

RESEARCH & SCHOLARSHIP MATTERS

A PUBLICATION OF THE ASSISTANT PROVOST FOR RESEARCH, DR. KIMBERLY BENDER

What's inside this issue:

5 KNOWLEDGE BRIDGES

RESEARCH & SCHOLARSHIP FISCAL YEAR IN REVIEW



KNOWLEDGE BRIDGES: COLLABORATION FOR THE PUBLIC GOOD

In creating the strategic plan, DU IMPACT 2025, the University heard that faculty members were eager for an institutional mechanism that not only allowed for cross-school and interdisciplinary collaborations, but that would promote and encourage those opportunities. In 2018, DU created Knowledge Bridges, an internal seed funding mechanism to do just that.

Now, every two years, DU issues a call for concept papers. These ideas are cross-disciplinary, faculty-driven initiatives seeking to solve complex problems. This issue features the five Knowledge Bridge ideas which have made it to Phase III of the proposal process. In December, one to two of these ideas will be funded. The next request for proposals will be due in Winter Quarter 2021.



IN THE NEWS

5280 Magazine - "Can Denver Public Schools Help Kids Experiencing Trauma?" quotes from Sarah Enos Watamura, Associate Professor, CAHSS

The New York Times - "In Iran's Hierarchy, Talks With Trump Are Now Seen as Inevitable," quotes from Nader Hashemi, Director of the Center for Middle East Studies, JKSSIS

ABC News Radio - Here's how dogs can improve your mental health," quotes from Phil Tedeschi, Executive Director of the Institution for Human-Animal Connection and Clinical Professor, GSSW

The Boston Globe - "Joe Biden's front-runner status in the primary is undeniable. Why?" quotes from Seth Masket, Professor and Director of the Center on American Politics

Colorado Public Radio - "Inventor Talks About 'Lightbulb Moment' And The Challenges Of Getting A Patent," radio interview with Bernard Chao, Professor, Sturm

Bloomberg - "Trump Administration Tightens Policy on Children Born Overseas," quotes from César Cuauhtémoc García Hernández, Associate Professor, Sturm, Public Impact Fellow

The Denver Post - "Efforts to combat homelessness in Denver's suburbs intensify as problems persist," features homelessness assessment spearheaded by the Burnes Center on Poverty and Homelessness

Channel NewsAsia - "Commentary: We are on the cusp of a plastic recycling revolution," op-ed by Jack Buffington, Professor of the Practice, DCB

Colorado Public Radio - "Women Work To Change The World; When History Meets Nostalgia," radio interview with Marie Berry, Assistant Professor, JKSSIS, Public Impact Fellow

The Denver Channel - "As commitment to youth sports takes up more time and money, parents weigh options," interview with Brian Gearity, Director of the MA in Sport Coaching, Public Impact Fellow

The Colorado Sun - "Opinion: For domestic violence victims, the price of immigration-related fears may be nothing short of death," op-ed by Anne DePrince, Professor, CAHSS, Public Impact Fellow

The Hill - "Pence visit to Warsaw on solemn occasion is important to close ally," an op-ed by Christopher Hill, Adviser to the Chancellor

INSTITUTE FOR STUDIES OF GLOBAL ENVIRONMENTAL CHANGE

SHANNON MURPHY & ANNA SHER



Global environmental change (GEC) includes effects related to large-scale land degradation, climate change, ocean resource depletion, habitat degradation, invasive species, and overuse of freshwater, among other impacts. It is a consequence of the growing demands of the human population on Earth and is the leading reason for loss of biodiversity and species extinctions. GEC is also an increasingly dire threat to human physical and mental health, equity and social justice issues, as well as human long-term persistence on Earth.

There are dozens of University of Denver faculty members with unique expertise related to human-caused GEC, spanning social sciences, life sciences, physical sciences, law, international affairs, and psychology.

Currently, however, faculty in these areas are not coordinated and are largely unaware of each other's work. Faculty studying GEC are funded by NSF, NOAA, and other external sources, but collaboration would facilitate even greater opportunities and promote partnerships beyond DU.

The Institute for Studies of Global Environmental Change (ISGEC) would be a transdisciplinary entity, with the primary goal to promote interaction among faculty, staff, and students across the University of Denver.

The ISGEC would include at least 24 faculty members from seven areas across the University of Denver, including: Natural Sciences and Mathematics; Sturm; Josef Korbel School of International Studies; College of Arts, Humanities and Social Sciences; and the Graduate School of Social Work.

The goal of the proposed institute is to capitalize on DU's current strengths to become a leader in research, teaching, and advocacy related to GEC. An Institute for Studies of Global Environmental Change (ISGEC) would increase research collaboration, future external funding, and student engagement across the entire university.

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DU IMMIGRATION CENTER

REBECCA GALEMBA & LISA MARTINEZ

The Rocky Mountain West, and Denver specifically, is historically known for the ebb and flow of migrant populations. Despite its history, however, there is scant research examining migration in this non-traditional context.

This Knowledge Bridge envisions DU as a hub of interdisciplinary migration research and fills this lacuna by bringing together qualitative, quantitative, and community-engaged research projects, teaching, and public good work from across campus.

Unique challenges exist in the Rocky Mountain West, many of which are tied to migration and a growing undocumented population. Relatedly, studies have shown there are net



economic benefits from immigrants at both the state and federal levels due to their contributions to Social Security and state and local taxes—contributions from which they do not benefit. Migration also dovetails with other issues DU is poised to address such as: gentrification, climate change, the economy, and politics.

This concept brings together faculty in the College of Arts, Humanities & Social Sciences, Graduate School of Social

Work, Josef Korbel School of International Studies, Morgridge College of Education, College of Natural Sciences and Mathematics, and Sturm College of Law with the goal of building a migration center dedicated to studying immigration in Colorado and, more broadly, the Rocky Mountain West.

These faculty members will lend their expertise to provide a more robust picture of migration dynamics via three interrelated pillars: social (education and health), economic (work, living, and labor), and legal (mobilization, citizenship, and crimmigration).

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Fall Events

September 9

Fall Quarter Classes Start

September 16

Public Good Kick-Off

Anderson Academic Commons,
Room 290

October 17 - 19

Homecoming / Family Weekend

October 29

Faculty and Staff
Awards Lunch

November 16

Last day of Fall Quarter
classes

November 22 - January 3

Winter Break

DU INSTITUTE FOR A JUST AND SUSTAINABLE FUTURE

REBECCA POWELL, CHAD KING & SUSAN DAGGETT



The Denver Metro region and the greater Rocky Mountain West both face an array of critical issues pertaining to sustainability, access, equity, and social justice. Denver is currently the fifth fastest growing metro area in the U.S. in the second fastest growing state, which has brought stresses to the infrastructure, environmental quality, and social fabric of the region.

Issues at the intersection of economic vitality, environmental quality, and social justice are among the greatest challenges of our time and require innovative thinking, creative problem solving, and a diverse community of scholars and collaborators. This Knowledge Bridge will merge existing faculty strengths with ongoing research projects to create the DU Institute for a Just and Sustainable Future—a vibrant, interdisciplinary network to support rigorous scholarship that addresses the issues of just sustainabilities across multiples scales.

The concept of just sustainabilities offers an unparalleled foundation for innovation, interdisciplinary research, and experiential education. The University of Denver is uniquely positioned to explore these critical questions of just sustainabilities.

The DU Institute for a Just and Sustainable Future will support knowledge creation for action toward a sustainable future in the

urban Rocky Mountain West, launching scientific and technical solutions that are grounded in values of equity and justice. The institute will nurture emerging interdisciplinary faculty research networks, expand strategic external partnerships, and enhance opportunities to utilize campus as a laboratory for scholarship and learning. Centralizing and coordinating this important work in an institute will leverage strengths, solidify collaborations, increase funding opportunities, and amplify our collective impact. Through the institute, we will develop new theoretical frameworks and analytical approaches for integrating the social, environmental, and technical elements of urban sustainability.

Work will focus on three essential structural components of the urban environment: (i) the natural environment—urban ecology, air and water quality, and climate; (ii) the built environment—buildings and infrastructure, urban design, and transit; and (iii) the digital environment—new technologies, “smart cities” infrastructure, and big data applications for creating resilient, adaptive, and efficient places.

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RECENT GRANTS AWARDED

Professors Julie Sarama & Doug Clements, & Assistant Director Crystal Day-Hess (MCE), \$3.2m

Grant from the Institute of Educational Science for "Evaluating the Efficacy of an Interdisciplinary Preschool Curriculum (EPIC)"

Associate Professor Mark Siemens (NSM), \$1m

Grant from the W.M. Keck Foundation for "Topological fluids of light for room-temperature quantum science and computation"

Assistant Professor Yan Qin (NSM), \$1.6m

Grant from the National Institutes of Health for "Regulations of organellar Zn²⁺+homeostasis and dynamics by TRPML1 in neurons"

Assistant Professor Jenalee Doom (CAHSS), \$733k

Grant from the National Institutes of Health for "Testing cortisol dysregulation as a mediator between early stress and adolescent cardiovascular health"

Assistant Professor Garrett Roberts (MCE), \$499k

Grant from the Institute of Educational Science for "Small Group Reading Intervention to Support Children with Pervasive Learning and Attention Needs (RISC-PLAN) in the Upper Elementary Grades"

Assistant Dean Tricia Olsen (DCB), \$244k

Grant from the National Science Foundation, for "Business and Human Rights: Explaining Variation in Justice and Remedy for Corporate Human Rights Violations"

Assistant Professor Cedric Asensio (NSM), \$411k

Grant from the American Diabetes Association for "Biogenesis of Endocrine Secretory Granules"

Associate Dean Breigh Roszelle (RSECS), \$130k

Grant for "In Vivo Evaluation of Natural Knee Kinematics"

Research Associate Professor Margaret Franko & Senior Research Associate Amy Roberts (GSSW), \$233k and \$174k

Grant from the Colorado Department of Human Services, for "CO Shines Brighter Analytics" and "CO Shines Brighter PDG Evaluation Planning"

NAVIGATING THE FUTURE OF GOVERNANCE

PROFESSORS DEBORAH AVANT & RACHEL EPSTEIN

Liberalism, and the governing institutions designed to sustain it are under strain. Some of the most significant criticisms of liberalism are emanating from the countries that have long claimed to be champions of its advance.

This Knowledge Bridge proposes to investigate the future of governance—the broader process of managing politics and economies, including coping with interdependence and adjudicating distributive conflict.

Unlike much of the current analysis, we acknowledge that more than just national governments engage in governance. Civil society, firms, local governments, and other actors are



critical to structuring social, economic and political life.

A central problem motivates our interest in governance and its evolution: populations everywhere are increasingly interconnected and interdependent—in large part due to changes in the climate and technology. At the same time, cooperation among governments has become manifestly more difficult to achieve.

This Knowledge Bridge draws on the research and expertise of 14 faculty members from seven distinct disciplines spanning five divisions at the University of Denver to understand how multi-actor and multi-level governance is effecting cooperation, either by offering new tools for managing interdependence or by making its management harder to achieve.

The project will address: the management of resources in a changing climate, the management of information technology, and the overarching inclusive or exclusive character of governance.

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UNIVERSITY OF DENVER ANIMAL STUDIES HUB

JUSTIN MARCEAU & PHILIP TEDESCHI

The subject of animal studies has taken on heightened prominence in recent years despite previously being relegated to the fringes of research, teaching and public engagement at higher educational institutions.

Recently, global premier universities have launched new programs to address animal-related issues. Prominent foundations and private donors have invested substantial philanthropic resources to support innovative programs in the field. Additionally, national, state, and local political leaders have increasingly focused on the subject of animal law and welfare.

The University of Denver is uniquely positioned to become one of the leading universities in the world in the realm of animal studies. This will be achieved through capitalizing on its



existing faculty expertise, its potential for additional cross-disciplinary collaboration, its developing relationships with prominent political leaders, and its potential for transformative philanthropic investment.

The goal of the proposal is bold but simple: elevate the University of Denver to a position of local, national, and international leadership in research, teaching, and public engagement on the intersectional issues facing animals and humans.

This Knowledge Bridge aims to establish an Animal Studies Hub, designed to foster cross-disciplinary collaboration and to further elevate the visibility and impact of multi-disciplinary research in the realm of animal studies at the University of Denver.

This Hub will bring together more than two-dozen faculty members, a multitude of staff members, and substantial numbers of undergraduate, graduate, and professional students from a variety of campus academic units. Led by the Sturm College of Law and the Graduate School of Social Work, this Knowledge Bridge will also collaborate with the Daniels College of Business, the Graduate School of Professional Psychology, the Morgridge College of Education, and the College of Arts, Humanities & Social Sciences.

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FISCAL YEAR 2019 BREAKS MORE RECORDS

FY 2019 was yet another record breaking year for research at the University of Denver. Research expenditures increased 18% over FY 2018, topping \$36 million. DU received 159 new awards totaling over \$46 million, compared to 115 new awards totaling \$24 million in FY 2018.

Research & scholarship saw 401 faculty authors, 21,866 citations, 704 archival publications, 76 media citations, and 14 highly cited papers.

The University of Denver increased funding for student research and scholarship in FY 2019. More than 500 undergraduate and graduate students were supported by \$5.9 million in grant funding, resulting in 20% of all students paid on campus being supported by grant funding.

For more information, check out the [Research and Scholarship Annual Report](#).

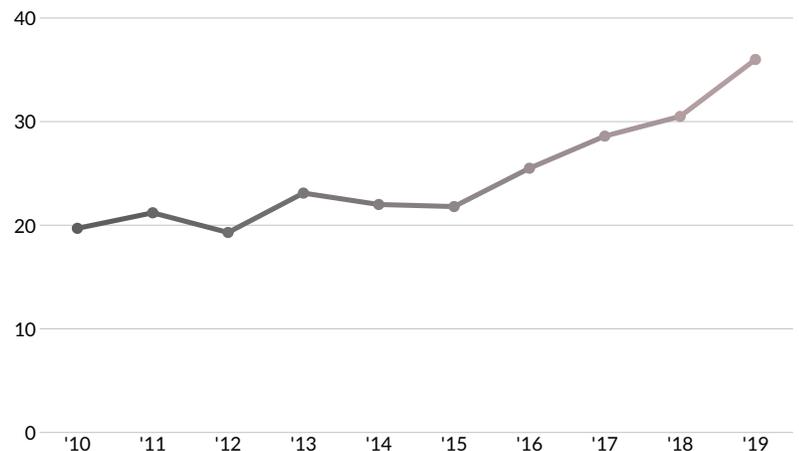


Figure 1. Highlights the 10-year trend. Research expenditures have increased 82% from FY 2010 to FY 2019.

ABOUT THE PUBLICATION

Research and Scholarship Matters is a quarterly newsletter produced on behalf of the faculty of the University by the Interim Associate Provost for Research. Faculty with notable accomplishments or images suitable to the front panel of the next issue are encouraged to send them to Audry LaCrone. Not all submissions can be included, but every attempt will be made to be inclusive of all high quality research, scholarship and creative works.

Previous issues can be found [here](#).

WANT MORE INFORMATION?

Want to receive emails regarding resources, celebrations, opportunities, and upcoming deadlines related to research and scholarship?

Join the DU-Research [listserv](#).