Dear Friends of the Department of Geographical and Sustainability Sciences,

It has been too long a time since I shared with you the happenings of the Department of Geographical and Sustainability Sciences (GSS). For this, you have my sincere apology. These strange and uncertain times do, however, promote reflection and an appreciation for all of the wonderful people who have touched the department over the years and made us stronger. So, let us try to bring you all up to date with the past couple of years. Before doing so, however, let me just say that we hope you and your family are well and you are navigating through these challenging times with minimal hardship.

Much has happened within the department since our last communication. The departmental focus remains at the intersection of human/environmental interaction and geographic information science. We have, however, grown and expanded our vision of what this means for us as a department. We have three outstanding new faculty members, Professors Susan Meerdink (started in August 2020), Carly Nichols (started in August of 2019) and Matt Dannenberg (started in January of 2019). You can read their bios on page 15. Our programs of study now include an interdisciplinary Bachelor of Science degree in Sustainability Science. This new degree is built on a systems science approach to the study of socio-ecological dynamics in the context of sustainability. Our undergraduate program continues to grow, at the end of the spring semester there were a total of 175 students in the three majors we administer.

While we are always impressed and inspired by our undergraduate and graduate students, they deserve a special thanks and congratulations for the perseverance and dedication to learning they exhibited over the past semester as their academic lives got turned upside down by the Covid-19 pandemic. We highlight a sampling of the projects they completed this year here. This was an exceedingly challenging, anxiety producing time for many and we greatly appreciate the hard work our students put in to insure a successful conclusion to the semester. I am also very appreciative of my GSS colleagues who transformed courses into an online format literally in the span of a week. The comments left by students on course evaluations always make me both proud and humbled to part of this department, but it is particularly true this semester. Importantly, this success in the classroom is coupled with equally successful and highly productive research programs. Below we highlight some of the important research conducted by faculty over the past year (see page 11).

While the last couple of years have been good to GSS, challenges remain. The economic downturn precipitated by the Covid-19 pandemic will have a significant and lasting impact on academia. For example, in the College of Liberal Arts and Sciences we have, at a minimum, a $10M hit to our budget. This will, of course, affect departmental budgets as well. In GSS, funds for adjunct and visiting professors, faculty travel, and course development are being eliminated for the upcoming academic year. What comes next is at best uncertain, but all indications are that challenges will remain for several years to come. These changes will impact our central mission of education, research and outreach. Some changes may prove positive. We may, for example, innovate and create new and more effective ways to teach. Other changes will negatively affect our ability to provide a diverse set of educational experiences for our students. Please take a minute to read about things you can do to help the department and our students through these challenging times at the end of this newsletter.

I would like to close this section with a thank you to the department’s administrative staff, Angie Bellew and Caroline Garske, for all they do to keep the department moving forward, and special thanks to Caroline for designing and creating this newsletter.

And thanks to you for being part of the GSS community!

Dave Bennett
Department Executive Officer
CONTENTS

04  A World of Academic Programs
08  Three-Minute Thesis
09  Senior Send-Off
10  Faculty Awards & Honors
11  Recent Faculty Publications
12  Geographers on the Move
14  In the Headlines
15  New Faculty
16  Lakeside Summer
17  Tracing History
18  The Guestbook
20  Graduates
22  Mapping Our Past

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Newsletter Editor & Designer
Caroline Garske

Department Executive Officer
Dave Bennett
A WORLD OF ACADEMIC PROGRAMS

With a new **Sustainability Science B.S.** degree and a new 5-Year Bachelor’s and Master’s Degree program in **Geoinformatics**, our students have more options than ever to explore the world of Geographical & Sustainability Sciences.
A MAJOR FOR THE FUTURE

Our new Sustainability Science B.S. is designed to provide students with the interdisciplinary knowledge and technical skills to build a more sustainable world for generations to come.

Sustainability Science

Sustainability science is an emerging field in which we study how humans and nature interact, what this means for future generations, and the solutions necessary to maintain the earth's life support systems.

The Sustainability Science B.S. prepares students to: understand the complex processes that connect humans to natural systems; analyze the potential impact of decisions; communicate the importance of sustainability science and management to leaders and the public; and adapt and flourish in a rapidly changing world.

The Issues

Climate change
Food security
Clean water
Healthy air
Safe and reliable energy
Long-term economic well-being
Equity and justice
Responsibility to other species
Conflict over limited resources

The Courses

(A sampling of course offerings)
Introduction to Sustainability
Environmental Econ. and Policy
Science Outreach & Communication
Environmental Justice
Urban Ecology
Water Resources
U.S. Energy Policy in Global Context

A new suite of courses was developed by faculty to support the Sustainability Science B.S. curriculum.

The new courses include: Sustainability as a System Science, Ecological Climatology, Sustainable Development Alternatives, and Intro to Geospatial Programming, a course that addresses the growing need for geocomputation courses.
As a rapidly growing field (expected growth of 29% over the next decade), there is an increasing demand for GIS skills. Graduates of the Geoinformatics U2G Program will develop technical skills such as spatial analysis, statistics, computer programming, and database management for geographic database and gain valuable experience applying these geospatial techniques to real world problems. Graduates will be prepared to enter a variety of career fields in the public or private sector. Career fields include economics, health, environmental management, and urban planning.

5 Years, 2 Degrees
The unique Undergraduate-to-Graduate (U2G) program provides students with an advanced degree in only five years, saving them one year of graduate school tuition and granting a competitive edge in the workforce.

Students apply for admission in their third year. Students will graduate with a BA or BS in geography after their fourth year and an MS degree in Geoinformatics at the end of their fifth year.

Geoinformatics

The 5-Year Geoinformatics U2G Program draws from statistics, computer science, informatics, geographical & sustainability sciences and more.

A sampling of coursework:
- Foundations of GIS
- Statistical Methods & Computing
- Geographic Visualization
- Intro to Remote Sensing
- Intro to Geographic Databases
- Applied Linear Regression
- Knowledge Discovery
- Computing in Statistics

The Courses
SPOTLIGHT ON BIN ZHANG

As one of the first students admitted to the new 5-Year Geoinformatics U2G program, Bin Zhang is blazing the trail between undergraduate and graduate studies.

Beginnings

When at a foreign language learning center in China, Bin Zhang was flipping through a brochure on US universities and the University of Iowa was the first one he found offering an emphasis in Geographical Information Science. Bin always loved maps and the advanced technologies being used to enhance them (VR, GPS). While Bin started as an open major, after taking Foundations of GIS with Professor Caglar Koylu, Bin was ready to declare geography as his major. In Professor Koylu’s class, Bin was amazed by how he used social media to track a snowstorm in real time using geotagged data.

Transitions

Once Bin was admitted to the U2G 5-Year Geoinformatics program, he spent the spring of 2019 delving deeper into the informatics and geographical course work. Not only did Bin keep up with course work, he also took on independent and group research. In addition to the senior project seminar requirements, Bin also teamed up with Professor Koylu and geography graduate student Hoeyun Kwon to author a paper on perceptions of climate change based on geo-tagged Twitter data.

This research was presented in a paper session at the 2019 American Association of Geographers Annual Meeting in Washington D.C. (see p.12). As an undergraduate at a major conference filled with experienced faculty and graduate students, Bin was apprehensive about presenting his own research to this group. Bin’s AAG experience was was one he will never forget. In April 2019, the department awarded Bin with the Nicholas Paape Memorial Award for academic excellence in geographic information science (see p.9).

After graduating with his BS in Geography (GIS Track) in the spring of 2019, Bin’s final year included serving as a Teaching Assistant for Silvia Secchi’s Contemporary Environmental Issues (GEOG: 1070) and finishing up his Master’s coursework. With continued guidance from his advisor, Professor Caglar Koylu, Bin graduated in spring 2020 and looks forward to a career in geoinformatics.
Several geography graduate students advanced to the finals of the Graduate College's *Three Minute Thesis* competition in 2018 and 2019. Students are given just three minutes to articulate their complex research to a non-specialist audience.

"Flooding and Suffering in America"
*Winner of People's Choice Award*

Oronde is a PhD student in the Department of Geographical and Sustainability Sciences. He completed a Bachelor of Arts degree in geography from the University of Guyana and holds a Master of Science in environmental hazards and geographic information systems from Coventry University (United Kingdom). His previous work focused on the impact of sea level rise and hazard vulnerability assessments in his native Guyana, where the national disaster management agency is utilizing his findings for community based disaster risk management plans. A GEEMaP trainee, Oronde’s current research examines the human–environment interactions that produce social vulnerability in multi-hazard settings.

"Camera Trapping for Urban Biodiversity Conservation"
*Winner of People's Choice Award*

Graduate school provides Brandon with the ability to pursue knowledge to his own level of satisfaction, surpassing the bounds set in an undergraduate education. He hopes that his work positively impacts our ability to conserve wildlife, both within and outside of an urban setting. Brandon’s biggest supporters are members of his family, who allow him to conduct office and field work when it needs to be done and provide moral support through every endeavor. Brandon’s advisor, Dr. Heather Sander, is an exceptional role model; she balances her work and family life, and her being a parent of children of similar age as his creates an understanding and positive environment for him to continue reaching his graduate degree milestones.

"Social Vulnerability to River Floods in the U.S."

Asif is a PhD student in the Department of Geographical and Sustainability Sciences and works with Professor Eric Tate. He completed his MS degree in environmental science and management from the University of Manchester in the United Kingdom and a bachelor’s degree in urban planning from Bangladesh University of Engineering and Technology in Dhaka, Bangladesh—his home country. His research focuses on the interaction between social vulnerability and flood hazard and people’s perception about their vulnerability. He hopes his research will help reduce the impact from future flood disasters. Outside his work, Asif loves to spend time with his wife, traveling and trying out different cuisines.

"Geographic Health Disparities: What are they and do they Matter?"

A significant part of my identity is based on the fact that my family migrated to the United States (Ames, Iowa) from Kenya when I was in grade school. I call two places home, Kenya and Iowa. Therefore, my work and career focus on maintaining my link back to Kenya. I completed my BS and MS at Iowa State University. During my M.S., I learned how to use Geographic Information System (GIS) tools to analyze patterns in geographic data. I mapped movement patterns of Bison and Elk in a prairie reconstruction project at Neal Smith National Wildlife Refuge near Des Moines. From there, every project I worked on has been linked to GIS. I love being able to show patterns in data and more importantly, trying to understand why those patterns happen. I was fortunate to spend four years in Kenya working as a GIS technician on projects ranging from food security patterns in urban informal settlements in Nairobi to mapping of disease vectors (such as biting flies) in very remote and rural parts of Kenya. My PhD work aims to define the temporal and geographic patterns of non-communicable diseases (such as hypertension) in Kenya.
28 students in the Senior Project Seminar course, lead by Professor Margaret Carrel, presented their research posters in late April 2019. Students spent the semester conducting independent research, analyzing data, and creating maps to examine their unique research questions.

Projects Included:
- County Voting Behavior in 2012/2016
- Climate Change Sentiment on Twitter
- Expansion of Invasive Garlic Mustard
- Fertilizer Use and Impaired Waterways in Iowa

Academic Award Winners:

**Chad E. Smith Memorial Award**
*Academic Excellence in Environmental Studies*
- Katherine Bussell

**Nicholas Paape Memorial Award**
*Academic Excellence in Geographic Information Science*
- Bin Zhang

**Martha L. Corry Award**
*Academic Excellence in Health & Society, EPPL*
- Greg Hardison
- Eric Small

**Best Poster**
- Cayla Baldus, "Sea level rise & sea turtle populations"
- Hannah White, "Hurricane Sandy and buyouts in New Jersey"
Margaret Carrel was named Andrew Carnegie Fellow for 2019-2020. The prestigious Andrew Carnegie Fellowship provides their class of 32 fellows a grant of $295,000 to research, write, and publish in the humanities and social sciences. Dr. Carrel’s project is titled “Understanding Infectious Disease Risk in the Wake of Hurricanes and Floods in the U.S.” The $200,000 grant will support her work and that of two other faculty members and a graduate student. The project will use data on health outcomes of U.S. veterans in combination with data on flood and hurricane exposure to assess if and how bacterial and viral infection rates change during or after disasters. Carrel hopes the project results will “inform public health preparedness and response to disasters.”

Marc Armstrong, named University Consortium for GIS (UCGIS) Fellow

In June 2019 at the UCGIS Symposium in Washington, D.C. Marc Armstrong, Professor and Collegiate Fellow, was awarded Fellow status. Dr. Armstrong’s contributions to the mission of UCGIS, to further research and development in the field, is exemplary. His contributions to the UCGIS organization include his service on the Board of Directors and his ongoing and steady support for UCGIS through participation in its events and activities throughout its entire history.

Additionally, Professor Armstrong gave the keynote presentation at the Location Powers Data Science workshop held at the Googleplex (Google HQ) in Mountain Valley, CA in November 2019. The presentation was titled, “Fundamental Issues in Geospatial Data Science: Emerging Trends in Data and Analytics”

Matt Dannenberg, awarded NASA Science Mission Directorate Grant

Assistant Professor Matt Dannenberg was awarded a grant from NASA’s Science Mission Directorate for the Soil Moisture Active Passive (SMAP) Science Team! Dr. Dannenberg’s grant is entitled, "Leveraging SMAP Soil Moisture and Multi-Source Earth Observations to Quantify Variability and Drivers of Global Dryland Carbon and Water Fluxes." Dr. Dannenberg’s research will utilize the NASA satellite soil moisture sensor data to, "improve upon existing satellite-based models of dryland carbon and water fluxes, especially when combined with other complementary Earth observations of ecosystem structure and function." These observations will provide information on the key drivers of water-limited ecosystems, allowing us to better characterize the drivers of carbon and water fluxes across global drylands.

Eric Tate, awarded U.S. Dept. of Housing & Urban Development Grant

The U.S. Department of Housing & Development (HUD) awarded $850,000 to a research team led by Associate Professor Eric Tate, for their proposal "Cost Effectiveness of CDBG-DR: Flood Mitigation and Vulnerable Populations." CDBG-DR is the disaster recovery program under HUD’s Community Development Block Grant Program. The 3-year project will analyze economic and social benefits of CDBG-DR disbursements for flood recovery and provide guidance for future program grantees. Additionally, Dr. Tate was named as a panel member of the Resilient America Roundtable of National Academies of Science. This panel and its programs aim to help communities and the nation build resilience to extreme events, save lives, and reduce physical and economic costs of disaster.
**SELECTED FACULTY PUBLICATIONS**


- **Malanson GP,** Farge DB, Zimmerman DL. 2018 Scale dependence of diversity in alpine tundra, Rocky Mountains, USA. Plant Ecology 219: 999-1008.


- **Malanson GP, DeRose J, Bekker MF.** Separating niche differentiation and individual-level variation in simulating impact of climatic volatility. Ecological Modelling, In press.


*GSS Graduate Student
In April 2019, faculty, graduate and undergraduate students made their way to Washington D.C. for the 2019 American Association of Geographers Annual Meeting. Members of our department participated in paper and poster sessions, presented research, chaired committees, and collaborated with other geographers at AAG. The 2020 AAG Annual Meeting was held virtually due to Covid-19. Read more about the meeting and our participants here.

Papers & Posters

- Hoeyun Kwon, Caglar Koylu, and Bin Zhang. "Climate change or natural cycle? Not sure, but it gets 2 hot and 2 cold 4 sure."
- Haoyi Xiong and Dave Bennett. "Urban Traffic Congestion Detection."
- Rebecca Kauten. "Understanding localized impacts and perceptions of connections between winter road maintenance and water quality."
- Margaret Carrel. "Mapping MRSA: Using geography to understand drug resistant S. aureus in humans and livestock."
- Oronde Drakes. "Social Vulnerability and Individual Assistance."
- Cristina Munoz. "Social vulnerability and FEMA Public Assistance."
- Matthew Dannenberg. "A long-term, consistent land cover history of the southeastern United States based on automatic adaptive signature generalization and multi-temporal Landsat imagery"
- Matthew Dannenberg. "Automated prediction of subannual continuous fields impervious fractional cover dynamics."
- Seungwon Kim. "Combining phylogeography and network analysis to evaluate the effects of landscape variables on the spread of influenza A viruses in the US."
- Cristina Muñoz. "Social Vulnerability and FEMA Public Assistance"
- Asif Rahman. "Social Vulnerability to River Floods in the U.S."
PhD student, Barbara Kagima, was one of twenty-one graduate students at the University of Iowa granted a Stanley Award for International Research in 2019. The **Stanley Award** allowed Barbara to conduct a 6-week survey of screening and treatment for hypertension in rural Kenya in the summer of 2019.

**Project Title:** Survey of Access to Screening and Treatment for Hypertension in Rural Kenya. The Stanley Award allowed me to conduct a 6-week survey of health care practices related to the screening and treatment of hypertension in rural Kenya. A 2015 nationally representative survey found a 25% prevalence of hypertension in Kenya, but only 15% of those diagnosed were aware of their hypertensive status. Although the prevalence of hypertension was similar in rural and urban inhabitants, the rate of awareness about their condition was much lower for rural dwellers.

Using qualitative methods, I surveyed local health care facilities in six rural counties about their ability to screen and treat hypertension. I also visited with local Ministry of Health officials to learn about the policies, programs, and interventions in place for hypertension prevention and management. This project serves as preliminary research for my Ph.D. dissertation about the spatial dynamics of chronic disease screening and access to treatment in developing nations.

*Photo credit: Barbara Kagima*
ADAM SKIBBE'S LIDAR RESEARCH FEATURED IN THE DES MOINES REGISTER AND DAILY IOWAN

GIS administrator, Adam Skibbe's research on using Light Detection and Ranging (LiDAR) technology to scan French Gothic cathedrals was featured in both the Des Moines Register and The Daily Iowan. The Des Moines Register's April 19, 2019 article entitled, "Inspired by laser scans of Notre Dame, Iowa researchers are mapping Hawkeye state landmarks" by Shelby Fleig quoted Skibbe, "mapping Iowa landmarks like Kinnick Stadium is one of the ways we teach our students about how these things are used out in the real world." Skibbe and students have taken LiDAR scans of the Maquoketa Caves, French Gothic Cathedrals, the Everly Brothers' childhood home and more.

ERIC TATE'S RESEARCH WITH IA FLOOD CENTER AND CITY OF DUBUQUE FEATURED IN IOWA NOW

Associate Professor Eric Tate's research on flood resilience was featured in Iowa Now magazine. The article by Lynn Anderson Davy entitled, "UI experts, Dubuque officials improve city's flood resilience one home at a time" details Tate’s research and collaboration on flood-hazard mitigation and resiliency. "There's a strong rationale for focusing on vulnerable populations as well as a strong moral case for it," says Dr. Tate. 'In Dubuque, we are focusing on helping people who are at greater risk during a flood in large part because they have fewer resources to safeguard their homes and health. In the long run, it's not only an equitable solution to mitigating risks, but also cost-effective.'"

MATT DANNENBERG'S CLIMATE RESEARCH HIGHLIGHTED IN IOWA PUBLIC RADIO INTERVIEW

Assistant Professor Matt Dannenberg's recent publication, "Reduced tree growth in the semiarid U.S. due to asymmetric responses to intensifying precipitation extremes" examines how extreme rainfall variability may cause long-term declines in tree growth for several species of trees. Dannenberg was interviewed by Iowa Public Radio and Radio Iowa on the findings of this research. Iowa's state tree, the bur oak, is one of the species threatened by reductions in growth due to precipitation extremes.

SILVIA SECCHI INTERVIEWED ON IOWA PUBLIC RADIO TO DISCUSS "A SAND COUNTY ALAMANAC"

Associate Professor Silvia Secchi discussed Aldo Leopold's "A Sand County Almanac," on Iowa Public Radio The book, first published in 1949, remains relevant 70 years later given its "contemplative musings on conservation and land stewardship". As an environmental economist, Dr. Secchi discussed the text's impact in ecological and cultural economics. Dr. Secchi discussed Leopold's examination of the Dust Bowl policies and emphasized the role of the government in matters of sustainable agriculture practices. Dr. Secchi noted Leopold's early concerns and observations of the environmental impact of industrial agriculture on humans and environment.
**MATT DANNENBERG**

Matt Dannenberg joined the department as an Assistant Professor in Spring 2019. Matt received his PhD in Geography from the University of North Carolina, Chapel Hill and served as a Postdoctoral Research Associate at the University of Arizona before coming to Iowa City. Matt specializes in global change ecology, forest ecosystem ecology, climate, land cover, remote sensing and more. His research investigates the impacts of climate variability/change on the growth, phenology, and carbon uptake of terrestrial vegetation. Matt also uses and develops methods for monitoring land use and land cover change with remote sensing, with the goal of separating climate influences on ecosystems from the effects of land cover composition. Since joining the department, Matt has developed two new courses: Ecological Climatology and Ecosystem Ecology. Matt spent the summer of 2019 conducting field work with several research assistants to collect tree ring data across sites in Johnson County.

**CARLY NICHOLS**

Carly Nichols joined the department as an Assistant Professor in Fall 2019 with a joint appointment in Geographical & Sustainability Sciences and Global Health Studies. Carly received her PhD in Geography from the University of Arizona before joining the department in Iowa City. Carly is a broadly trained human-environment geographer with specializations in feminist, health, and agro-food geographies. Carly has over seven years of research experience across northern, eastern, and central India investigating agriculture, health, gender, food, and nutrition security. Carly's research examines the complex interplay among processes of human health and wellbeing, ecological change, and everyday social relations, particularly to food and agriculture. Carly has specific interest in using qualitative, ethnographic, and feminist methods to understand how health and social inequities are produced, reproduced, and experienced by different stakeholders. Since joining the department, Carly developed a new course, Envisioning Future Worlds: Sustainable Development and Its Alternatives.

**SUSAN MEERDINK**

Susan Meerdink joined the department as an Assistant Professor in Fall 2020. Susan received her PhD in Geography from the University of California Santa Barbara. Susan works at the intersection of machine learning, remote sensing, and ecology to understand our functioning natural environment. The ability to capture high temporal, spatial, and spectral resolution imagery has advanced much more rapidly than algorithms for processing, visualizing, and interpreting these images. In her work, Susan aims to develop algorithms and methodologies for image processing that transforms the data into manageable and applicable information for future applications. Additionally, monitoring ecosystem function with high resolution over large spatial scale is extremely difficult due to the inherent cost and complexity managing ground-based operations and sensors. To overcome these challenges, Susan uses computational spatial methods to characterize the vegetation function and the effect of physiology on the optical and thermal properties of plants.
Summer courses offered at Iowa Lakeside Laboratory, located at West Okoboji Lake, allow students to experience their coursework first hand in prairies, lakes, and quarries across the Midwest.

In summer 2019, former Visiting Assistant Professor, Rebecca Kauten, led the way teaching two Lakeside Lab courses.

**PRAIRIE ECOLOGY (IALL:3122)**

Students visited both wet and dry prairies, sampled soil at various locations to compare, and spent an afternoon with Dwight Rutter, a local farmer-turned-prairie seed grower entrepreneur, who has an amazing piece of land in the Little Sioux watershed. John Pearson from Iowa DNR joined the group for two field excursions. One was to the Waterman Creek Complex, which includes an archaeological preserve in O'Brien County. The other was Fen Valley, also within the Little Sioux watershed.

**TOPICS IN ECOLOGY & SUSTAINABILITY: INTRODUCTION TO GIS (IALL:3034)**

This included field excursions to the EROS data center in Sioux Falls, a subsequent visit to the Falls, and a trip to the Jeffers Petroglyphs about an hour north of Lakeside. There's also a county park, Red Rock Falls, where students had a picnic lunch — much smaller than the Big Sioux Falls, but part of the same formation. The group talked not only about physical geography, bedrock maps, Sioux quartzite and glacial formations.
"A living history of Shell's Development of the Mars-Ursa Basin in the Gulf of Mexico"

Ty Priest, Associate Professor of History and Geographical & Sustainability Sciences, is a widely-published scholar of energy and environmental history, with expertise in the history of offshore oil. Geography alumna, Amy Kopale (MA ’19), assisted with the creation of the projects maps in ArcGIS.

The purpose of the website is to document, analyze, preserve, and display the history of this American energy asset. It seeks to reveal the intricacies of leading company’s decisions, investments, and operations in one of the biggest and most technologically innovative industries in the world, and to humanize those who took part in this history. The website provides a forum for “Martians” and other participants to contribute recollections, images, or artifacts which will help to maintain the living history and memory of “Shell Oil’s Deepwater Mission to Mars.” Hundreds of thousands of people have worked directly in the Gulf of Mexico offshore oil industry over time, tens of thousands for Shell, and thousands on the Mars project. Together these people advanced the state of science and technology, not just for the extraction of offshore oil and gas, but also beyond it. The story of deepwater oil in the Gulf of Mexico can be told through the story of Mars, historically the largest single source of crude oil in American waters.

It was one of the earliest prospects to be drilled and developed on some of the first federal deepwater leases offered in the early 1980s. In the late 2010s, thirty-five years later, it remains one of the most productive basins in the Gulf at the cutting edge of technology. More than any other project in the Gulf of Mexico, Mars (and the development of its adjacent fields, Ursa, Europa, Deimos, and West Boreas) documents the wide-ranging innovations that have propelled the industry into ever-deeper waters and new geological frontiers. It provides a window into the evolution of geophysical technology and interpretation, drilling and well completion, platform and facilities design, workforce organization and culture, process engineering, subsea engineering, reservoir engineering, pipelining, project management, disaster management, and safety management.

View the interactive, multi-media project at: dsp.s.lib.uiowa.edu/mars-deepwater-gulf
Check out who stopped by Jessup Hall for Kohn Colloquium in 2018-2019

SARA HAMIDEH
Assistant Professor of Community and Regional Planning at Iowa State University: "Understanding and Predicting Housing Recovery After Disasters"

BRIAN CHAFFIN
Assistant Professor of Water Policy at the University of Montana: "Resilience, Governance, and Food-Energy-Water Policy in the Klamath River Basin, USA"

LAURA SCHMITT OLABISI
Associate Professor in Dept. of Community Sustainability and Environmental Science at Michigan State University: "Participatory Modeling: Partnering with Stakeholders for Sustainability"

METHA KLOCK
Adjunct Professor of Earth and Environmental Sciences at the University of Iowa: "Promiscuous Plants: Why Less Choosy Legumes May be More Likely to Invade New Regions"

TODD EDWARDS
Advisor and Coordinator of Data & Analytics with Mission 2020: "Global Climate Change Policy: 1.5°Celsius and the Role of States, Regions, Businesses and Civil Society in U.N. Climate Change Diplomacy"

CAROLINE GOTTSCHALK DRUSCHEK
Associate Professor of English at University of Wisconsin-Madison: "Critical Approaches Freshwater Management in the Places of Persuasion"

JESSE LECKBAND
Senior Environmental Analyst for MidAmerican Energy: "The MidAmerican Energy Multi-Project, Multi-Species Wind Habitat Conservation Plant"

GIANG RUDDERHAM
Data Manager at the Iowa Social Science Research Center, Iowa Public Policy Center: "Data Resources Available to UI Researchers: ISCPSR and QDR"

HAIFENG QIAN
Assistant Professor and Director of Graduate Studies for the School of Urban & Regional Planning at the University of Iowa: "The Geography of Entrepreneurship in the U.S."

YONGREN SHI
Assistant Professor of Sociology at the University of Iowa: "Multiplex Social Networks in Rural Honduras"
KOHN COL•LO•QUI•UM:  noun: \ˈkōn \ kə-ˈlō-kwē-əm
A weekly seminar for graduate students, faculty, and other interested community members to hear from experts
and specialist in the broad field of geographical & sustainability sciences. Participants learn about and discuss
the latest research from unique perspectives and hone professional development skills. Founded in 1946 and
later named "Kohn" Colloquium after Professor Emeritus Clyde F. Kohn. Coffee and cookies always included.

ADAM KAY
Associate Professor of Biology at the
University of St. Thomas: "Changemaking
Ecology: Using Basic Research to
Catalyze Social Innovation"

IBRAHIM DEMIR
Assistant Professor of Civil &
Environmental Engineering at the
University of Iowa: "Intelligent Data
Analytics and Communications Systems
for Disasters"

LEIGH GRAHAM
Assistant Professor in the Department of
Public Management at John Jay College of
Criminal Justice: "Risk, Race and
Recognition in Rockaway: Just Climate
Adaptation after Hurricane Sandy"

JUSTIN MAXWELL
Associate Professor of Geography at
Indiana University Bloomington: "How do
Anomalously Wet Periods Influence the
Drought Response of Radial Tree Growth?"

KIMBERLY VAN METER
Assistant Professor in Ecohydrology at the
University of Illinois at Chicago: "Signatures
of Human Impact: Legacies, Land Use, and
Long-Term Trajectories"

LUBA KURKALOVA
Professor of Economics at North Carolina
Agricultural and Technical State
University: "The Intensity of North
Carolina Cropland Use"

MALLORY BARNES
Assistant Professor at Indiana University’s
O’Neill School of Public and Environmental
Affairs: "Ecology in the Big Data Era:
Harnessing the Power of Informatics to
Uncover Ecosystem Responses to Global
Change"

WEI ZHANG
Assistant Research Scientist at IIHR -
Hydroscience and Engineering UI: "Cracking
the Climate Nut Through the Use of
Numerical Modeling and Data Analytics:
Hurricanes and Atmospheric Rivers"

BENJAMIN MAAS
Assistant Professor of Environmental
Science and Geology at Buena Vista
University: "Utilizing Place Based Education
& Research to Assess the Environment of
Iowa, from Lakes to Karst"

Kohn Colloquiums in 2018-2019 were organized by
faculty members Eric Tate (Fall 2018), Caglar Koylu
(Spring 2019), and Matt Dannenberg and Silvia
Secchi (Fall 2019). Alumni are always welcome!
IOWA GRADS

FALL 2018
Alexander Behnke, Geography BA
Will Brock, Geography BA
Amber Egan, Geography BA
Calvin Eldred, EPPL BA
Dillon Evertsen, Geography BA
Marcus Hempen, Geography BS
Sarah Huettner, Geography BS
Anna Jones-Hughes, EPPL BA
Eric Knipper, Geography BA
Jiawei Li, EPPL BS
Laura Mendoza, Geography BA
Keaton Merschman, Geography BA
Ben Peters, Geography BS

SPRING 2019
Blake Alberhasky, EPPL BA
Tucker Allen, Geography BA
Isabella Brown, EPPL BS
Katherine Bitch, Geography BA
Benjamin Christensen, Geography BA
Madison Conley, EPPL BA
Andrew Cook, EPPL BS
Eden DeWald, EPPL BS
Nicole Douglass, Geography BS
Jeremigh Freyberger, EPPL BA
Grace Galles, EPPL BS
Anna Grimson, Geography BS
Ryan Hall, EPPL BA
Gregory Hardison, Geography BA
Bailey Hesse-Withbroe, Geography BS
Luke Jipp, Geography BA
Christian Johnson, EPPL BS
He Ketong, Geography BA
Catherine Knight, EPPL BA
Kennedy Knight, EPPL BS
Natallie Maves, EPPL BS
Samuel McCrory, EPPL BS
Mica Nguyen, EPPL BA
Ayman Sharif, EPPL BA
Benjamin Staley, Geography BA
Bjorn Swenson, EPPL BA
Lirong Yin, Geography BS
Bin Zhang, Geography BS

SPRING 2020
Brandi Amantea, EPPL BS
Katherine Bitch, Geography BA
Paige Brandenberg, EPPL BA
Daniel Brecher, Geography BA
Andrew Carlson, EPPL BA
Kathleen Chartier, EPPL BA
Caiden Comito, EPPL BA
Amanda Dian, EPPL BA
Melissa Edwards, EPPL BA
Tyler Gates, Geography BS
Ann Guhin, EPPL BS
Jack Hoogeveen, EPPL BA
Dustin Hornberg, EPPL BS
Zachary Kanka, Geography BA
Brandon Kilcoyne, EPPL BS
Ian Klopfenstein, Geography & EPPL BS
Sydney Lyddon, EPPL BA
Noel Mills, EPPL BA
Jack Moran, Geography BA
Ellie Mullins, EPPL BA
Emma Nelson, Geography BA
Alexander Oberhelman, EPPL BA
Bella Otsby, EPPL BA
Joshua Patterson, Geography BA
Jade Pederson, EPPL BS
Julia Poska, Geography BA
Ryanne Prochnow, EPPL BA
Allison Rodish, Geography BA
Jesse Rolling, Geography BA
Zachary Schieltz, Geography BS
Eric Small, EPPL BA
Hunter Staszak, EPPL BS
Sophie Sunderland, Geography BA
Derek Tate, Geography BA
Hannah White, EPPL BA

BY THE NUMBERS

Figures on the graduating classes of Fall 2018 - Spring 2020:

- **52 EPPL Majors**
- **42 Geography Majors**
- **61 Bachelor of Arts Degrees**
- **33 Bachelor of Science Degrees**

*EPPL: Environmental Policy & Planning*
GRAD STUDENT "GOODBYES"

In spring and summer of 2019, five of our graduate students successfully defended their dissertations, theses, and portfolios, and officially became alumni.

Ph.D., GEOGRAPHY

CODY HODSON

Advisor: Heather Sander
Dissertation Title: Vegetation in Student Environments and School-Level Academic Achievement: Associations at Multiple Scales and in Various Social and Environmental Contexts

REBECCA KAUTEN

Advisor: Eric Tate
Dissertation Title: Beyond Chloride: Quantifying Secondary Impacts of Road Salts on Urban Waters
Currently: Scientist in Residence Fellow at Iowa Lakeside Laboratory

M.A., GEOGRAPHY

AMY KOPALE

Advisor: Silvia Secchi
Focus: Environmental Geography: GIS methods, spatial analysis, and applications
Currently: GIS Specialist, CDM Smith, Chicago, IL

KANG SAN LEE

Advisor: Marc Linderman
Thesis Title: A comparative analysis of UAS photogrammetry and terrestrial LiDAR for reconstructing microtopography of harvested fields

BRIANNA ZUMHOF

Advisor: Heather Sander
Thesis Title: Understanding Perceptions of Urban Biodiversity and Its Benefits
Currently: Geographic Information Systems Specialist, HR Green, Cedar Rapids, IA

ALUMNI: WE WANT TO HEAR FROM YOU!

Have news or updates to share? We want to know! Connect with Geography at Iowa on LinkedIn or email us at geography@uiowa.edu
While the first geography course was taught at the University of Iowa in 1855, it wasn't until nearly a century later that the Department of Geography was founded in 1946. It took the lobbying of several dedicated professors and increased enrollment following World War II to give the department a permanent standing in the college.

When the Geography Department became official, the faculty members were mostly housed in University Hall, now known as Jessup Hall. Before the department joined the College of Arts and Sciences, geography courses were taught in the College of Commerce.

1947-1952: TO THE BARRACKS!  The Nomadic Years

In the first year after the war there was a critical shortage of buildings and classroom space. Geography, as a new department, was forced to occupy temporary "barracks like" structures located around campus.

- Iowa Avenue Temporary Buildings (located along Iowa Ave west of Madison St.) Pictured in top left photo.
- Clinton Street Temporary Buildings
- Union Temporary Buildings (located north of the Iowa Memorial Union) Pictured in lower left photo.

"Geography came late to the University of Iowa"
- Professor Emeritus Harold McCarty, 1979
In the fall of 1952, with the completion of the new Main Library Building, Geography was able to occupy the southerly portion of Old Armory, directly across the street from the Main Library. In the 1960s, faculty and graduate student offices were also housed on the west side of the third floor of the Main Library.

"When's the train coming?"

While housed in the Old Armory, the department held its weekly colloquiums (now Kohn Colloquium) at 4:00 in a classroom on the railroad side of the Old Armory. Usually at about 4:15-4:30 a train on the Crandic railroad would go by, and if the windows were open, create such a noise as to force seminar speakers to stop talking. Speakers from other universities frequently had heard of this and would joke about “when is the train coming?”.

A brisk morning exam

With enrollment for Introduction to Geography up to 300-400 by the early 1960s, the lectures were given in the Studio Theater in Old Armory. This large lecture hall had been used as a gymnasium and an ROTC drill space. There was a running track circling the room on the second level. There was very little heat provided and all 400 students would bundle up in their coats, hats, and gloves to take their exams.

At least as early as 1972, the department began to lobby for more adequate space. Geography was offered the fifth floor of the newly constructed Phillips Hall, but turned it down as the College of Business enrollment was growing. Geography was also offered a spot in the new Social Science building to be built on the parking lot of the Main Library. This building was never built. Finally in the early 1980s, Geography was promised it could move to the second and third floors of Jessup Hall. This move occurred in the academic year 1984-1985.

Coming back home to its original birthplace in the mid 1940s, the Geography Department truly came full circle. Jessup Hall has now served as the department’s home for three decades. In 1996, for the department’s 50th anniversary, the GIS lab was opened on the second floor where it remains today.
SUPPORT THE DEPARTMENT

As noted in the opening section, we are in unprecedented times and private support of GSS is more important than ever. If you are in a position to contribute to the success of our department and students, please consider one or more of the following options for support. Visit givetoiowa.org/geography for details.

- **Development Fund**: These funds are used to enhance the department through recruitment activities, guest speakers, events, student travel for conferences, or field research, student excellence awards, and experiential learning opportunities for students.
- **Gerard Rushton Academic Excellence Fund**: Supports graduate students & visiting speakers.
- **Rex Honey Speaker Series Fund**: Supports bringing guests and speakers to our department.

Your gift to the department will make a difference, please visit: givetoiowa.org/geography

You can also make valuable contributions to department in ways that do not require a monetary contribution. For example: host an intern at your place of employment, hire a UI GSS graduate, mentor students working on projects, or provide insightful feedback on how your GSS experience prepared you for your career. Please contact Dave Bennett (david-bennett@uiowa.edu) or Caroline Garske (caroline-garske@uiowa.edu) if you are interested in one or more of these opportunities.

**WE'RE TURNING 75 IN 2021!**

2021 will mark the 75th anniversary of the department! Plans are already underway to celebrate the department’s 75 year history. If you have any memories, photos, mementos, or tidbits to share about your time in the department, please email Caroline Garske (caroline-garske@uiowa.edu) to contribute to the 75th anniversary showcase! In the meantime, stay tuned for more updates as Fall 2021 nears.