First row, from left:
• The UI School of Library and Information Science delivers distance education to train teacher librarians across Iowa.
• Lisa Schroeder performs at the World Flutes Festival in Argentina and lands a faculty position at the California State University, San Bernardino.
• Clinical alarms are meant to alert medical staff of possible health issues in patients. Todd Papke has developed a personal audio alerts system to measure alarm fatigue in health care providers.
• Catina Bacote writes about violence in a New Haven public housing project in the 1980s & 1990s.

Second row, from left:
• Erin Robinson researches ways to work with health care providers to inform older adults about HIV.
• Rosaura Orego-Aguayo works to improve mental health outcomes among incarcerated domestic violence offenders.
• UI postdoctoral scholars organize a regional collaboration and host a career development and networking symposium.
• Artist’s rendering of an ecosystem riverfront area. Students in the UI’s IISC produced this riverfront development plan for the Community Improvement Action Team in Muscatine.

Third row, from left:
• Mark Pooley with Iowa State Representative Dave Maxwell, House District 76, discussing sustainable urban planning for Iowa communities.
• Ph.D. working in industry: Kristina Rogers is a research scientist at Kemin, leading a team developing a dietary supplement to improve eye health.
• This image is a cross section of healthy mouse kidney cells. Diane McCabe works to understand how cellular stress responses affect kidney health.
• UI graduate students sweep MAGS Distinguished Thesis Awards for 2014.
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As an elementary school principal for 25 years in the Iowa City Community School District, Chris Kolarik observed the unique skill set of her school’s teacher librarians. These educators did much more than just help students check out library books. While librarians aren’t classroom teachers, they possess the expertise necessary to help students succeed in the information age of the 21st century. Teacher librarians are uniquely trained to teach students to think critically and construct new understanding and insights from varied information sources.

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Funded by the University of Iowa’s Office of the Provost and the Better Futures for Iowans initiative, the UI’s School of Library and Information Science is offering a master-of-arts degree designed for working teachers interested in becoming school librarians. The two-year program equips graduates to effectively and creatively operate a school library media program. Courses are delivered primarily via video conferencing, but students are required to attend at least one class component on campus during the summer.

“In this information age, we need people who really understand the whole process of how to intelligently deal with so much information from such varied sources. That isn’t something that most teachers have an expertise in,” says Kolarik, program coordinator of the Teacher-Librarian Program. “Right now, there are teacher-librarian job openings across the state, and there are not enough certified teachers to fill them. The Iowa Department of Education has listed teacher librarians as one of the teacher shortage positions.”

The 2013 cohort—the first under the Better Futures for Iowans initiative—currently has four students, while this fall’s incoming cohort currently has 12 students. Students live in the following Iowa communities: Granville, Clear Lake, and Charles City in northwestern and northern Iowa; Jefferson and Ankeny in west central and central Iowa; and DeWitt, Camanche, Eldridge, Bettendorf, Davenport, Blue Grass, Ottumwa, Iowa City/Coralville, and Cedar Rapids in southeastern and eastern Iowa.

Jim Elmborg, associate professor in the School of Library and Information Science, shares Kolarik’s assessment that there is a need for more teacher librarians across the state.

“The state code says every school district must have a librarian and a K-12 articulated library program, but many districts share librarians and have not developed a written program. The teacher librarian hops from school to school,” says Elmborg, faculty administrator for the Teacher-Librarian Program. “That person cannot deliver a quality program. A librarian should be someone you can find at any time students or other teachers need them. Having that presence is important.”
A
t age 9, Lisa Schroeder sat mesmerized in front of the television as world-renowned flutist Sir James Galway performed Concerto in G Major by Mozart. She knew from that moment she wanted to play that beautiful instrument he played so effortlessly.

“It feels like your feet are not even on the ground. You are transported somewhere else,” says Schroeder, describing her sensations of hearing Galway play the flute. “His playing makes you forget all your worries. You have a relaxed state of mind.”

Schroeder is a Doctor of Musical Arts candidate in flute performance and pedagogy at the University of Iowa. As the founding member of Noteworthy Duo, a professional flute and guitar duo, Schroeder has played over 100 concerts in 26 states. She performs with Jose Luis Merlin, a guitarist, professor, and composer from Buenos Aires, Argentina.

Edward F. Gobbel, manager of Altus Flutes, describes Schroeder as a performer who “possesses a depth of expression that never fails to involve you in the musical moment.”

“I like to feel that everyone is participating in this journey with me,” Schroeder says. “My hope is that people have fun with the music. Raw emotion is required to have fun with the music. I love it when I see that while I’m playing.”

**Education’s importance**

Prior to enrolling at the University of Iowa, Schroeder was an applied flute instructor at Vanguard University in Costa Mesa, Calif., Cerritos College in Norwalk, Calif., and Golden West College in Huntington Beach, Calif.

In 2011, Schroeder, a native of Saginaw, Mich., received an Iowa Performance Fellowship from the Graduate College to attend the UI to pursue a doctoral degree.

“I’ve always wanted to get my doctorate. My grandmother instilled in me that no one can take your education away from you,” says Schroeder, who is expected to complete her doctorate in December, 2014.

Schroeder’s dissertation is titled “The Flute and Guitar Duo (1986 to 2014): The Role of the Guitar and its Evolution from Accompaniment to Equal Partner.” Professors Nicole Esposito and Kristin Thelander are co-advisors on her dissertation.

Schroeder is surveying over 100 professional flute and guitar duos, documenting and analyzing performance techniques to expand our understanding of how the two instruments work in ensemble.

“I want to show that the flute and guitar have become equal partners within the last 20 years,” says Schroeder. “They’re both playing melodies and playing as equals, not as accompanist and soloist.”

Schroeder and Merlin perform as equal members of Noteworthy Duo. However, maintaining an even balance between instruments can be challenging.

“The hard part about a flutist playing with a guitarist is not overpowering the guitar,” says Schroeder, who plays the C flute, alto flute, and bass flute—all made by Altus Flutes. “Classical guitar is a softer instrument. As the player is more accomplished with classical guitar, they can project more sound, but it’s still a softer instrument.”

**Opportunities of a lifetime**

Last September, Schroeder was selected to perform at the prestigious World Flutes Festival in Mendoza, Argentina. She received funding from the Friends of Flutes Foundation, Inc., University of Iowa School of Music, UI Graduate College, and UI Graduate Student Senate to attend the festival.

For Schroeder, performing at the World Flutes Festival was an opportunity of a lifetime. However, it wasn’t her first chance to work at such a high level. In 2007, Schroeder was one of only four flutists chosen to play for Galway during his master class in Napa Valley, Calif.

Galway remains an inspiration for Schroeder, the flute performer and educator.

“My ultimate goal is to touch even just one life the way Sir James and many of my teachers along the way have touched mine,” Schroeder says.
Clinical alarm systems are intended to alert medical personnel of possible patient health-related issues. While these alarms help ensure patient safety, they also can create alarm fatigue in clinicians.

According to The Joint Commission, a nonprofit organization that accredits more than 20,000 health care organizations and programs in the United States, medical staff can become desensitized to alarms in noisy environments resulting from numerous alarms. The Joint Commission further states that between 85 to 99 percent of alarms don’t require clinical intervention.

These fatigued clinicians may turn down the alarm volume, turn off the alarm, and adjust alarm settings, possibly compromising patient safety. In response, The Joint Commission initiated the 2014 National Patient Safety Goal. This goal requires hospitals to establish policies and procedures for managing their alarm systems by Jan. 1, 2016.

Todd Papke, a Ph.D. graduate in health informatics at the University of Iowa, says personalized alerts is a possible solution for alarm fatigue. Papke’s dissertation, “Personal Audio Alerts in Medicine” concludes that personalization of alarms may improve information delivery and reduce overload on health care providers.

“Right now, when the alarms go off, there is unnecessary cognitive load on the nurses,” Papke says. “What kind of alarm is it? Is it a high priority alarm or a low priority alarm? Where is it?”

“My study shows if you let someone create their own alert sounds, they will respond to them faster and remember them longer than they would if they use the current standard sounds.”

Papke created a Personalized Alert Study Application (PASA) that allows him to capture, edit, and compare sounds for effectiveness in the clinical setting. Papke used PASA to facilitate his study in which participants’ responses to personalized sounds were contrasted with their responses to sounds that meet the current standard established by the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC).

Twenty-four students in the UI’s College of Nursing created their own alarms, ranging from high priority to low priority, using a variety of sounds, including sound clips from movies, recordings of their own voices, and clips of classical music. Participants completed consecutive tests to evaluate their ability to recognize their alerts versus the standard melodic alerts. Eleven participants worked with 6 alarms at a time; thirteen participants worked with 10 alarms.

The students responded to 100 alerts per test by touching an iPad icon that corresponded to a specific physiological condition.

**Study results**

Papke observed that accuracy, reaction time, and retention were significantly improved with the personalized sounds. Median errors for the 6-alert study were 4 for personalized alarms compared with 27 for standard alarms. Median errors for the 10-alert study was 1 for personalized alarms versus 55 for standard alarms.

“If future technology allows us to let people personalize the information they are receiving, then we might very well allow nurses to create their own alert sounds,” says Papke, whose thesis supervisor was Prakash Nadkarni, UI research professor of internal medicine.

Papke will make PASA publicly available for those interested in studying personalized alarm viability in critical care environments. PASA is a stand-alone application that runs on Macintosh and Windows computers.
Catina Bacote takes a stroll down memory lane. She is a 7-year-old sitting at her new typewriter, putting her thoughts on paper via the shiny keys. Birthday present ideas and ages of family members are some of the topics she chronicled in her New Haven, Conn., bedroom.

“I love that little girl. She just seemed to know what she wanted to do,” Bacote says about herself. “She wanted to be an artist.”

For years, Bacote stopped writing, then started again. Stop-start, stop-start, never moving completely away from her craft. She worked for six years teaching humanities, history, and literature to junior high and high school students in New York City and eight years for an educational nonprofit.

Finally, Bacote put her writing front and center. She applied to and was accepted into the University of Iowa’s top-ranked Nonfiction Writing Program in 2011. She also received a Dean’s Graduate Research Fellowship from the Graduate College.

“Writing isn’t something I do for career advancement or financial security. It’s something I feel called to do,” says Bacote, who graduated from the UI with an MFA in nonfiction writing in May. “When I write, I feel alive in some way. I feel like my writing is my intervention in the world. It’s my way to disrupt familiar narratives. It’s my way to tell stories that aren’t often told.”

**History of Eastern Circle**

Bacote seeks to understand the world better through her writing. She asks hard questions and takes literary risks in order to gain new perspectives on life’s unexpected twists and turns.

Her current project dives into personal experiences of family and circumstance.

Bacote is writing a detailed account of life in the New Haven public housing project of Eastern Circle and its drug and violence epidemic of the late 1980s and early 1990s. According to the New York Times, New Haven, in 1990, ranked sixth in violent crimes per capita in American cities with more than 100,000 residents. In October 1991, New Haven had an average of six reported gunfire incidents a day.

“I want people to read [my book] and think about the history of places like Eastern Circle. A lot of people were shot, a lot of people were murdered, and a lot of families suffered,” says Bacote, who is in the process of writing the book. “This story happened and involves our entire country, not just the urban centers and low-income areas.”

Bacote also writes personal essays that examine how her family and their neighbors wrestled with a troubling and changing landscape in New Haven. Her younger brother, Bernard, is a focus of her writing. Bacote says her brother had two stays in prison, totaling eight years, for selling drugs. He is currently home raising his two children and working.

“I not only want to tell my brother’s story, but explain how greatly it affected my life and my mother’s life,” says Bacote, who received the first-place award in the Creative Works Division at the UI’s 2014 Jakobsen Conference for her submission about her family’s experience in Eastern Circle.

**Iowa’s Nonfiction Writing Program**

The UI English Department selected Bacote as the Provost Post-Graduate Visiting Writer for the 2014-15 academic year. Bacote will teach the Creative Non-Fiction Reading course both semesters, while continuing to write her book. Ultimately, she plans to pursue a career as a college-level teacher and writer.

Bacote believes the Nonfiction Writing Program provides thorough training. By reading her fellow students’ pieces, she gained insight into how their minds were working. Colleagues’ written and oral critiques of her work helped Bacote better understand her own craft.

“I am not trying to sound like a ‘writer.’ I found my personal voice,” Bacote says. “I try to channel the people I’m talking with, like my family and former neighbors. I’m not just writing about them. I am writing through them.”

DEAN’S GRADUATE RESEARCH FELLOW
According to the Centers for Disease Control and Prevention, 31 percent of people living with HIV in the United States are over the age of 50, and the number is growing. By 2015, half of the people living with HIV nationwide will be over 50 years old.

Research shows that these older adults have low levels of knowledge about how HIV is transmitted and the risk factors involved. Erin Robinson, a third-year doctoral student in the School of Social Work at the University of Iowa, believes health care providers can play a key role in communicating with older adults about AIDS transmission and its risk factors.

“Older adults report that they get most of their health information from their health care providers,” says Robinson, a native of Winterset, Iowa. “Research suggests that providers aren’t as aware of HIV-specific issues around aging. When they think of HIV, they think about HIV in younger generations. Health care providers will be bombarded with older adults in this baby boomer population for the next 30 years and they’re going to have to rethink how they talk about sexually transmitted diseases.”

Robinson acknowledges that older adults can have an array of health issues, so their sexual health isn’t always a priority in conversations with doctors. She adds that there’s little research about how care providers can influence positive health behaviors among older adults, specifically regarding HIV prevention.

“I’m interested in using health care providers as a starting point to create tailored messaging to older adults about how they can prevent transmission of AIDS, such as using condoms, talking to your partner, and cleaning needles, if you’re a drug user,” says Robinson, who holds a master’s degree in public health from the University of Iowa as well as a master’s in social work from Washington University in St. Louis.

Robinson began doing HIV outreach work after earning her bachelor’s degree in social work at the University of Iowa in 2005.

She interned with the Johnson County Public Health Department in 2005-06, conducting HIV testing and educational outreach for injection drug users. She currently is doing HIV testing for the Public Health Department as a volunteer.

Outreach efforts

Robinson says she is fortunate to have received quality mentoring from UI faculty, most notably Sara Sanders, associate professor of social work.

“Training in public health “has made a tremendous impact on how I approach patient-provider communication around HIV/AIDS,” Robinson says. “It has allowed me to understand, from both a public health perspective and a social work mindset, the importance of intervening with the healthcare providers.”

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UI provides career planning and mentoring

Robinson is customizing her doctoral degree to give herself the best opportunity to become a social work professor in the future. This approach enabled her to earn a UI master’s of public health.

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As a doctoral student, Rosaura Orengo-Aguayo challenges herself to translate basic research into empirically-supported treatments for people in need of service.

Her proposed dissertation project epitomizes this mission.

Orengo-Aguayo, a Ph.D. student in clinical psychology at the University of Iowa, is testing the effectiveness of a new intervention method called Acceptance and Commitment Therapy (ACT). Her research will examine the effectiveness of ACT in reducing aggression and impulsivity and improving mental health outcomes among incarcerated domestic violence offenders.

Orengo-Aguayo and UI graduate students under her supervision are facilitating 12 ACT sessions for five groups of inmates at the Linn County Correctional Center in Cedar Rapids.

ACT is based on the idea that human suffering is universal and strives to promote behavior that is freely chosen, contextually controlled, and value based. Orengo-Aguayo and her colleagues encourage offenders to identify what gives their lives meaning and vitality, to notice their thoughts, feelings, and sensory experiences, and to move toward their values despite unwanted thoughts and feelings that show up along the way.

At the same time, Iowa Department of Corrections employees will be administering an intervention based on the Duluth Model to five control groups of inmates. The Duluth Model is a skills- and content-focused program in which offenders are held accountable for their thoughts and behaviors.

“The Iowa Department of Corrections has already expressed interest in disseminating this intervention (ACT) statewide if empirical support is obtained, making direct public policy impact attainable,” says Orengo-Aguayo, whose dissertation research is funded by the Society for the Psychological Study of Social Issues.

Orengo-Aguayo received a grant from the University of Iowa Injury Prevention Research Center to extend her data collection time and to obtain 3-month follow-up data, which is important in determining whether intervention gains are maintained after leaving jail. This grant supports graduate student and junior faculty research that focuses on the prevention of injuries in Iowa.

Coordinating this project has helped Orengo-Aguayo acquire key skills that will enhance her ability to compete in the job market. Orengo-Aguayo, a Dean’s Graduate Research Fellow and a 2007 UI SROP scholar, shares her insights about professional development and external funding:

Q: You earned a National Science Foundation (NSF) Graduate Research Fellowship and a National Academy of Sciences Ford Foundation Fellowship as a senior at the University of Puerto Rico, Rio Piedras. What advice do you have for students interested in such fellowships?

A: As a college senior, it’s your best chance of getting an NSF Fellowship because the committee members see you’re an undergraduate and are already thinking about external funding. You should do your proposal with your ideal school in mind and establish a partnership with the faculty member you are wanting to work with in graduate school. The NSF and Ford Foundation funds you based on your potential as a student.

Q: You’ve developed mutually-beneficial relationships with policy makers and government employees during this project. How did you establish this network and maintain these connections?

A: It all starts with a phone call. It’s that easy. You make a phone call and say, “I’m wondering how I can be of service to your agency.” I mentor a graduate student who is interested in implementing ACT for at-risk teenagers in Iowa City. I called the school’s guidance counselor and said we have workshops we can offer for free. We set up a meeting for a few weeks later and that turned into a massive project. This research isn’t just about us. We need to connect with people in our community first and assess their needs and how we can be of service. Then we can talk research.
Postdoctoral scholars at the University of Iowa played an important role in establishing a collaborative platform for career development and networking among several Midwestern academic institutions.

UI postdocs hosted the Midwest Postdoctoral Symposium in Iowa City on May 2 at the UI College of Public Health Building. The symposium featured career and professional development training for 93 postdocs from the University of Iowa, Iowa State University, Mayo Clinic, and the University of Illinois (Chicago).

“The academic take-home from the symposium for postdocs was networking for research purposes and presenting their research,” says Phillip Gander, president of the University of Iowa Postdoctoral Association and postdoctoral research scholar in neurosurgery. “We focused on professional development issues, such as how to promote yourself to the media and what it is like to have a job in academia compared to industry.”

Daniel Reed, vice president for research and economic development at the University of Iowa, was the keynote speaker. Reed, formerly Microsoft’s Corporate Vice President for Technology Policy and Extreme Computing, spoke about career environments in both academia and industry.

The symposium also promoted awareness for the Midwest Postdoctoral Forum (MWPDF), a model for a regional collaboration among postdoctoral communities and between postdoc offices. The MWPDF was created in June 2012 in Ames, Iowa in response to a scarcity of networking opportunities among postdoc communities. The MWPDF includes Iowa State University, University of Iowa, Ames National Laboratory, Argonne National Laboratory, Mayo Clinic, University of Kansas Medical Centers, University of Nebraska-Lincoln, and Wright State University.

The forum’s board consists of individual representatives appointed from member postdoctoral associations. These representatives provide leadership and continuity to the MWPDF.

The board meets regularly, either via e-conference or at regional events. This forum has become a valuable platform for sharing:

Experiences—adapting successfully implemented policies used by individual members at other member institutes

Information—circulating announcements regarding local and regional events

Resources—opening local events to postdocs from member institutes and sharing the costs between neighboring institutes by hosting concurrent career development workshops.

“Successfully conducting the first Midwest Postdoctoral Symposium this year allows us to establish a collaborative platform in the Midwest that provides more opportunities for career development and networking for the postdoctoral scholars,” says Sina Safayi, president of Iowa State University Postdoctoral Association and postdoctoral research associate in veterinary clinical sciences.

“For years to come, such commitment from member institutes will not only serve the postdoc community but also advocate for it on both regional and national levels,” says Safayi.

“I am very happy with the success of the first symposium, and we received quite positive feedback from both the participants and contributors,” Gander says. “A good quality event is something the rest of the forum can build upon and is necessary if we are to keep the forum active and productive.”

Safayi and Gander believe this forum could serve as an effective model for other regions in the United States, ensuring more networking and career development opportunities for the postdoc communities.
Sustaining Iowa
The UI’s IISC fosters partnerships

“**I personally list this project on my resume and have found that I draw on my IISC experience quite a bit in my current position with a county planning department in Wisconsin.**”

—Caitlin Shanahan, Project leader in Muscatine, MS 2014 Urban & Regional Planning

Funded through a Better Futures for Iowans grant from the University of Iowa Office of the Provost and administered through the School of Urban and Regional Planning, the Iowa Initiative for Sustainable Communities (IISC) is a campus-wide initiative that calls on UI students and faculty in numerous disciplines to assist communities across Iowa.

Cedar Rapids, Muscatine, and Washington partnered with IISC during the 2013-14 academic year.

Coordinated by Nick Benson, IISC projects helped communities with a variety of projects, including riverfront development, community-based social justice work, public art, and work toward creating a Self-Supported Municipal Improvement District (SSMID).

All projects were identified as priorities by the cities. Following are summaries of a few of this year’s projects.

**Cedar Rapids**
Project: SSMID Evaluation and Development in the Czech Village/New Bohemia Main Street District in Cedar Rapids.

Outcomes & Impact: “The Urban and Regional Planning students wowed not only our local community, but also a statewide audience with their professionalism and dedication to helping communities tackle the challenge of determining whether or not a SSMID is right for them.”

—Jennifer Pruden, Main Street District Executive Director

**Muscatine**
Project: Riverfront Strategic Growth Plan for the city of Muscatine.

Outcomes & Impact: The UI student team recommended that the city of Muscatine create a working ecosystem riverfront for citizens to enjoy. “The IISC and Muscatine Partnership program has brought a breath of fresh air to our community. We live here each day and take for granted the many assets Muscatine has to offer. The students came in with fresh perspectives and creative ideas to help open our eyes and minds to so much more that we could be doing.”

—Rich Dwyer, Co-chair Muscatine Community Improvement Action Team

**Washington**
Project: Branding campaign for the city of Washington.

Outcomes & Impact: “The students’ fresh perspectives were enlightening to our organization and gave us an outsider’s view on how we can better market our community. We are really using the tools developed to implement the new branding campaign. And without the support of the IISC program at the U of I, it wouldn’t have happened.”

—Michelle Redlinger, Chamber of Commerce Executive Director

**Mutual benefit**
UI students gain from the training they receive through the IISC, working on projects with community leaders in Iowa. “The Iowa Initiative for Sustainable Communities provides students with the chance to work on real-world projects, applying what they have learned in their academic studies to solve challenges facing Iowa’s communities,” says Benson. “It’s a great opportunity to gain practical experience, but also connect with professionals in their fields who may become future job references or even employers.”

Communities benefit, as well, since UI faculty guide students through each project to ensure quality work and useful research outcomes.

“IISC partner communities receive thousands of hours of work from talented, motivated UI students who bring really creative ideas to the table. We are always impressed at the end of the year to see students complete final projects that are fresh and innovative, yet practical, and this year was no exception,” says Benson.
Mark Pooley, a 2013 Obermann Graduate Fellow, is committed to thinking about how to make bicycle commuting more accessible, an issue he explored as a master’s student in the School of Urban and Regional Planning and now as a Ph.D. student in civil engineering.

Contributing to his graduate research about transportation, Pooley organized the Winter Warrior Bike Challenge last December in Iowa City along with the University of Iowa’s Office of Sustainability and the UI Bicycle Advisory Committee. More than 200 people participated in the winter challenge from Dec. 1 to Dec. 20.

“We were able to encourage people to ride during the winter months when temperatures reached negative 16 degrees. There were roughly 3,000 trips made and 8,300 miles ridden,” says Pooley, about his Obermann Center project titled, “What Gears Bicycling Commuting?”

“Through very simple means, we have the possibility of diversifying our transportation mode choice. If we can work with the university and the city, which we are currently in the process of doing, to improve bike infrastructure and make more [bicycle] parking available, then we can make biking an increasingly attractive community choice.”

Raised in rural Johnson County between Solon and Iowa City, Pooley says there are plenty of disincentives for biking, including a lack of infrastructure, physical exertion, and weather.

Would incentives prompt people to change their bicycling habits? Pooley administered an attribute-based preference survey to determine the relative importance of three incentives—infrastructure, parking, and financial—in encouraging the community to bike. He is trying to understand how bicycle commuters make trade-offs between on-street bicycle facilities (e.g., bike lanes), destination parking options, and a potential employer incentive for riding a bicycle (e.g., a monthly allowance/stipend).

“I learned that infrastructure and parking are the most important of the three incentives and financial was the lowest,” Pooley says. “Using recognition, small financial incentives, or a chance of attaining these incentives is easiest to implement. It’s not so easy to impact parking and infrastructure.”

Pooley’s doctoral work includes using open source data sets to understand travel behavior and mode choice and how we can improve our transportation systems and make them more democratic. This research is a continuation of his Obermann project.

Pooley said that the UI Bicycle Advisory Committee, which was started two years ago and is comprised of a good mix of students, staff, and faculty, echoes what he learned at the Obermann Graduate Institute regarding collaboration.

“One of the many aspects the Obermann Institute emphasized was building partnerships with mutually beneficial goals in mind,” Pooley says. “Working to improve bikeability at the University of Iowa would be a daunting task for an individual, but working with a group to develop practical and realistic ideas and solutions makes this objective attainable.”

Transportation planning

Pooley studied transportation planning in the School of Urban and Regional Planning.

As a second-year planning student, Pooley and his fellow group members in the Field Problems in Planning course completed an alternative transportation project in Dubuque that provided a set of recommendations to city officials for diversifying and expanding their transportation options.

“We organized a lot of focus groups using novel methods,” Pooley says. “It was pretty cool to pull out qualitative elements and quantify them. We evaluated the relative importance of all these aspects. It allowed us to provide a prioritized list of what the community was really seeking.”

Professor Paul Hanley was Pooley’s advisor for the Field Problems project. “(Professor Hanley) showed me how to evaluate a transportation network in a city,” Pooley says. “You can look at transportation modes individually, but also collectively to see how they’re linking up and where you might have discernible gaps in your transportation system.”
Kristina Rogers-Szuma, Ph.D., is an associate scientist working in research and development in Kemin’s division of human nutrition and health. At Kemin, Rogers-Szuma works in a team environment on projects focused on producing naturally-sourced dietary ingredients.

Rogers-Szuma was the lead research and development scientist on the team that formulated a supplement for ocular health. The product, ZeaONE Zeaxanthin, includes lutein and zeaxanthin, both of which are found in the macula and block damaging light from the sun, indoor lighting, and computer screens.

As the result of good mentoring and excellent course offerings in the UI’s graduate program in Chemistry, Rogers-Szuma felt well-prepared for her career move into industry.

She offers the following advice to current and prospective graduate students interested in broadening their career options:

Q: How did you prepare? Were there certain courses you took that proved helpful?
A: I focused on learning basic research skills. For my degree program, I focused on learning as much as I could about plants and natural products research. If you focus on acquiring solid, basic research skills, you’ll be able to use those in many types of jobs.

Q: What did you learn outside the classroom?
A: At Kemin, I draw on communication skills I learned while I was at Iowa. Experience in the UI’s Graduate Student Senate (GSS) helped me gain many skills that are important in my current job—skills I would not necessarily have learned in the classroom in my program of study.

The team environment at Kemin includes working with people in quality control, sales, marketing, regulatory affairs—there are many moving parts and a variety of disciplines. Collaborative skills are key. Make and maintain professional relationships with people who have different knowledge sets. GSS helped with this, since we worked with students from across all graduate programs on campus. The global aspect of industry means it’s important to learn more about other cultures. Throughout my graduate program, I got to know students from other cultures, and that’s been helpful.

Q: How important is it to find a good mentor?
A: It is very important. Dr. Jim Gloer provided expert mentoring by setting an example of how to behave professionally. I would sit in meetings observing Dr. Gloer interact with others in delicate communications situations. Watching him, I learned skills that have proved invaluable. Dr. Gloer also served as a mentor by caring about the team, and he provided guidance to the group members to help them achieve their goals.

Q: How do you start looking for a job in industry?
A: Network. I sent hundreds of resumes, but found the job through networking. Keep in touch with alums and people from your cohort. Directly contact recruiting agencies. Google the metro area in which you want to work and find out about the agencies recruiting for companies there. You can also use resources like Career Builder, but recruiting agencies are good because they look for a good fit between the person and the company. On your resume, be sure to include details on your specific skills because data searches look for specific skill matches.

Q: What if you don’t know whether a job in industry is the right fit?
A: Once you get in, you can find opportunities to tailor the job. Don’t be afraid to forge your own career path by transferring within the company. Industry can be a fluid and dynamic environment where you’re encouraged to move around to gain more experience.
Diabetes and obesity can create cellular stress on our kidneys. When the body fails to regulate this stress, fat accumulates in the kidney and chronic disease could result.

What mechanisms do our bodies employ to reduce systemic stress and maintain normal kidney function?

Diane McCabe, a postdoctoral researcher in anatomy and cell biology at the University of Iowa, studies the role of ATF6 in stress response and regulation of metabolism leading to fatty kidney.

In the lab, McCabe works with mice that lack ATF6. Within 48 hours of injecting these mice with a known stressor, the mice develop completely fatty kidneys. The fat accumulation in the kidney does not allow the organ to function properly and may cause hypertension.

“I believe the absence of ATF6 is affecting factors involved in the fatty acid metabolism,” says McCabe, whose research is ongoing. “The pathways that are normally involved in breaking down fats or transferring fats out of the kidney are no longer working.”

McCabe is also part of a UI team researching the protein CHOP, produced when cells experience certain kinds of stress. CHOP is known to promote cell death. Usually, factors that promote cell death guard against cancer by causing damaged cells to die. However, McCabe and her colleagues are examining data indicating that CHOP does not follow the usual pattern.

McCabe contributed to a UI study showing that despite its role in cell death, CHOP is elevated in liver tumor cells in mice. Also, mice without CHOP are partially protected from liver cancer, developing fewer and smaller tumors than the normal mice when exposed to drugs that cause liver cancer. The study was published last December in the journal PLOS Genetics. Thomas Rutkowski, assistant professor of anatomy and cell biology and McCabe’s supervisor, is senior study author.

Changing research paths
A native of Kalamazoo, Mich., McCabe entered a new area of research when she joined Rutkowski’s anatomy and cell biology lab. She earned her Ph.D. in biochemistry at the University of Illinois.

“As doctoral student, I worked with chaperon proteins and cellular stress response, so there was some commonality. But this was a huge change,” McCabe says. “I started from square one to do all the back reading and wrap my mind around this field.”

McCabe proved to be a quick learner, aided by a good mentor.

“Prof. Rutkowski is expert in cellular stress response. He’s taught me how to build a project from the ground up,” McCabe says. “He’s helped me conceptualize things and look to the future and think about what experiments I need to do to go from Point A to Point B. At the end of the day, I will have a lot of tools in my toolbox as far as techniques.”
Kaylia Duncan and Anna Lynch have added to the achievements of University of Iowa graduate students, each of them winning the 2014 Midwestern Association of Graduate Schools (MAGS) Distinguished Thesis Award.

Duncan, who earned her master's degree in pathology in 2013, won the award in the biological and life sciences category for her thesis “Dynamics of Tumor Progression and Therapy Response in IL-6 and MYC Driven Plasma Cell Malignancy,” a study that uses a mouse model to determine patterns of tumor progression in cases of multiple myeloma.

Lynch, who received her master's degree in religious studies in 2013, won the award in the humanities category for her thesis “Early Lutheran Education in the Late Reformation in Mecklenburg,” a study that covers the historical foundations and approaches to education in the Lutheran Reformation in Mecklenburg, Germany.

“This is a wonderful recognition of the outstanding work that our graduate students undertake and accomplish,” says John Keller, UI Associate Provost for Graduate Education and Graduate College Dean. “Kaylia and Anna both received virtually perfect scores by the reviewers for their superior research.”

Duncan and Lynch were nominated for the MAGS Award after receiving the L.B. Sims Outstanding Master’s Thesis Award from the UI Graduate College.

The Midwestern Association of Graduate Schools is a regional affiliate of the Council of Graduate Schools. MAGS member states include: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, and Wisconsin.

Iowa now has three MAGS Distinguished Thesis Award winners. Brigitte Hecker Salami (Art History) received the honor in 1999.

Kaylia Duncan
Duncan, originally from Saint Vincent and the Grenadines, used positron emission tomography (PET) imaging to assess the dynamics of tumor progression in a mouse model of multiple myeloma.

“We found early tumor onset in young mice previously not associated with disease,” Duncan says. “Once we had those metrics of how the tumor progresses in this mouse model, we used that as a reference to move ahead with pre-clinical studies of a novel inhibitor.”

Duncan discovered that the experimental drug MLN2238 is effective in increasing the overall survival of the mice.

“After two or three consecutive doses of this drug, we saw a notable decrease in tumor burden,” Duncan says. “Witnessing this development, we can use this mouse model as a means for screening other drugs using PET imaging.”

Duncan’s thesis advisor was Siegfried Janz, professor of pathology.

Anna Lynch
Lynch, a native of Vermillion, S.D., addressed a gap in the understanding of education’s role in the Lutheran Reformation between social and confessional historians.

This gap becomes even wider when investigating the Reformation in northern Germany, particularly in Mecklenburg. In southern Germany, the Reformation is reported as having been swift, dramatic, and conflict driven. Conversely, in the understudied Mecklenburg, change was believed to have been slow and deliberate.

“Part of what I studied was how education was used to further the Reformation,” Lynch says. “Once the Reformation came in, they wanted people to be able to read the Bible so they needed some mechanism to teach them. That’s when the first required schooling came in.”

This created two camps of academics—the social historians and the confessional historians.

“The social historians say the theological aspect doesn’t matter. You should just focus on the dry facts, [such as] how many students were in the class and what books were they reading,” Lynch says. “The confessional historians say it’s all about the theology. I think there should be more people studying both perspectives. I tried to bridge the gap in my thesis.”

Lynch’s thesis advisor was Raymond Mentzer, professor of religious studies.