

Department of GEOGRAPHY & GEOGRAPHIC INFORMATION SCIENCE

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN | COLLEGE OF LIBERAL ARTS & SCIENCES

SPRING 2014

Memories of Davenport Hall



The Department of Geography and Geographic Information Science is undergoing constant change. Just one year after amending our name to reflect an increased focus on geographic information science, we have moved out of Davenport Hall, home to geography since the department officially became an academic unit in 1945. We are temporarily stationed in the Computing Applications Building, but will join the School of Earth, Society, and Environment's other two departments—atmospheric sciences and geology—in the renovated Natural History Building (NHB) in 2017, a move that will strengthen interdisciplinary links among SESE faculty, students, and researchers. As we look forward to the move into NHB, we also reflect on geography's history in Davenport Hall.

Davenport Hall was originally home to the College of Agriculture, and the central section was used as a stock pavilion. Important agricultural discoveries were made in Davenport, especially in the field of crop sciences. Dr. Fred Kolb, professor of crop sciences, takes his "Principles of Plant Breeding" class on guided tours of Room 328, the former office of

Edward Murray East (PhD 1907). Dr. East, considered the father of modern plant breeding, was the co-inventor of hybrid corn. "Some classes really get into it. They walk in there and look around like they're visiting a shrine. You can see the heavy safe they used for seed storage, and one of the racks still has a 'Department of Agronomy' label on it. Presumably, this is where

they discovered the gene that makes sweet corn sweet," said Kolb.

Our future move to the Natural History Building harkens back to this department's roots as a subfield of geology. Through the 1920s, geography faculty offices were scattered in small portions of NHB's second and fourth floors, while geology and the Natural History Museum occupied the rest. Space was at a premium, to say the least. Seven geography faculty members shared 1,400 square feet of space, and another three were squeezed together into just 130 square feet of shared space. Dr. Jerome Fellmann, who served as the Department of Geography's head from 1974-77 and authored an invaluable history of the department, noted that "[g]eographers, if not wholly content, were at least quiescently resigned to the subordinate role of their discipline within the Department of Geology during the 1920s."

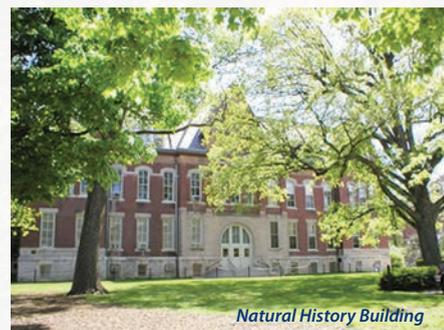
Advances in the discipline, along with steady increases in faculty hires and student enrollments, made clear the need to establish geography as a separate discipline from geology. Our first official

name change came in 1934, when the Department of Geology officially became the Department of Geology and Geography. Another boost for geography came in 1936, when University of Illinois president Arthur Willard announced that certain geography courses would satisfy both the physical and social science general education requirements for undergraduates. However, it was **Dr. Joseph Russell**, the namesake of our department's seminar room and graduate student fellowship, who oversaw the most significant changes to the department.

In 1945, Dr. Russell was appointed the first official department head of the newly-established Department of Geography, and one of his first acts was a bold request for 16,500 square feet of space for faculty, instruction, and laboratory use. He made clear in a 1950 letter to the chairman of the space committee of the college the need for "ample and continuously available space for instructional work in cartography, a number of special-purpose laboratories and additional classrooms, adequate and safe storage...for manuscript maps, cartographic supplies and field equipment, and field instruments."

In response, geography was granted the first floor of Davenport Hall, which

(Davenport Hall continued on page 4)



MESSAGE FROM THE HEAD



Dear Friends,

Change is constant in our department, but the past year was especially eventful. In early January 2013, I fatefully remarked to our office staff that: "things seem slow;" after which a flood of activity ensued. The most important change was our move from Davenport Hall, geography's home for more than 60 years, into temporary space in the Computing Applications Building. In three

to four years, the department will move again to the newly-renovated Natural History Building, the future home of the School of Earth, Society, and Environment (SESE).

Vacating the space we occupied for so long was an enormous task. Recycling bins filled up with paper from faculty offices, reflecting the shift from analog to digital file storage. All sorts of items were discarded or put into storage. Maintaining records of the department's history was a priority, and we uncovered many interesting treasures in the process. Most of our department's former space in Davenport is being converted into SESE classrooms, although Professor Geoff Hewings's Regional Economics Applications Lab remains in the building, along with departmental classrooms and research spaces.

While the move was challenging, there were many bright spots in this busy year. Terrific new faculty and graduate students joined the department. A group of graduate students hosted the Upper Midwest Nature-Society workshop. Two symposia, on GIScience and Sociohydrology, were held in the fall. We continue to build the department's GIScience focus with new courses, faculty, funded research projects, and establishment of the cutting-edge CyberGIS Center for Advanced Digital and Spatial Studies led by Professor Shaowen Wang. Development of our GIScience program is beginning to pay dividends, reflected in rising student interest in our GIS classes and in the GGIS major.

Moving from Davenport drove home the fact that our department is much more than bricks and mortar. It is a deeply-linked community of students, faculty, staff, and alumni, with a distinctive sense of place and identity. We are incredibly grateful for all of your contributions to the department: to the alumni who participated in the iGIScience Symposium, building bridges with our current faculty and students, and to all of you who have done so much to make this a top department. Your contributions support student research and conference travel, departmental events, facility improvements, and scholarships and fellowships for our outstanding students. Your accomplishments and generosity are a critically important part of who we are, and what we are becoming. Thank you so much. I would love to hear from you and welcome you to visit our new space when you're in Urbana-Champaign.*

Sara McLafferty
smclaff@illinois.edu

SPRING 2014

Department of Geography and
Geographic Information Science
School of Earth, Society and Environment
College of Liberal Arts and Sciences
University of Illinois at Urbana-Champaign

This newsletter is produced by the
College of Liberal Arts and Sciences Office
of Communications and Marketing.

Correspondence may be sent to:
255 Computing Applications Bldg.
605 East Springfield Avenue
Champaign, IL 61820
(217) 333-1880
Fax: (217) 244-1785
geograph@illinois.edu
geog.illinois.edu

Facebook.com/IllinoisGGIS

Twitter.com/UIUCGeogGIS

LinkedIn: Geography &
GIS - University of Illinois

College of
**Liberal
Arts &
Sciences**
AT ILLINOIS

Alumni, Students, and Faculty Participate in iGIScience Symposium

On Friday, Oct. 4, our department hosted the iGIScience Symposium, an event that marked the department's recent name change and highlighted scientific innovations and opportunities in geographic information science (GIScience) at the University of Illinois. GGIS faculty, students, alumni, professional colleagues, and the campus community gathered in a packed room at the Illini Union to learn, listen, and participate in panels and presentations about the increasingly important role of geospatial data and technologies in business, government, research, and everyday life.

The *GIScience in Practice* panel featured departmental alumni who are working in the GIScience field, including **Anthony Aducci** (Federal Emergency Management Agency, BA 2004), **Brett Beardley** (Argonne National Lab, BA 2006), **Steve Breese** (Nokia HERE, BS 2001), **Elizabeth Lyon** (U.S. Army Corps of Engineers, MS 2006), and **Steve Thayer** (Physician's Immediate Care, BA 1989). These panelists discussed the diverse uses of GIS in their firms, such as developing infrastructure protection plans for football's Super Bowl or identifying locations for urgent care facilities. Issues of education and career development were also discussed, especially in relation to spatial thinking, GIS training, and professional network development. The *GIScience in Practice* panel was a great opportunity for Illinois geography alumni to pay a visit to Urbana-Champaign and reconnect with their former instructors and colleagues, as well as share their professional experiences with our undergraduate majors and graduate students.



Undergraduate major **Phillip Wilson's** lightning talk at the iGIScience Symposium (above).

Dr. Sara Metcalf presenting during the GIScience Futures panel (right).



Geographic Information Science is one of the top three fastest growing U.S. job sectors, and our alumni demonstrated many current uses of GIS in the public and private sectors.

The symposium's second panel, moderated by GGIS Professor **Heath Robinson**, featured current GGIS undergraduate majors who presented their research projects in five-minute "lightning talks." Well-presented and well-illustrated, the lightning talks showcased exciting work being done by students in the department's GIS track. **Will Andresen** mapped the ongoing Syrian civil war, clearly delineating the conflicts over resources, ideologies, and historical settlements in the region. **Jiangdong Liu** mapped and analyzed the economic, logistic, and commercial implications of sea ice formation. **Jacqueline Costello** explored the geomorphological and geopolitical significance of a new island

being formed after an earthquake off the coast of Pakistan, only the fourth such occurrence since 1945. **Philip Wilson** mapped Illinois's thriving industry of craft breweries, trying to determine craft beer's (economic) saturation point. Finally, **Taylor Thornton** presented a spatial analysis of archaeological data that tracked a north to south migration through parts of present-day Illinois during the Middle Woodland Period.

The iGIScience symposium keynote speaker was GGIS faculty member and recently named LAS Centennial Scholar, Professor **Shaowen Wang**, who introduced his newly established CyberGIS Center and outlined his goal to make geospatial data more integrated and accessible. Cyber-GIS involves the novel integration of computing, storage, and visualization capabilities for enabling data-rich and interactive geospatial problem-solving and decision-making.

(iGIScience Symposium continued on page 7)



Davenport Hall

(Davenport Hall continued from page 1)

admittedly needed some work.

Dr. Fellmann notes: “first floor space was there—a sprawling maze of vermin-infested temporarily-partitioned cubby holes and open areas, housing the Photographic Services department.” Considering its condition, the director of the University Physical Plant was somewhat skeptical, but agreed that geography could use the first floor of a renovated Davenport Hall, as long as they pardoned some dust in the process.

Reconstruction plans were formally drawn in 1956, and geography graduate students were moved (temporarily) to Altgeld Hall’s east reading room until the first round of Davenport renovations were completed in the summer of 1957. Altgeld Hall was actually a vast improvement, considering graduate students were previously working in Davenport’s dirt floor basement. Geography Professor Emeritus **John Jakle** (department head, 1990-94) recalls “they were down in the dungeon.”

To accommodate an academic unit, Davenport’s entire center section had to be gutted, and three floors were installed to house faculty, graduate students, and classrooms. The basement was also lowered and paved for graduate student office space. Dr. Jakle illustrates Dr. Russell’s relentless work to ensure geography’s future: “Dr. Russell was able to convince the University to give us larger offices for drafting tables, map cases, and plenty of room to unroll big maps. As a result, we had plush accommodations in Davenport. We were even able to install a darkroom for wet photography, and provide an office for the staff cartographer, who had been working over in the Main Library.”

Dr. Fellmann notes, “the third floor...was designed to contain a large cartographic laboratory with attached area for ancillary equipment (including a printing press); a classroom equipped with tables and floor electrical outlets especially designed for air photo and map interpretation studies.”

Geography officially moved back into Davenport in June 1957, claiming more space as renovations and upgrades continued. In 1970, a floor was installed above the main entrance’s majestic yet creaky stairwell, cutting access to the third floor except by stairs at either end of the hallway. In 1996, an elevator was finally installed in the main hallway. The new floor created valuable laboratory space for soil analysis and remote sensing equipment, which at the time was quite bulky. Allocation of this third floor lab space has changed over the years, and was most recently home to Professor **Shaowen Wang’s** CyberInfrastructure and Geospatial Information Lab.

While most of the Department of Geography and Geographic Information Science has relocated to the Computing Applications Building, economic geography Professor **Geoffrey Hewings** still resides in the former cartography lab and darkroom (Room 318 and 318A), a space just large enough to host his bustling Regional Economics Applications Lab. Professor Emeritus **Bruce Hannon** has also retained his first floor office.

The Department of Geography has gone through many changes, including our incorporation of Geographic Information Science into our name and academic mission. As we leave Davenport Hall and its memories behind, we look forward to collocating with the School of Earth, Society, and Environment in the substantially upgraded Natural History Building. This collaborative arrangement of three distinctive departments housed in an integrative school echoes our department’s history, and moving to state-of-the-art space in one of the most historic buildings on the Quad will strengthen research and education in geography and GIScience through the next century. *



(Left to right) Professor Dara Goldman, current CLACS Director; Professor Carl Deal and Professor Joseph Love, former directors, and Professor John Thompson (seated)

Dr. John Thompson (Geography department head 1965-1974) was also the founding member and first Director of the Center for Latin American and Caribbean Studies. Dr. Thompson was honored with a plaque, and in a special session: “Our Not-so-Humble Beginnings” at the center’s 50th Anniversary Symposium in October 2013. *

Water, Wood and Science: Surveying Record Flood Flows on the Mighty Mekong



Collecting wood from the raging Mekong

September 2013 saw the fourth largest recorded flood hit the Mekong River, Cambodia, after substantial rainfall related to the onslaught of several tropical cyclones through the region, including Typhoon Usagi—a huge category 5 super typhoon. At the flood peak, more than 63,000 cubic meters of water were pulsing through the Mekong every second—around four times that of the average Mississippi annual flood discharge. The fall 2013 floods affected more than 1.7 million people in Cambodia, with 144,000 being evacuated at the height of the flood. If you were a team of river scientists seeking to study bank erosion and channel change on the mighty Mekong River, this would be a perfect time to be out surveying; catching such a flood peak is a very rare opportunity. Yet this opportunity is precisely what GGIS Professor **Jim Best** caught last fall, through his participation in an international research project entitled *STELAR-S2S—Sediment Transfer and Erosion on Large Alluvial Rivers*.

This three-year project, led by Professor Steve Darby (University of Southampton, UK) and Professor Dan Parsons (University of Hull, UK) and funded by the UK Natural Environment Research Council, seeks to better understand the relationship between climate and sediment transport in some of the world’s largest rivers. Every year, approximately 19 billion tons of sediment is transported by the world’s largest rivers to their deltas, which are home to approximately 14% of the world’s population. In the rivers of Southeast Asia, the majority of this sediment is transported and deposited during the annual monsoonal floods, the timing and magnitudes of which are increasingly affected by climate

change and human development in the form of hydropower dams. This makes these rivers vulnerable to change—the Mekong delta is one of only three in the world classified by the IPCC as “extremely vulnerable” to future changes in climate. *STELAR-S2S* aims to provide the first quantification of the natural and human controls on sediment supply and deposition under a changing climate.

The project is combining surveying of key areas of the Mekong River in Cambodia, at both high and low river flows, with numerical modeling to understand such climate-sediment transport links. To date, the team has conducted three field seasons at 12 sites along the Mekong, but September 2013 allowed an amazing opportunity to measure the river at its highest flow. At this flood stage, huge flows of water were moving out of the river channel and onto the floodplain, inundating thousands of square kilometers of land. As the floodwaters covered more and more floodplain, the population had to respond by moving livestock, machinery, equipment, food, and possessions to higher land, which often consisted solely of the slightly elevated dirt roads that run through the region. Many of the houses and buildings are raised on stilts to cope with such floodplain inundation, although some towns and villages were flooded at the peak flow. At this high flow stage, the quantity of sediment transported and amount of bank erosion through the river are enormous. The team used high-resolution acoustic techniques to map the morphology of the river bed and quantify the flow fields associated with areas of intense bank erosion. This data will be used to test hypotheses regarding the role of climatic variability in influencing how such mega-rivers transport their sediment, and the effects of this on bank erosion, channel change, and construction of the river floodplain.

Although such large floods cause hardship and flooding of many areas, they also bring some unexpected benefits, such as nourishing the floodplain and enabling locals to haul floating driftwood—including whole trees—from the swollen river to be later sawn up and utilized. Adaptation to floods is a way of life in Cambodia; this project seeks to understand how the Mekong itself will adapt under future scenarios of climatic change.

More details on the *STELAR-S2S* project can be found at stellar-s2s.org. *



Stilted house in Cambodia

NEW FACULTY PROFILES



Trevor Birkenholtz

What is your academic background, and how did you become interested in geography?

When I started my undergraduate career at University of Iowa in 1994, I had a general interest in environmental issues. Geography offered the largest number of courses in environmental policy and politics, so I took a large introductory course and declared my major after that. In that course, they advertised a position for a student at the water resource division of the USGS in Iowa City, and I started working there. That sparked my interest in water resources, right after the big Mississippi flood in 1993. I took another undergraduate course with Paul Robbins, a great, very charismatic teacher, and ended up following him to Ohio State for my graduate work, where I pursued my interest in the politics of water development and agrarian technology. Dr. Robbins was working in India, and so there was a natural vacuum taking me there. So, I went there and never looked back.

What are your research interests, and what field work have you done?

I am a political ecologist and development geographer, interested in the politics of water development and agrarian

change, and I'm also a South Asianist. Historically, I've worked mostly on agrarian water issues, and over the last decade it's become clear that agrarian water issues are also urban water issues, so I've begun working in urban areas as well to understand the connections between rural and urban water development. My two primary projects now are looking at urbanization of water process, as water is being transferred from rural to urban spaces, and what that means for farmers' livelihoods. I have a new project studying the explosion in drip irrigation as a climate change adaptive technology, compared to conventional irrigation. The largest growth in drip irrigation happens to be taking place in India, where I'll be working in the spring of 2014.

What drew you to the Illinois campus?

Three things: one, I'm really happy to become part of a strong department, with faculty who have expertise in what I do, so we create a nice cluster of political ecologists. Second, being from the Midwest myself, it's nice to be close to my family, and as a product of two Big Ten state schools with nice college towns, I like Urbana's atmosphere. Third, and most importantly, my wife (Jessica Vantine Birkenholtz, Department of Religion) and I both took positions at Illinois, or we probably wouldn't be here. So that constellation of three things has really worked out well for us. *

information system (GIS) methods. I am interested in understanding how social differences (e.g., gender, race, ethnicity, and religion) shape urban residents' everyday experiences and perceptions/use of the built environment. I am also interested in studying how specific characteristics of the social and physical environment affect the well-being and behavior of different social groups (e.g., health behaviors and outcomes, access to jobs, social isolation, residential segregation, and spatial mobility).

What drew you to the Illinois campus?

I was drawn to the U of I campus because it has outstanding strengths in many areas closely related to my own research interests. These include GIScience, health geography, and transportation geography. There will be considerable synergy and potential for collaborative work with other researchers on campus. *



Mei-Po Kwan

What is your background, and how did you become interested in geography?

I received my undergraduate degree in geography and a master's degree in urban planning. After that, I worked as a redevelopment consultant in California for a year. Then I decided to pursue a PhD with GIS as my major research focus. I became interested in geography because I found the discipline fascinating in terms of its theoretical and analytical tools that greatly enhance our understanding of complex social and physical phenomena.

What are your research interests, and what recent fieldwork have you done?

My research addresses health, social, transportation, economic, and environmental issues in urban areas through the development and application of innovative geographic

FACULTY PROMOTIONS



Ashwini Chhatre

Dr. Ashwini Chhatre joined the department in 2007, and was promoted to associate professor in 2013. His research and fieldwork focus on natural resource conservation, land management, and climate change adaptation, stressing the involvement of affected populations. He works closely with rural Indian communities to help shape forestry governance and food security policies. Next year, Ashwini will pursue his research in India, based at the Bharti Institute of Public Policy at the Indian School of Business in Hyderabad. *



Heath Robinson

Dr. Heath Robinson joined the GGIS faculty in the summer of 2012, and was promoted to clinical assistant professor in 2013. He has taken a considerable instructional role in our department, and is working to strengthen our undergraduate and graduate curriculum. Dr. Robinson teaches diverse courses in GIS and political geography, including: "The Digital Earth," "Advanced GIS," "Map Compilation and Construction," and "Geography of International Conflicts." He has recently published articles on state theory and the economic geography of virtual worlds, and is a contributor to the forthcoming *Atlas of 2012 Elections*. *



Shaowen Wang

2013 was a remarkable year for **Dr. Shaowen Wang**: he was promoted to full professor of geography and GIScience, selected as one of 10 LAS Centennial Scholars, and appointed as founding director of the campuswide CyberGIS Center for Advanced Digital and Spatial Studies, hosted at the National Center for Supercomputing Applications. Dr. Wang has been a GGIS faculty member since 2007. *

(iGIScience Symposium continued from page 3)



Graduate students and iGIScience panelists at the post-symposium reception. From left: Yi Zou, Elizabeth Lyon, Matthew Aadland, Yizhao Gao, Steve Breese, Nathan Pavlovic, and Jamie Fishman.

Thanks to the remarkable efforts and accomplishments of Professor Wang and his research team, our department is an international leader in this cutting-edge field.

The final panel, *GIScience Futures*, featured GGIS alumni and current faculty members whose work is pushing the boundaries of GIScience research and applications. Professor **Mei-Po Kwan** discussed the use of GPS technologies to visualize and analyze people's mobilities, and to challenge prevailing concepts in urban geography.

Marc Armstrong (PhD 1988), professor of geography at the University of Iowa, provided a unique historical perspective on GIScience at Illinois, discussing the development of GRASS, one of the first free GIS software systems, and innovations which spawned from the Spatial Data Analysis Laboratory during his time as a graduate student.

Veronica Escamilla (BA 2004, MA 2006), who holds a post-doc at the University of North Carolina at Chapel Hill, drew on her water-quality and well-placement study in rural Bangladesh and ongoing malaria studies in Malawi to demonstrate that geospatial data is an invaluable tool for global-scale public health and disease prevention.

Sara Metcalf (PhD 2007), associate professor of geography at the University at Buffalo, discussed geospatial modeling of urban health and sustainability patterns, such as the disparity of oral health outcomes in Manhattan, N.Y. She is also using GIS to model trends in urban agriculture and the "local food" movement.

Steven Radil (PhD 2011), assistant professor of geography at Ball State University, stressed the importance of collaboration between geographic information scientists and human geographers to understand the concepts of political power and peace. Dr. Radil leads a GIS Workshop course each spring semester that pairs his students with local non-profit and citizen organizations.

The iGIScience Symposium reinforced the fact that Illinois remains at the forefront of geographic information science education and research. After a lively and engaging symposium, participants retreated to a local restaurant for conversation, food, drinks, and fun. *

GRADUATE STUDENT PROFILE

Michael Minn

Geography and GIScience graduate student Michael Minn's path to geography has had many station stops along the way. He holds a bachelor's degree in music education, a master's degree in computer science, and worked in the performing arts in New York City in the 1990s and early 2000s.

Looking to make a career change in the mid-2000s, Michael stumbled upon an interview with Dr. Vaclav Smil, a retired professor who has written on energy issues for over 40 years, including the complex relationship between energy and society, and the challenges of future energy transitions. Michael's interest in energy and transportation issues was first stoked during the oil crises of the late 1970s, and he wondered, "What would it take for me to be like Dr. Smil?"

When he found that Dr. Smil earned a PhD in geography, Michael was initially surprised. "I had no idea that there was that much to study in geography, much less get a PhD in it," Michael remembers, so he sought advice from the City University of New York's geography program, located just across Central Park from his apartment at the time. His academic advisor encouraged him to bring his technical background to the study of human geography, which led Michael to earn a second master's degree, along with an advanced certificate in GIS from Hunter College.

Michael's research interest in railroad infrastructure and its potential role in a more energy-constrained future drew him to the work of GIS Professor **Julie Cidell**, a prominent transportation and urban geographer. He also found that Illinois' Department of Civil and Environmental Engineering features a strong railroad-engineering program. Dr. Cidell agreed to be Michael's dissertation advisor; a good funding offer combined with closer proximity to his family led Michael to Urbana-Champaign, where he began his dissertation work in 2010.

Michael's study of transportation and infrastructure has been supplemented by extensive train travel on most of Amtrak's major long-distance lines, including a trip on the Lake Shore Limited to New York City last November to run the 43rd NYC Marathon. Michael's journeys have allowed him plenty of time to reflect on how disparate American cities and towns are connected.

"You get to see unusual places and meet unusual people when traveling long distances by train in America. Amtrak trains often travel slowly through legacy industrial areas that have been largely abandoned due to globalization and the restructuring of American manufacturing practices. So, trains really do give you the opportunity to see the environmental diversity of the



country without the visual encumbrances along the interstate highway system, or the responsibility of driving. You get to experience landscapes at a scale and pace that allows you to appreciate them more than you could while driving, or from 35,000 feet. These areas can be both depressing and fascinating.

Michael also became accustomed to passenger rail's unique social environment. "Long-distance train travelers are often colorful characters, and because you are stuck in a fairly small space for a long period of time, there is this curious tendency for strangers to tell each other their life stories. There's always an interesting random sampling of the vicissitudes of life from a lot of different perspectives. The train helps you appreciate how many different stories make up the American experience. However, even though many of us romanticize the train, long-distance rail travel is brutal, especially if you're a poor grad student [who] can't afford a sleeper compartment."

Michael does not envision America making a wholesale change to long-distance passenger rail anytime in the near future, but he is researching and plotting what a less petroleum-thirsty America might look like. Passenger rail sits at the intersection of a wide variety of historical, technical, political, social, and spatial influences. This makes it perfect for study from the interdisciplinary perspective of contemporary geography, but also makes it largely impossible to predict the future. While local and regional rail systems have shown surprising growth over the past couple of decades, automobiles and airplanes still dominate American transportation.

"Looking farther out, world transportation is almost totally dependent on liquid hydrocarbon fuels, so future changes in the availability and price of those fuels will likely change the transportation mix, although the timing and nature of those transformations is the multi-trillion dollar question. If the automobile and the airplane are unable to significantly adapt to the post-fossil-fuel era, electrified rail could make a comeback; energy-efficient electrified buses are also a possibility. There's also the possibility that our great-grandchildren, like our great-grandparents, just won't move around as much as we've become accustomed to during the era of cheap oil. That may not be all bad." *

NEW GRADUATE STUDENT PROFILES



JAMIE FISHMAN enters the field of geography from a humanities background, having received both a BA and MA in Greek and Latin languages and literature from Kenyon College and the University of Cincinnati respectively. After rediscovering his lifelong passion for geography, Jamie has found a very welcoming home in GIS. His interests are in the applications of GIS in the public health and health care domains. Specifically, Jamie is excited to investigate possibilities for adding a geospatial data component to existing clinical data systems, and how such data integration can enhance clinical decision-making, population health management, and hospital administration in general.



ANA GRAHOVAC was born in Bosnia and Herzegovina, and grew up in Evanston, Ill. She holds a bachelor's degree in international studies and French from DePaul University. She is interested in researching access to women's reproductive health care in rural and urban regions in the United States. Ana seeks to understand how a woman's residential area affects the quality and type of health care she receives. Using GIS and qualitative research methods for her project, she hopes to understand these differences in terms of gender, geography, socio-economic status, politics, and cultural norms.



ALOIS MANDONDO holds an honors degree in agriculture and an interdisciplinary MS in tropical resource ecology from the University of Zimbabwe. His main area of research interest is natural resource governance, especially the political economy of environmental decentralizations. He intends to study the governance dimensions of market-driven land acquisitions under Reducing Emissions from Deforestation and Forest Degradation (REDD)-related initiatives in Mozambique.



NATHAN PAVLOVIC received a BA in biology with a concentration in global development studies from Grinnell College in 2010. After graduating, he studied arid

system ecology in Namibia before returning to his native Northwest Indiana to work in environmental advocacy and conservation. Nathan's research interests now focus on the use of remote sensing and GIS in the study of land use and global change, coupled with a political ecology perspective, to understand how social forces drive these processes. At the U of I, he intends to study how the fire regimes of West Africa may be changing over time as a result of shifting land use.



PRONOY RAI comes to Illinois from Ohio University, where he earned an MA in international development studies, writing his thesis on the politics of access to food.

With interdisciplinary research interests in labor geography, anthropology of the state, development studies, and a regional interest in South Asia, Pronoy hopes to learn from the range of theoretical and methodological expertise available at Illinois.



PRIYAM TRIPATHY'S research interests in urban geography stem from her education and upbringing in the megacities of Bombay and New Delhi, India. She holds a BA and MA in sociology from Jawaharlal Nehru University, New Delhi, and an MA in urban planning from the Indian Institute of Technology in Bombay, India. Her research seeks to understand the transformation of these "megacities" into "global cities" through collective urban aspirations, and struggles over space and citizenship. Priyam believes the Department of Geography and GIScience is an ideal place for her research, as it provides a strong and eclectic combination of critical human geography and space studies.



SANDY WONG'S research interests broadly span the geographies of health, race, and segregation, as well as mixed methods. She received a BA in geography from Dartmouth College, and an MA in geography from the Ohio State University. Sandy plans to investigate chronic disease in the United States for her doctoral degree at the U of I.



LI XU received his BS in GIS from Peking University, China, and an MA in geography from the University of Colorado at Boulder, where his thesis aimed to improve spatial accuracy of mobile positioning data. He also worked on a project investigating environmental determinants of childhood schistosomiasis in Ghana. Li was drawn to GIS because of its strengths in GIS and health geography. During his PhD program, Li expects to focus on using GPS data to characterize urban-scale human mobility patterns through sequential trajectory pattern mining, and its application in exposure assessment.



MINGJING YU received her BS and MS degrees in geography at Nanjing University, China. She has been trained as a geographer for more than seven years, and is interested in human impacts on fluvial systems. Field study experiences in many parts of China and Europe have stimulated Mingjing's enthusiasm to explore the integration of both field study and modeling of river systems.



REA ZAIMI holds a degree in economics from Suffolk University. Prior to joining the U of I, she worked in the areas of microfinance and monetary policy both in Kosovo and her native Albania. Rea's research interests center around solid waste management, particularly the exploration of waste related environmental problems in an urban political economy context.



YI ZOU received her BS from the University of Minnesota's environmental science policy and management program, with a minor in GIS. She is interested in using GIS and remote sensing to support broad environmental studies, and to make better natural resource management decisions. She enjoys assisting different kinds of environmental research and projects from a geospatial approach, and plans to pursue a career in environmental management with specialization in GIS and remote sensing. *

Featured 2013-2014 Roepke Study Abroad Scholarship Recipients: Stephanie Mundis and Russell Pildes

The Howard Roepke Study Abroad Scholarship facilitates international travel and study opportunities for our undergraduate majors. We asked this year's recipients what drew them to their study abroad destination, their research interests, and interesting social and cultural aspects they experienced during their stay.



Stephanie Mundis – Nairobi, Kenya

I chose to go to Kenya because I'm interested in vector-borne diseases and neglected tropical diseases, particularly within the context of developing countries. I also am interested in the history of colonialism and post-independence development in former colonies. The program I studied through, Minnesota Studies in International Development, was particularly appealing because it included an internship component that allowed me to be involved in research that was relevant to my academic interests.

While I was in Kenya, my research goals became focused on the epidemiology of neglected tropical diseases. In particular, my fieldwork with the Kenya Medical Research Institute focused on monitoring distribution of the intermediate host of the parasite,

Schistosoma haematobium, which infects humans when they come into contact with infested freshwater. I was interested in the environmental factors associated with high vector abundance and high infection rates.

Of course, my time in Kenya also included some interesting social and cultural experiences. I stayed with host families, and was able to observe how religion was an integral part of the daily routine of many Kenyans. While many Americans identify themselves as Christian and attend church occasionally, Christian Kenyans participate in prayer sessions, devotionals, bible studies, and church services on an almost-daily basis. I was surprised to find that going to church on a Sunday could entail a five-hour service, as well as some intense singing and dancing. *



Russell Pildes – Dunedin, New Zealand

When I reached my junior year and began seriously considering whether I would actually go abroad, Dr. Cidell told me that the University of Otago in Dunedin, New Zealand, has a very prestigious geography program. I took a class at Otago on environmental management in New Zealand that addressed resource management and conservation issues facing the country and the strategies employed to mitigate adverse effects and conserve environmental resources. This included an introduction to the 850-page Resource Management Act 1991, and by the middle of the semester I had (and was expected to have) a working knowledge and understanding of much of the text of the Act. But during the opening weeks of the class, I realized that, unlike my Kiwi classmates, I didn't know the first thing about law and government in New Zealand. So I would save my questions, and after each lecture I would quietly go down to the professor, who would give me a 7th-grade civics lesson on the New Zealand court system or the meaning and nuances of separation of powers in a parliamentary system.

This is but one example of how much I gained as a foreigner

in those classrooms. There were so many things I simply could not have learned elsewhere, including at Illinois, and this was indispensable in refining my outlook as a geographer. It challenged my assumptions, allowed me to critique theirs, and it has consequently given me solid ground to stand on going forward. I would be a very different geographer were it not for my experiences abroad.

Kiwis have a wonderful tradition of going barefoot. Everywhere. While there are places where it would be inappropriate, you can go just about anywhere without shoes: around town, in the supermarket, on a bicycle, on the rugby pitch, on the treadmill, on a skateboard, even to and from classes. At first it didn't bother me that people were barefoot, since I don't usually look down and think about people's feet as I'm going about my day. But one day when I *was* in the supermarket and I noticed little kids *and* their parents walking around barefoot in autumn, it caught me off-guard. But then one night I was going to town with my Kiwi friends, and after we'd walked a few blocks from our flat someone turned to me and said, "Russ, where are your shoes?" *

Congratulations to our 2013-2014 Undergraduate Scholarship and Graduate Fellowship recipients:

UNDERGRADUATES

- **Roepke Study Abroad Scholarship:** Eric Ladwig (Vienna, Austria)
- **Incoming Student Roepke Scholarship:** Morgan Johnson
- **Roepke Undergraduate Research Opportunity:** Eric Ladwig – Faculty Advisor: Dr. Sara McLafferty
Anthony Cohen – Faculty Advisor: Dr. Shaowen Wang
Stephen Frankel, Christopher Szmurlo – Faculty Advisor: Dr. Heath Robinson
- **Jerome D. Fellmann Scholarship, Spring 2013:** Matthias Landt
- **John Thompson Scholarship, Spring 2013:** Michael Browne, Jeremy Marsan, Alissa Pump

GRADUATE STUDENTS

- **Charles S. Alexander Graduate Fellowship for Women in Geography:** Sheng Ye, Jessica Zinger
- **Marion G. Russell Fellowship in Geography:** Charles Fogelman, Pushpendra Rana
- **George Beatty Fellowship:** Nathan Pavlovic, Yi Zou

Donald Lee Johnson Changed Views on Soil Formation

Written by former Illinois geography students Jennifer Burnham (MS 2002) Augustana College, and Randy Schaeztl (PhD 1987), Michigan State University.



Donald Lee Johnson, professor of geography from 1970 to 2003, and professor emeritus since 2003, passed away on May 10, 2013. He was born March 8, 1934, in Long Beach, Calif. Don received his PhD in geography in 1972 from the University of Kansas. Diana Johnson was his life partner for 53 years, and wife for 49 of them. Don's life and career were an inspiration to many. Though retired, he never stopped his research and writing. He was one of those blessed individuals whose career was his hobby, and he never tired of his work.

Over the course of his career, Don taught 10 different courses in physical geography, soil-geomorphology and zoogeography at U of I. He loved what he taught and his enthusiasm was infectious. Don was always entertaining and positive in the classroom, and his students truly loved him. Don took his enthusiasm for research into the classroom, taking his students on field trips every semester. He led 28 different undergraduates on independent study projects. His list of advisees and graduate committees includes 10 with senior theses, 23 with master's theses, and 26 with doctoral dissertations. Many of his students have gone on to highly visible careers, yet they all continued to stay in touch with him. Don loved the relationships that he developed with students.

Perhaps the best testaments to Don's teachings are reports given by his former students. His students left his classroom believing that soils—of all things—could truly be interesting, exciting, and important, and that there is still much to learn about them. Never one to simply cite the party line, Don continually challenged the status quo and asked his students to do the same. Most importantly, he taught his students to question what they saw, and to always think outside of the box. He simply asked them to learn by looking. He was a keen observer of natural systems, often catching

things that others ignored. He called it his intellectual filter. There's no doubt he viewed the world through different intellectual filters than most, and in so doing he saw things that other people looked at but didn't quite see. Anyone who received an email from Don likely noticed a quote in his signature: "We don't see things as they are, but as we are."

Don's list of published papers in refereed journals and books numbers over 80. Yet the numbers don't do justice to his contribution to these disciplines, nor to the long-lasting impact that his work will have on future generations. Not once but twice, Don won the GK Gilbert Award for Excellence in Geomorphic Research from the AAG Geomorphology Specialty Group (GSG). His second Gilbert Award—won just this year with colleague and former student Jennifer Burnham for their GSA Special Paper on Mima Mounds—illustrates that Don never stopped doing what he loved: research and fieldwork. In 2005, he received the Distinguished Career Award from the GSG of the AAG. Don was a truly interdisciplinary scholar, as evidenced by the Rip Rapp Archaeological Geology Award that he had also received from the Geological Society of America. Don was equally at home with geographers, geologists, soil scientists, archaeologists, and biologists and published in journals of all these disciplines.

Don published paper after paper, gave talk after talk, and had one-on-one conversations with people from all walks of life, all designed to highlight the importance of bioturbation and biomechanical processes on soil formation. His theoretical papers on soil genesis and evolution dramatically changed the way that the academic community views soil formation. This work has particularly assisted archeologists and tropical soil scientists by helping to explain the formation of stone lines, enigmatic features whose origins had been

debated for decades. His work on mima mounds helped settle a centuries-long debate on the origins of these features. Don's theoretical contributions were revolutionary. His body of work will enjoy a position among the very best of soil theoreticians in recent history. And of course, much of this work was done in collaboration with his career-long field partner, Diana.

Don was an explorer, a field person, and an adventurer. Ever curious, Don and Diana traveled the world seeking answers to the question: how do Earth systems really work? Don was a thoughtful and generous man, always taking the time to be kind and gracious and forging many strong friendships. He was a true inspiration to everyone he met. Don's family, friends, and colleagues will miss him dearly, but he lives on in our hearts and minds, and his passion for the soil lives on in what he has written. *

The passing of Don Johnson has been a loss for the department, for geography, and for the field of soils geomorphology. Don's accomplishments as a scholar serve as a benchmark of excellence for those aspiring to careers in physical geography. Don was strongly committed to graduate education, especially to training graduate students in field and laboratory research methods.

To honor Don, and with the encouragement of his former students, the department has established a fund in his name to support field research by graduate students in physical geography. The **Donald L. Johnson Field Research Fund** will provide resources for graduate students to conduct field and laboratory research that is a vital component of their education. The success of this campaign depends on your contributions and we invite you to participate in honoring Don through the establishment of this fund.

Contributions can be made via our website: geog.illinois.edu/about/gift *

**DEPARTMENT OF GEOGRAPHY AND
GEOGRAPHIC INFORMATION SCIENCE**

University of Illinois at Urbana-Champaign
255 Computing Applications Bldg.
605 East Springfield Avenue
Champaign, IL 61820

Nonprofit Org.
U.S. Postage
PAID
Permit #75
Champaign, IL



We Value Your Support!

Show your support for the Department of Geography and Geographic Information Science at the University of Illinois by making a contribution.

Please indicate the GEOGRAPHY & GISCIENCE fund(s) you wish to support:

- LAS Annual Fund for Geography (334861)
 - Geography Graduate Fellowship and Scholarship Fund (776640)
 - Joseph and Marion Russell Fellowship Fund (775045)
 - Donald L. Johnson Field Research Fund (337026)
- \$1,000 \$500 \$250
 \$100 \$50 Other \$ _____

I/we wish to pay by:

- Check (made payable to the *University of Illinois Foundation*)
- Please charge my gift of \$_____ to the following credit card:
 VISA MasterCard American Express Discover
Card # _____ CVV # _____ Exp. Date _____

Credit card billing address if different from the address at right:

Name as it appears on card: _____

Signature: _____

Name(s): _____

Address: _____

City: _____ State: _____ Zip: _____

Home Phone: _____

Email: _____

- This gift is also from: _____
Relationship: _____
- My company will match my gift.
Company name: _____

Please mail this completed form along with your check or credit card information to:

University of Illinois Foundation
PO Box 3429
Champaign, IL 61826-3429

Visit our secure website to make your gift online:
geog.illinois.edu/about/gift

Thank you for your gift.

Your tax-deductible gift to Illinois will be processed and receipted by the University of Illinois Foundation.