and trace, through the voices of the hyperorgan community, where it is headed and what it affords our current social and political climate. Aspiring to be more than a traditional scholarly edited volume, this e-book will present a media-rich online digital presence with contributions by scholars, artists, master artisans, and arts institutions from around the world. Additionally, the work will blur the dichotomy of subject and object: a hyper-book that introduces readers to the hyperorgan movement and its many interdisciplinary strands, but one that is also of the movement itself, an innovative work of both scholarship and artistic practice. The work will be peer-reviewed and published through an

independent academic press. Furthermore, this major publication will secure UNI's place within the hyperorgan community, serve to highlight the cultural heritage of the organ in Iowa, and lay the groundwork for new musical art in communities across our state.

LEE, SEI-YOUNG, Associate Professor, Social Work, 6 Years of Service, Academic Year 2025-26

Title: Social Media Use and Gender Norms: Predictors of Intimate Partner Violence Among College Students

More than 90% of young adults constantly use social media to socialize and share information. Accordingly, there are growing concerns regarding problematic internet and social media use and its negative impacts on young populations such as: decreased mental health, poor sleep quality, negative body image, sex objectification, and gender role stereotypes. Recent studies reported the internet and social media's roles in reinforcing traditional gender role stereotypes and beliefs among adolescents and young adults. This is another concern because traditional gender role stereotypes were reported to be associated with acceptance of rape myths and intimate partner violence (IPV). This project aims to compare social media use, gender norms, and IPV between Korean and U.S. college students. The Principal Investigator (P.I.) collected data from UNI undergraduate students in AY 2023-24 in support of the UNI Capacity Building Grant. The P.I. proposes to collect data at the Sejong University in South Korea as the P.I. has been invited as a visiting scholar for AY 2025-26. South Korea has the world's fastest internet while being reported to have the highest rates of digital crimes and AI-generated deepfake sex crimes in the world.

MERZ, CHRISTOPHER, Professor, School of Music, 24 Years of Service, Fall 2025

Title: Arranging the Music of Phil Haynes

The Principal Investigator (P.I.) has been commissioned to create arrangements of 10 compositions by New York-based drummer Phil Haynes for the Corner Store Big Band, a large jazz ensemble comprised of 5 saxophones, 7 brass, piano, guitar, bass and drum set. The material was originally composed for small groups ranging in size from 3-5 players. Drummer Hayes selected the P.I. for this project upon hearing his recent septet recording, *New Juju*, featuring their adaptations of the music of master composer/saxophonist Wayne Shorter. He was intrigued by the P.I.'s ability to maintain the integrity of the original works while retaining a personal musical stamp on them. This project expands upon that concept by increasing the ensemble size threefold over the original instrumentation. These compositions are more abstract in nature than the Wayne Shorter works, creating an interesting challenge: how to maintain the linear nature of the originals while fully utilizing the greatly expanded textural possibilities of the larger ensemble. The scores will be completed by the end of summer, 2027. Performances will be scheduled in Pennsylvania (Phil's current home state) and at UNI during the 2027-2028 academic year. Following these performances, Phil will schedule the New York recording with the Corner Store Big Band, which the P.I. will conduct. While the P.I. has written over 100 compositions, arrangements and transcriptions, most of his writing has been for either educational (high school and college ensembles) or personal use. This project represents a major advancement for the UNI musician's career, as it will be his first opportunity to write for an elite ensemble of New York professionals. This project will benefit UNI through the positive exposure the recording will provide

the UNI School of Music. Phil has a track record of reviews in major jazz publications, including *Down Beat Magazine*, *Jazz Views*, and *Jazz Weekly*. The citizens of Iowa will benefit through the opportunity to hear the works performed by UNI student musicians.

TOWNSLEY, MATT, Associated Professor, Educational Psychology, Foundations and Leadership Studies, 6 Years of Service, Fall 2025

Title: Manuscript submission and proposal: Leadership for standards-based grading and reporting (SBG+R) in elementary schools

This project involves writing an empirical article for a peer-reviewed journal and submitting a book proposal to a K-12 education publisher. The article, tentatively titled "Leadership for Standards-Based Grading and Reporting in Elementary Schools," will focus on the successes and challenges elementary school leaders experience when implementing standards-based grading and reporting (SBG+R). Interview and artifact data collected for the article will serve as the basis for writing a book proposal for a practitioner-focused book, designed for elementary educators getting started with standards-based grading and reporting. A tentative title for the book is *Making Report Cards Matter: Standards-Based Reporting in Elementary Schools*. The PDA will facilitate and support the principal investigator's time for finishing data collection, completing data analysis, and writing the article for submission to a peer-reviewed journal, as well as for submitting a practitioner-focused book proposal to one of the top K-12 education publishers, Solution Tree.

Iowa State University

ARBUCKLE, J. GORDON, Professor, Sociology and Criminal Justice, 17 years of service, Fall 2025

Title: Climate smart and precision agriculture in the U.S. and China: Addressing challenges and opportunities toward making innovative practices work for small and medium-scale farms
Arbuckle will work with colleagues in China during the proposed assignment to improve farmers' use in precision agriculture technologies related to soil and water conservation. The results of this work will enhance the sustainability of food production and improve rural livelihoods in both countries, and also lead to publications and conference presentations.

BEECHER, CONSTANCE, Associate Professor, School of Education, 10 years of service, Fall 2025

Title: Exploring a policy, systems, and environment approach to linking kindergarten readiness to public health

Beecher will research the association between language and literacy development and health during her proposed assignment. This work is expected to result in a community toolkit on the subject and will also form the basis for a new Iowa State course linking education with lifelong wellbeing.

BRUNA, KATHERINE, Professor, School of Education, 21 years of service, 2025-2026 academic year

Title: Toward A New Educational Anthropology: The Role of Responsible Agency in Community Engagement

Bruna will use her assignment to study how ways of being, believing and behaving are passed through generations. This work is expected to result in a journal publication, presentations and ultimately a book for community engaged scholars.

CAMPBELL, CHRISTINA, Associate Professor, Food Science and Human Nutrition, 15 years of service, Fall 2025

Title: Developing Tools and Strategies to Engage Consumers in Sustainable Food Systems for Personal and Planetary Health

Campbell will visit the Shetland archipelago in the U.K. during the proposed assignment, developing strategies to enhance public understanding of the interconnectedness of the food system, and supporting healthy eating patterns. Outcomes of this work are expected to include peer-reviewed publications and conference presentations.

CHAMBERLIN, MELISSA, Associate Professor, Management and Entrepreneurship, 7 years of service, 2025-2026 academic year

Title: Developing a Theoretical and Practical Understanding of Workplace Inclusion

Chamberlin proposes a project to help leaders better understand how employees belong and feel valued in the workplace, a timely and relevant challenge for many businesses. Outcomes of this work will be submitted to premier management journals and will be incorporated into Iowa State management courses.

CHAN, JASON, Professor, Psychology, 17 years of service, 2025-2026 academic year

Title: An investigation of cheating effects on exam performance

Chan's project will address a timely, critical concern in education – the impact of cheating on exams and other academic works – by studying behaviors of Iowa State and community college students completing online assessments. Outcomes will inform education policy and will also include publications and external funding proposals.

COWAN, ARNOLD, Professor, Finance, 36 years of service, Spring 2026

Title: Environmental Protection Agency Rulemaking and Shareholder Wealth

Changes in federal regulations have complex effects on businesses, including not only the direct costs of compliance, but also how regulations alter choices on what to produce or not produce. Cowan will conduct research on the effects of EPA regulations on publicly traded companies, resulting in papers submitted to finance journals and conference presentations.

DEES, SARAH, Assistant Professor, Philosophy and Religious Studies, 5 years of service, 2025-2026 academic year

Title: Museum Representations of American and Indigenous Religions and Cultures, Past and Present

Dees will study historical and contemporary museum practices during the proposed assignment, with the goal of helping museums better serve their communities. In addition to advancing her research, the results will also be used to enhance her Iowa State courses on religion. Dees has requested funding from the Smithsonian and National Endowment for the Humanities to support her work.

EIKE, RACHEL, Associate Professor, Apparel, Events, and Hospitality Management, 6 years of service, Fall 2025

Title: Revolutionizing Circular Fashion: Transforming Textile Waste into Innovative Solutions

Eike's proposed project aims to divert textile waste from landfills through conversion into non-woven leather alternatives, and also using it as animal bedding or soil fertilizer. This work will offer students hands-on experience in sustainability and promote interdisciplinary collaboration across the fashion, art and agricultural sciences.

GALLUS, WILLIAM, Professor, Earth, Atmosphere, and Climate, 29 years of service, Fall 2025

Title: Improved understanding of climate change impacts on thunderstorm hazards

Gallus will research extreme thunderstorm events during the assignment, including derechos and storms with damaging winds, as well as how the Mediterranean Sea acts like the Gulf of Mexico. Outcomes will include external funding proposals, support for Iowa State graduate students, and new course materials.

GHOSH, ARKA, Professor, Statistics, 19 years of service, Fall 2025

Title: Graph Models and Study Abroad in Italy

Probability based graph models, including social networks, image/speech recognition, language processing, and recommendation systems, are indispensable in today's data-driven world. Ghosh

will use the proposed assignment to optimize these models, including research with collaborators in Italy. The results will enrich educational opportunities for Iowa State students.

HARTWIG, JONAS, Associate Professor, Mathematics, 9 years of service, 2025-2026 academic year

Title: Representation Theory and Mathematical Physics

Hartwig will advance his research programs in representation theory and mathematical physics by visiting collaborators in the U.S. and Sweden during the assignment. Outcomes of these works are expected to include the development of a manuscript that may serve as a future textbook on the subject, as well as publications and new projects for graduate students.

HOPKINS, CHRISTOPHER, Professor, Music and Theatre, 20 years of service, Spring 2026

Title: Advanced Musical Expression through Visual Music Composition

Hopkins will use the assignment to extend his scholarship in visual music, an innovative field that explores new ways of experiencing music, including both sound and graphical animation. Outcomes will include new compositions and performances, conference presentations and new interdisciplinary course materials for Iowa State students.

HSU, MING-CHEN, Professor, Mechanical Engineering, 11 years of service, Spring 2026

Title: AI-Driven Physics-Informed Fluid-Structure Interaction Digital Twins for Biomedical Applications

Hsu's assignment aims to revolutionize the modeling of complex cardiovascular interactions using advanced AI techniques to create "digital twins" that replicate patients' unique physiological characteristics. Results will be shared in publications and conference presentations and form the basis for future funding proposals.

HUGHES-BELDING, KERE, Professor, Human Development and Family Studies, 21 years of service, Spring 2026

Title: Building Belongingness to Promote Recruitment and Retention

Hughes-Belding will remain on Iowa State's campus for her proposed assignment, focused on developing strategies to improve faculty recruitment and retention in the College of Health and Human Sciences. Hughes-Belding will incorporate the results of this work into trainings for early childhood home visit professionals across the country.

IADECOLA, THOMAS, Associate Professor, Physics and Astronomy, 5 years of service, Fall 2025

Title: Adaptive Dynamics and Control of Quantum Many-Body Systems

Iadecola will use the proposed assignment to examine how measurements can be used to control complex quantum systems. Outcomes are expected to include a multi-institutional Department of Defense grant proposal, with Iowa State as the lead institution, as well as workshops, new projects for undergraduate and graduate students, and materials for Iadecola's quantum computing class.

IANCU, RALUCA, Assistant Professor, Art and Visual Culture, 5 years of service, 2025-2026 academic year

Title: Researching Sustainability in Printmaking and Papermaking

lancu will develop non-toxic, sustainable printing practices during the proposed assignment, which includes residencies in Italy, Japan and Ohio. The work will focus on letterpress printing, Japanese water-based woodblock printing, and Japanese papermaking; results will enhance lancu's teaching and research at Iowa State, including the development of new course materials.

IRISH, JULIE, Associate Professor, Interior Design, 6 years of service, Fall 2025

Title: Designing Inclusive Environments

Irish will use the proposed assignment to work on a book project that explores factors preventing environmental access, including disability, age, gender, religion and poverty. The book, which is based on Irish's graduate-level interior design course, will serve as a comprehensive resource for students and practitioners.

JANNESARI, ALI, Associate Professor, Computer Science, 6 years of service, 2025-2026 academic year

Title: AI-assisted Performance Modeling for High-Performance Computing and Scientific Applications

Jannesari will create intelligent performance engineering and modeling approaches to improve high-performance computing, particularly in complex scientific applications. Outcomes of this work will include publications, open-source tools and datasets, workshops, new course materials for Iowa State computer science students, and external funding proposals.

KIM, SANG, Associate Professor, Electrical and Computer Engineering, 21 years of service, Spring 2026

Title: Integrated Navigation and Communication in Global Navigation Satellite System

Kim will use the proposed assignment to develop next-generation global navigation systems, improving services such as precision agriculture, emergency response, and autonomous transportation. This work, in collaboration with the Air Force Research Laboratory, is expected to result in student internship opportunities, future research projects and new course modules.

LEE, JOHN, Associate Professor, Mechanical Engineering, 7 years of service, Fall 2025

Title: Design of Environmental Chambers for Soft Matter Electrostatic Levitator Dedicated to Neutron Beamlines/Development of Electromagnetic Rotor for Superfast Creep Measurement of Refractory Materials Using Electrostatic Levitation

Lee proposes an assignment to develop new soft matter electrostatic levitator chambers, which will be used to support both research and student learning, leading to publications and funding proposals from NASA and NSF. Lee has received \$128,000 from the National Research Foundation of Korea to support his assignment.

LUCHT, TRACY, Associate Professor, Greenlee School of Journalism and Communication, 12 years of service, 2025-2026 academic year

Title: Adoption in the News Media: Privilege and Parenthood in American Journalism

Lucht will perform historical research during the proposed assignment, tracing adoption narratives and activism in U.S. journalism from the era of "orphan trains" to sensationalized battles over

parental rights. The project is expected to result in a book on the subject, contributing important context to current debates over policy related to adoption and child welfare. Lucht has applied for a National Endowment for the Humanities Fellowship to support her work.

MCDANIEL, MARSHALL, Associate Professor, Agronomy, 8 years of service, Spring 2026

Title: A “Sabbatical of Practice” to Deepen Knowledge of On-Farm Challenges in Agriculture, Enhance Farmer-to-Scientist Collaboration, and Generate Basic Research

McDaniel will combine traditional PDA activities with field experience, working with farmers near Charles City, Iowa to conduct on-farm research trials related to crops, climate and soil. This work will also be incorporated into Iowa State courses on soil and plant growth, and lead to external funding proposals.

MCDONNELL, LAWRENCE, Associate Professor, History, 15 years of service, Spring 2026

Title: The Civil War and the Making of the American Working Class, 1844-1877

McDonnell will use the proposed project to complete the final stages of research for his book exploring the impact of the Civil War on modern economic and social relations, which will be submitted to a major publisher. The assignment will also enhance McDonnell's teaching of U.S. and military history at both the undergraduate and graduate levels.

PASSE, ULRIKE, Professor, Architecture, 18 years of service, Fall 2025

Title: Development of a book manuscript: Designing Natural Ventilation Strategies using Computational Fluid Dynamics: A Guide for Architects

Ventilating interior spaces has become part of the public health discussion since the onset of the COVID-19 pandemic. Passe's proposed project will complement her previous book on natural ventilation by focusing on the use of computational fluid dynamics, including case studies, tools and instructions for architects, and will be aligned with new architectural accreditation criteria.

PATRICOLA, CHRISTINA, Associate Professor, Earth, Atmosphere and Climate, 4 years of service, Spring 2026

Title: Future Changes in Tropical Cyclone Intensity and Precipitation: The Role of Atmosphere-Ocean Feedbacks

Tropical cyclones are the leading cause of weather-related economic loss in the U.S. Patricola will use the proposed assignment to investigate how atmosphere-ocean interactions (how strong winds interact with ocean water, for example) can be used to better predict the intensity of storms and their associated rainfall. Results will include new predictive models, publications and material for two Iowa State courses.

PESCHEL, JOSHUA, Associate Professor, Agricultural and Biosystems Engineering, 7 years of service, Fall 2025

Title: Advancing Mathematical Approaches in Cyber-Agricultural Systems

Peschel will use the proposed assignment to foster new research partnerships and generate innovative research concepts to support real-time decision making in cyber-human systems, with the goal of reducing uncertainties in agricultural production. Outcomes are expected to include publications, grant proposals and materials for Peschel's Iowa State courses.

PETERSON, DAVID, Professor, Political Science, 15 years of service, Spring 2026

Title: The Beaten Generation: The Politics and Apolitics of Generation X

Generation X (Americans born between 1965 and 1980) has been the least politically engaged across its life cycle. It is yet to have a president, is underrepresented at all levels of government, and has lower levels of political participation than other generations. It is also the most conservative generation. Peterson will use the assignment to conduct the first largescale study of Generation X politics, which will result in a book, and new material for Iowa State courses.

PRINCE, ANGELA, Associate Professor, School of Education, 7 years of service, Fall 2025

Title: Bridging Cultures in Special Education: Understanding Teacher Preparation in Japan

Prince proposes a Fulbright Scholar teaching and research appointment to examine how special education laws and policies are implemented in teacher preparation programs. Outcomes are expected to include publications, conference presentations, and new course materials for Iowa State's teacher preparation program.

RAMAN, RAJ, Professor, Agricultural and Biosystems Engineering, 18 years of service, Spring 2026

Title: Developing and testing a holistic framework for quantifying key intangible challenges of novel cropping systems

Raman will use his assignment to improve the adoption of environmentally beneficial cropping systems by better integrating research from sociologists, economists, agronomists and engineers. Results of this work will support Iowa State's research, teaching and extension and outreach programs, including the submission of external funding proposals.

RIZO, ELISA, Associate Professor, World Languages and Cultures, 17 years of service, Fall 2025

Title: From Cuba to Equatorial Guinea: Tracing Labor and Race in Spanish Colonies

Rizo will use the proposed assignment to expand on her Fulbright-funded work focused on racism in the Spanish-speaking world, examining Spanish public discourse from 1886 to 1978. Outcomes include publications, conference presentations and material for Iowa State undergraduate courses.

ROE, KEVIN, Associate Professor, Natural Resources Ecology and Management, 9 years of service, Fall 2025

Title: Acquiring Training in Analysis of Conservation Genomics Data

Roe will use the proposed assignment to attend a workshop related to conservation genomics, as well as analyze existing data, prepare several manuscripts for publication, and develop materials for Iowa State's course on Genetics for Natural Resource Managers. This work is also expected to support Roe's work with graduate students and enhance submissions for external funding.

RONGERUDE, JANE, Associate Professor, Community and Regional Planning, 14 years of service, Spring 2026

Title: Residential Rental Property Owners and Disasters: A Research Dissemination Strategy
Rongerude's proposed project expands her research on residential rental property owners into disaster planning and land policy and includes collaborations with the National Hazard Center and Lincoln Institute for Land Policy. Projected outcomes include research and curricular modules for practitioners, researchers, educators and students.

RUTHERFORD, CASSANDRA, Associate Professor, Civil, Construction, and Environmental Engineering, 7 years of service, Fall 2025

Title: Innovative materials for soil improvement and 3D printing
Rutherford, an expert in geotechnical engineering, will use the proposed assignment to generate new research in soil improvement, and additive manufacturing using soil-based materials. Results will include new grant proposals that benefit Iowa transportation and infrastructure projects, as well as journal articles and research presentations.

SCHLEICHER, DEIDRA, Professor, Management and Entrepreneurship, 6 years of service, Fall 2025

Title: Collaborative Projects in (1) GenAI and Human Resources and (2) Talent Management in Academia

Schleicher's proposed assignment is focused on two areas of interest to students in Iowa State's Ivy College of Business. The first is a study that addresses the challenges and opportunities generative AI presents for the human resources (HR) field. The second is a study of talent management in academia, an often-overlooked topic in HR literature, where Schleicher will use her experience as a department chair to develop a book proposal and other publications.

SHARP, JONATHAN, Associate Professor, Music and Theatre, 9 years of service, Fall 2025

Title: Bounce: A Comprehensive Method for Developing and Mastering Rebound Strokes on Snare Drum

Drum rolls – which appear in nearly every musical setting, from orchestral works to drum solos at rock concerts – is one of the most difficult challenges for percussionists to overcome. Sharp will use the proposed assignment to write a comprehensive guide to advance drum roll techniques in both concert and marching settings, including detailed exercises, practice routines, and stylistic considerations.

SIVILS, MATTHEW, Professor, English, 16 years of service, 2025-2026 academic year

Title: Spinning the Teetotum: Reading Nineteenth-Century American Board Games

Sivils will use the assignment to conduct archival research and write six chapters of his book-in-progress on the cultural impact of early American board games which, from the period spanning 1822-1904, coincides with arguably the nation's most formative era. The work will also support Iowa State courses on American literature and literary study.

SWANNER, ELIZABETH, Professor, Earth, Atmosphere and Climate, 9 years of service, 2025-2026 academic year

Title: Connections between lake and Baltic Sea ferromanganese concretions that form critical mineral resources

Swanner will spend her proposed assignment in Estonia, studying the availability and sustainability of critical materials in the Baltic seafloor, as well as the impact of extraction, and connecting her work to the North American Lakes. Swanner has applied to the Fulbright Scholar program to support her efforts. Additional outcomes will include training of Iowa State graduate students, publications, new course materials and research collaborations.

TRAJCEVSKI, GOCE, Associate Professor, Electrical and Computer Engineering, 7 years of service, Spring 2026

Title: Query Processing and Data Analytics for Mobile Shapes and Volumes

Enhancing query processing for evolving shapes and values, including such phenomena as mapping crop infestations or the spread of oil spills in oceans, has high societal relevance. Trajcevski's work in this area will result in a new graduate course in spatial-temporal data analytics, as well as course modules for undergraduates, publications and grant applications.

WADE, NATHANIEL, Professor, Psychology, 21 years of service, Fall 2025

Title: Developing Machine Learning Models to Evaluate the Effectiveness of Group Psychotherapy and Support Training and Supervision

The need for effective and efficient group therapy training has never been more significant, as mental health systems in U.S. communities are overloaded, especially in rural areas. Wade's project will create a machine learning program to evaluate group psychotherapy sessions, providing a critical tool to practitioners worldwide, supporting Iowa State student learning, and increasing mental health treatment options.

WHEELER, ANDREA, Associate Professor, Architecture, 11 years of service, Fall 2025

Title: Regenerative Architecture and Intentional Eco-Communities

Wheeler will develop an edited collection manuscript that explores the intersections of philosophy, art and architecture, with a focus on contemporary debates surrounding aesthetics, ethics and sustainability in design, as well as a single-author book proposal on the philosophy of eco-communities, drawn on her previous research.

YU, CINDY, Professor, Statistics, 19 years of service, Spring 2026

Title: Advancing Financial Risk Management: Integrating Machine Learning and Quantile Regression for High-Dimensional Data Analysis and Portfolio Optimization

Yu's proposed assignment will advance the field of financial statistics by improving the accuracy of predictive models and exploring new risk metrics that account for extreme events. Results will contribute to Yu's teaching, leading to publications, funding proposals and new research topics for graduate students.

ZHENG, MAI, Associate Professor, Electrical and Computer Engineering, 6 years of service, Spring 2026

Title: Optimizing the RAS Properties of Large-Scale Storage Systems for Data-Intensive Computing

Zheng will work to improve the reliability, availability and serviceability (RAS) of large storage systems during his assignment, working with academic colleagues and equipment manufacturers. Outcomes are expected to include new course materials, publications and external funding proposals.