

# uncg research

2013

Research, Scholarship and Creative Activity



RESEARCHERS TRADE A CLEAN LAB FOR JUST THE OPPOSITE, AND DOZENS OF BUDDING SCIENTISTS REVEL IN THE DISCOVERIES

## THE BIG MUDDY

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UNCG Research is published by  
The Office of Research and Economic Development  
The University of North Carolina at Greensboro  
PO Box 26170  
Greensboro, NC 27402-6170  
336.256.0426

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No state funds were used to print this magazine.



**THIS ISSUE OF UNCG RESEARCH** highlights the essential role that research and creative activity play at UNCG. As a civically engaged public research university, UNCG serves as a “steward of place.” Defined as “answering the call to join with public and private partners...to identify problems, explore potential solutions, and test those solutions in real life” (2002 AASCU *Stepping Up as Stewards of Place*), this stewardship includes a primary responsibility to educate. Far from relegating research to a minor place, the integration of research with teaching and learning and with community and economic engagement *propels* the research and scholarship of faculty, students and staff into an essential role. Research is critical for teaching our students to be lifelong learners, innovators and tomorrow’s leaders and is vital to helping UNCG fulfill its mission of improving quality of life throughout the city, region, nation and world.

**BENEFITS TO TEACHING**

In addition to providing the content that is taught in university classrooms all over the world, faculty research directly enhances education. The synergy that occurs when research and creative activity are coupled with inspired mentoring and students’ curiosity results in new knowledge and innovation. Dr. Eric Jones’ support of undergraduates conducting anthropological research in Mexico and Ecuador and Dr. Joanne Murphy’s mentorship of students mapping the cultural remains of civilizations in Greece are great examples of this synergy. We want students to learn not just *what* we know in the various disciplines, but *how* we come to know it. Encouraging students to imagine and innovate, to test ideas and persist in the face of failure, and to develop original solutions to complex problems is most effectively accomplished when modeled by faculty who are themselves actively involved in research and creative activity.

**GENERATION OF NEW KNOWLEDGE**

Research results in the generation of new knowledge and plays a critical role in informing what we teach our students today and in the future. Research Excellence professors Dr. Karen Kilcup and Dr. Esther Leerkes provide tangible examples of ways in which research across the disciplines at UNCG contributes to internationally recognized new knowledge and new understandings. Research fosters innovation in virtually every field of human endeavor. UNCG is involved in everything from igniting community passion for the biological diversity of our state and how that informs science education research to innovative approaches to injury rehabilitation in Dr. Chris Rhea’s virtual reality lab. What we do now in research and creative activity will be the key to innovation and prosperity decades into the future.

**BENEFITS TO THE COMMUNITY**

Research and creative activity contribute to the economic vitality of the community and the state. It puts dollars into the economy and results in marketable products and services that can be patented, licensed or result in spin off companies. It supports businesses by supplementing their own research efforts, especially important for smaller businesses, which may not have access to the personnel or the facilities for a large research enterprise.

Research and creative activity at UNCG also contribute to what some have termed the “wisdom economy” — the application of knowledge for the good of humanity. Working in partnership with governments, commerce and society, universities can bring together different perspectives in order to propose solutions to local and global challenges. This benefit to the “wisdom economy” is reflected in the work of faculty such as Dr. Vincent Francisco who is helping to formulate evidence-based public policy to improve the health and vitality of our citizens and their communities.

Whatever the focus, the breadth and variety of scholarship of our faculty and students fully articulate UNCG’s commitment to doing something bigger altogether, thereby fulfilling our role as a steward of place.

**LINDA P. BRADY, PHD**

**Chancellor**

**TERRI L. SHELTON, PHD**

**Vice Chancellor for Research and Economic Development**

For more information about research at UNCG and the Office of Research and Economic Development, go to [research.uncg.edu](http://research.uncg.edu).

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Systemic change

“ You have to deal with what caused the problem in the first place. You can give kids new behavior — that’s not the hard part. But when they are out in the community, the old behaviors come back. ... If you try to change behavior without changing the context supporting the behavior, it won’t work.” Dr. Vincent Francisco

HOW DO YOU KEEP TEENS AWAY FROM DRUGS AND gangs and prevent HIV / AIDS and chronic disease? You change the environment.

Dr. Vincent Francisco, associate professor of public health education, has spent 23 years working with communities to change and create programs, policies and practices that will positively affect behavior and health outcomes in those communities. His goal is systems improvement.

“You have to deal with what caused the problem in the first place,” he said. “You can give kids new behavior — that’s not the hard part. But when they are out in the community, the old behaviors come back. ... If you try to change behavior without changing the context supporting the behavior, it won’t work.”

Francisco, trained as a developmental and child psychologist, understands prevention is key. And one single change isn’t going to work. It will take hundreds of changes across all the contexts faced by youth and adults in communities.

While working at the University of Kansas, he co-created the Community Tool Box, found online at <http://ctb.ku.edu>. Community organizations can go to the tool box and get a number of resources, including information on identifying issues and how to develop a framework or model of change. The more information and training people have, the better they are prepared to change their physical and social environments.

He notes the Americans with Disabilities Act is an example of a policy that changed all communities. Before 1991, businesses and communities could choose whether to make buildings accessible. People in the Independent Living movement empowered others to effect systems improvement that resulted in changes in the physical and social context in every community in the United States.

At UNCG, he — along with other faculty, staff and generations of students — has helped a number of groups identify needs and work toward change. They partnered with communities from as close by as Alamance County to far-flung Mexico, Russia and Canada.

Most recently, he is partnering with the Rev. Odell Cleveland and Dr. Bob Wineburg, UNCG professor of social work, to help Mt. Zion Baptist Church in Greensboro create lasting systems improvement so that people currently without insurance will get better access to health care.

They want more low-income people to have access to insurance and regular medical service. But that’s just the start.

“It’s all about long-term gain,” Francisco said. “Insurance alone won’t solve the problem.”

One woman from the congregation came to see him with a business idea. She has diabetes and wants to create a company to help others who deal with the disease.

“The doctors gave her insulin but did not tell her how to manage her disease,” he said. “She felt talked down to.” She wants to provide diabetes education, access to testing supplies and support groups.

Francisco, Wineburg and Cleveland teach a community grant writing course (HEA 702) to help people get support for ideas like these.

Francisco came to UNCG in 2004. He was particularly struck by the history of community collaboration at UNCG and the passion of alumni to give back to the community. Alumni — especially those of the Woman’s College era — have been a positive influence in North Carolina, he said. That passion is needed for lasting change to happen.

“We’ve got to work together or we’ll never change,” Francisco said. “We need to create a new future together. All of our futures are locked together.

“This is so the right thing to do.”



Joshua O’Byrne, far right, is one of four undergraduates who took part in a research internship at the Joint School of Nanoscience and Nanoengineering this summer.



ABOVE, the Joint School of Nanoscience and Nanoengineering (JSNN) Building has been awarded LEED Gold Certification established by the U.S. Green Building Council. LEED is the nation’s preeminent program for the design, construction and operation of high performance green buildings.

Gateways to science

FACULTY at the Joint School of Nanoscience and Nanoengineering are bringing science to students of all ages.

This summer, four undergraduate students took part in a research internship at JSNN that allowed them to collaborate with faculty and graduate students.

Coordinated by Nanoscience Chair Dr. Daniel Herr, the first-year program is funded by the Semiconductor Research Corporation (SRC), which does strategic research for the electronics industry and is a recipient of the National Medal for Technology. Through its Education Alliance, SRC annually supports graduate-student research worldwide, but this is one of its first programs for undergrads.

The four students — two from UNCG (physics and biology majors) and one each from N.C. A&T State University (engineering) and Elon University (biology) — spent 10 weeks getting hands-on experience in nanoscience and nanoengineering fields and with the

sophisticated instruments used for research at JSNN. The \$20,000 grant covered a \$4,000 stipend for each student and other expenses for graduate student mentors. Herr believes that SRC will renew — and expand — the grant next year.

This summer, the students worked in their fields and were expected to prepare a poster presentation or a paper by the end of their internships. Depending on the judging, SRC plans to invite one or more to participate in TECHCON, the company’s premier event, which draws top graduate students to Austin, Texas, to present their work. Plans are to continue engagement with these students through group events and meetings throughout the 2013-14 academic year.

“The experience was positive all around for the students and the faculty,” said Herr.

In April, faculty and graduate students spent time with a younger crowd. More than 250 Guilford County students in grades 3 through 12 came to the JSNN to get their first look at what scientists do.

Called “Gateway to Science,” the event introduced the students to nanoscale science with live demonstrations and tours of the JSNN, along with presentations from the Greensboro Science Center and a video which featured scientists from all over the world. JSNN faculty and students gave their time alongside volunteers from the Women’s Professional Forum to share the joy of research and to show students how they might one day become scientists too.

Gateway to Science was part of the North Carolina Science Festival. With ongoing events around the state, the festival encourages children to pursue science-related careers and businesses to invest in North Carolina by highlighting the educational, cultural and financial impact that science has in our state.

Dr. Marinella Sandros, a UNCG assistant professor of nanoscience, coordinated JSNN’s involvement. Sandros sees the need to make science accessible to children early on, especially young girls. She also believes this will help young students carry science interest into adulthood by exposing them to careers in the fields of science and technology. With sponsorship from the Women’s Professional Forum, the JSNN, and the Girls in Science and Technology (GIST) Project, Sandros is responding to those needs in a big way.

“Science has no boundaries; it is your passport to the world,” said Sandros.



VISITORS TO A WINERY, such as Grove Winery in Gibsonville, go for a romantic experience, a pristine landscape, to meet a wine grower and learn a bit about wine, said Dr. Erick Byrd. Good customer service is a key element in expanding tourism in this industry.

## Growing the wine industry

IT MUST HAVE BEEN ONE OF THE BEST RESEARCH ASSIGNMENTS in the state university system.

Dr. Erick Byrd and six students spent summer 2012 visiting wineries across North Carolina. Their goal: to learn more about who was visiting and why, so they could help owners develop informed marketing strategies, increase tourism and maximize revenue across the state.

The group found that most visitors to the state's vineyards had little to no knowledge of wine. Instead, they were drawn to a strong visitor experience and exceptional customer service.

"People might not be able to tell the difference between one red wine and another red wine, but they can tell if someone is spending time with them and being nice to them," says Byrd, an associate professor of Hospitality and Tourism Management in the Bryan School of Business and Economics.

"We found that people go to wineries for a romantic experience, a pristine landscape, to meet a wine grower and to learn a bit about wine. Of course, everybody also likes to go home and tell a good story about their visit. That customer service element creates a complete experience."

From May through August 2012, the team surveyed more than 800 visitors at 23 selected wineries from the beach to the mountains. They found the average visitor was white, female, highly educated and fairly affluent.

Across North Carolina, the wine industry is growing, with about five new wineries opening annually, many of them in the Piedmont Triad/Yadkin Valley region. Revenue from wine tourism grew 27 percent between 2005 and 2009. It is also an important driver for other tourism.

"For people who are trying to get away and find a day trip or a short vacation in this area, wineries are a key aspect to the entire destination," Byrd said.

Five undergraduate students and two graduate students were vital to the project, helping to shape the questions, conduct the survey, enter the data and even provide individualized reports for some of the wineries.

Diana Phelps '13 joined the study as a rising senior majoring in math and economics. She counts the experience as a key factor in helping her to land a full-time job doing economic research with the Research Triangle Institute.

"Whenever I see an article about this study or about a North Carolina vineyard, I remember that I was a part of that," Phelps says. "It feels good to be able to make a difference in my home state."

Dr. Bonnie Canziani, Dr. Yu-Chin "Jerrie" Hsieh and Dr. Keith Debbage also participated in the study, which was funded by the North Carolina Department of Commerce, Division of Tourism, Film and Sports Development, and UNCG.

Byrd, who has a special interest in rural tourism, hopes that North Carolina wineries can capitalize on some of the findings when it comes to marketing themselves, either individually or as a region.

"For tourism to be successful in a community, it should build on the resources the community already has and preserve the landscape," Byrd says. "The wine industry does that perfectly."

SEE THE FULL REPORT AT [www.uncg.edu/bae/or/NC-Winery-Visitor-Tourism-Study-Final-Report.pdf](http://www.uncg.edu/bae/or/NC-Winery-Visitor-Tourism-Study-Final-Report.pdf).

## A model of collaboration

A YEAR AFTER ITS LAUNCH, UNCG's Community Engagement Collaboratory has fulfilled the goals of its creators and then some.

The Collaboratory is a database of projects and partnerships that tracks how UNCG faculty, staff and students partner with community organizations. The site — found at [communityengagement.uncg.edu](http://communityengagement.uncg.edu) — holds information on more than 200 ongoing or completed projects that address some community issue. That number is expected to grow as more people learn about the Collaboratory and add their information.

It gives everyone a richer picture of UNCG's impact in the community, said Dr. Emily Janke, special assistant for community engagement.

This year, Janke and Kristin Medlin, a former UNCG graduate student, have been working with the Research Triangle Institute to create a socioeconomic impact report of UNCG. "We never would have been able to talk about social impact without the Collaboratory," Janke said.

With data a few clicks away, they have been able to identify areas of strength that fall under four general themes: Healthy People, Healthy Communities; School Learning Success; Entrepreneurial Greensboro; and Arts, Culture and Design as a Force for Positive Change.

"These data matter," said Medlin, communications and partnerships manager. "It tells the story of UNCG."

It will also help when preparing information for Carnegie classification, accreditation review or any other requests. "It's so efficient," Janke said.

Last year, because of the work already happening at UNCG, Janke was tapped to lead a UNC system task force on developing community engagement metrics. Jerry McGuire, UNCG's associate vice chancellor for economic development, was asked to lead the partner task force on economic development metrics.

"We brought the two task forces together," she said. "There are strong ways they can overlap to create healthy, sustainable, safe communities. When we show up good things often happen."

Also in the past year, Janke has made numerous presentations and done several webinars talking about the data gleaned from the Collaboratory and how UNCG is using it strategically.

Inevitably, people have asked about how to create something similar on their campuses. "The interest in this thing is incredible," Medlin said.

Janke and Medlin are working with a vendor with an eye toward licensing the tool to sell. It will be the first online platform of its type that serves not only as a way to collect and report information for campus and community use, but also serves as the only international database of community-university partnerships. "This has the opportunity to transform the field of community-university partnerships as we don't have access to these kinds of data, yet," Janke said.

For now, an updated version of the Collaboratory is expected to be launched in early 2014. Its expanded scope also will include information about public service and outreach done on behalf of the community such as camps, performances and lectures.

The current model has already helped in unexpected ways. Faculty candidates have said they looked at the database to see which sites would be amenable to their work.

"They are imagining their scholarly lives not only in the department but also in the community," Janke said. Additionally, the Collaboratory shows UNCG's commitment to community engagement.

"It has helped UNCG have a more collective mind," Janke said. Previously she would hear people say they felt they were the only person in their department doing community engaged research. Now with the Collaboratory, they see they are not the only ones.

"We have institutional confidence," she said. "We are an engaged campus."

Independents' day

“ Basically, students think that the parties are more interested in serving themselves than the people.” Dr. Omar Ali

HISTORIAN AND POLITICAL ANALYST DR. OMAR ALI BELIEVES “we’re at the very beginning of a transformation in American politics” – and he’s providing a front-row seat for his students.

Ali, an associate professor in the African American Studies Program at UNCG, and three of his undergraduate students spent the eight weeks prior to the 2012 U.S. presidential election interviewing college students across the state about their political views.

Supported by a grant from UNCG’s Office of Research and Economic Development, the group journeyed from Boone to Wilmington and many spots in between, visiting public and private universities, historically black institutions and community colleges.

They polled more than 1,200 undergraduates at 16 campuses, and their research reveals “a significant de-alignment with regard to the two major parties,” Ali says. “Basically, students think that the parties are more interested in serving themselves than the people.”

The gridlock of the current system is driving strong dissatisfaction among voters, especially those under the age of 30, who are declaring their independence. In fact, two of every three new voters in North Carolina are registering as independent.

Ali describes that phenomenal growth rate as part of a national trend.

In February, Ali led a group of 11 undergraduates to Manhattan for the National Conference of Independents held at New York



Dr. Omar Ali, center, with students in New York

University. Ali and three of the students were featured on C-SPAN during a forum at the event. The students interviewed attendees at the conference for a research project and also posed questions to the televised panel of political experts. One Afro-Latina student of Ali’s, Stephanie Orosco, also made a brief presentation about why she identifies herself as an independent.

It was one of the latest high-profile experiences for Ali, to whom national and statewide media regularly turn for

his research expertise on independent voters.

Ali’s books include “In the Balance of Power: Independent Black Politics and Third Party Movements in the United States” and most recently “In the Lion’s Mouth: Black Populism in the New South.” Ali also is co-founder of North Carolina Independents, a nonpartisan association of independent voters that focuses on political reform.

Even as opinion polls reflect Americans’ deep discontent with Congress, endless battles between Republicans and Democrats and their slow legislative progress, Ali remains optimistic about the country’s future — that is, if we change our political culture from one that emphasizes conflict to one that values collaboration.

“People are more agreeable than disagreeable if you can create spaces for conversation that are not overly determined by partisanship or ideology,” Ali says. “The task is to keep finding ways of creating those kinds of developmental spaces for culture-change both locally and nationally.”

The art of evaluation

There was a time when Dr. Holly Downs worked for PBS. It was a dream job.

“I had always wanted to work for Big Bird,” she jokes.

But it wasn’t funny when she saw really good programs fall by the wayside for lack of support.

“I was inspired to get my PhD because of that,” she says. “I wanted to arm them with knowledge so they could improve and sustain these programs.”

Today, Downs is an expert on evaluation. As an assistant professor in Educational Research Methodology in the School of Education, she brings her expertise to a number of programs locally and internationally. She teaches graduate students how to conduct effective evaluations as well.

In 2011-12, her class of graduate students spent the fall

semester on theory. In the spring, they put theory into practice when they worked with Dr. Holt Wilson to evaluate a math professional development program for teachers.

“They conduct a real evaluation for a client,” she says. They went through the Institutional Review Board (IRB) process, met with the client, designed an evaluation plan and collected data.

As a result, one student got an assistantship. Some students presented their findings to the American Evaluation Association. And Wilson received funding to continue his work.

He appreciated having 20 students working on the evaluation.

“There is no way we could have gotten that amount of feedback without this, at the depth we needed to make this program better,” he says.

A new group of students, mentored by a few of Downs’ previous

Mind mapping

UNCG’s Department of Counseling and Educational Development (CED) is putting brains on the map through neurofeedback.

“We were really excited because, as a field, counseling needs to move toward a biological measure of what we do,” says Dr. Scott Young, CED department head. Measuring brain function provides hard data for brain changes that are otherwise difficult to quantify.

Dr. Jane Myers and Young got a neurofeedback machine, software and training at no cost, in exchange for adding to a normative database of “peak performers” brain function. Peak performers are characterized by sustained effort, clear interpretation, empathy, insight and stable control.

Myers, who has neurofeedback certification, is supervising the brain-mapping project. The goal is to map at least 200 peak-performing brains.

Feedback from the machine can help clients retrain their brains for a variety of purposes, whether they want to overcome anxiety or drug addiction, improve their ability to focus or simply get a good night’s sleep.

Neurofeedback machines read brain waves in a painless, harmless and noninvasive way. Subjects simply put on a cap. Wires are connected to 19 terminals on the cap, and then hooked into the module. Readings are made as the subject sits briefly with eyes open and eyes closed.

EEG, or electroencephalography, sensors read brainwave patterns to track levels of brain activity, eventually generating a color-coded “map” of activity. Scientists note four levels of brain wave activity: Beta, awake and normally alert, working; Alpha, alert but mentally relaxed; Theta, deep relaxation/meditation with reduced consciousness; and Delta, asleep or unconscious.

Treatment for a variety of conditions may take as few as 20 or as many as 100 or more sessions. However, the benefit “tends to hold” as positive changes are imprinted on the brain, Young says. Clinical applications are broad, he says, extending to sports medicine, food addictions and even hearing problems like tinnitus.



GRADUATE STUDENT WENDY MATHES places a cap on a volunteer and prepares to attach wires from the cap to the neurofeedback machine. The machine tracks brain activity.

students, evaluated a UNCG learning community geared toward undergraduates majoring in math, chemistry, computer science or physics.

Students did the whole evaluation process – from needs assessment to client interviews to document review. From there, they formed an evaluation plan. Student teams worked with different stakeholder groups, such as the 44 students in the community and the administrators.

“It isn’t just throwing out a survey,” Downs says. “It’s cool to see it all come together. It’s like herding cats, all these moving parts.”

And students got practical lessons on everything from how to conduct an interview to what to do when someone won’t call back.

“It was awesome to see the growth of the students,” she says. “And to see how appreciative the clients are.”

While Downs has been guiding students through learning to do effective evaluations, she has been busy conducting her own. She is

the co-PI evaluating College STAR (Supporting Transition, Access, and Retention), a collaborative project with Appalachian State and East Carolina University to support students with learning differences. She is working with Physicians for Peace as they evaluate an online and hybrid educational program for prosthetic and orthotic technicians based in Santo Domingo, Dominican Republic. And she and education professor Dr. Heidi Carlone are looking at the implementation of an engineering program in elementary schools with the Museum of Science in Boston.

Closer to home, she has been helping start the Office of Assessment, Evaluation, and Research Services within the School of Education. The office has two goals – to offer consulting services and to provide graduate students with extensive evaluation training.

It’s a great fit for someone passionate about evaluation and teaching. “It’s real-life experience.”



## Recovery and restoration

*Dr. Karen L. Kilcup, professor of English, didn't always want to study literature. She grew up on her extended family's working farm, and, as an undergraduate, had a strong interest in astrophysics. She eventually focused on math and English. "I was actually a better mathematician than a literature scholar," she says. Today, this 2012 Research Excellence Award winner writes, teaches and "recovers" forgotten American authors.*

**AMERICAN LITERATURE'S STANDING** American literature is still understudied and under-resourced, compared to British literature, but the collective energies of many scholars over several decades have enabled us to begin to appreciate its richness and complexity. Studying American literature helps students ponder how we began, how we developed and who we are now; it's essential for good citizenship.

**RESTORING AUTHORS TO PROMINENCE** Much of my scholarship falls into the category of recovery work, the restoring of neglected texts and authors to visibility and legitimacy. My long-term challenge has been to reintegrate fractured literary traditions.

**WOMEN WRITERS IN AMERICAN LITERATURE** When I was in graduate school, most women writers – especially in the 19th century, my particular period of interest – were essentially dismissed. But immensely popular writers like Harriet Beecher Stowe transformed American society; they performed vital forms of what we call “cultural work,” were part of every major literary movement and received significant recognition. But because they often wrote about subjects or in emotional or formal modes that 20th-century scholars and writers dismissed as unimportant, most of these authors disappeared. Women of color were especially vulnerable to cultural exclusion. They included North Carolina writers like Harriet Jacobs, author of “Incidents in the Life of a Slave Girl,” and Anna Julia Cooper, who published “A Voice from the South.” Women writers still face substantial discrimination and underrepresentation in terms of publication, grants and awards.

**CHANGING ROBERT FROST'S IMAGE** I have wanted to show Frost's connections to his 19th-century female predecessors and his contemporaries. He gives us immensely sensitive portraits of women, and he supported women writers. I wanted to complicate the view of him (from a prominent early biography) as a self-interested chauvinist. Frost also interested me because he bridged the gap between academic and popular audiences. His readings drew huge crowds, but his academic respectability, if you will, has always been brittle. UNCC's own Randall Jarrell insisted Frost “deserves the attention, submission, and astonished awe that real art always requires of us.”

**BALANCE BETWEEN TEACHING AND RESEARCH** Research and teaching are entirely synergistic; my teaching depends on my research, and my research advances my teaching. In my classes, we address questions with which I continually wrestle. My students also regularly conduct primary and archival research, and I share with them my own research and writing, including its unevennesses. Students' feedback helps me think more imaginatively – and more pragmatically – about my projects.

**ENVIRONMENTAL CONCERNS** I'm really excited about my just-published book, “Fallen Forests: Emotion, Embodiment, and Ethics in American Women's Environmental Writing, 1781-1924.” The project examines how these earlier writers anticipate contemporary environmental concerns, ranging from resource depletion and resource wars to voluntary simplicity and environmental justice.

**FORTHCOMING AND FUTURE PROJECTS** In the fall Johns Hopkins University Press will publish my anthology of 19th-century American children's poetry, which will make available some wonderful rediscovered material. The first of my new monographs, “Who Killed Poetry?,” will examine the interacting forces that caused most 19th-century American poetry to disappear from classrooms and public consciousness. Focusing on the great children's periodicals, my other project, “The Envious Lobster,” will study children's nature writing and environmental writing roughly from the founding of the U.S. to World War I.

**LEARN MORE ABOUT DR. KAREN KILCUP'S RESEARCH AT**  
[www.uncc.edu/eng/englishfaculty/facultybios/kilcup.html](http://www.uncc.edu/eng/englishfaculty/facultybios/kilcup.html)

## Positive parenting

*Dr. Esther M. Leerkes is an associate professor of human development and family studies. Growing up as one of the oldest in an extended family with more than 30 cousins, she was interested in the variety of child personalities and parenting skills she observed. Educated as a developmental psychologist, she calls herself a “parenting scholar” and, with three children, she knows whereof she speaks. This 2012 Research Excellence Award winner's multiple research studies have received more than \$5 million in grants from the National Institute for Child Health and Human Development.*

**PARENTS AND CHILDREN** My research primarily focuses on links between parenting behavior and children's adjustment and on what enhances the quality of parenting. I am particularly interested in identifying the skills that help mothers respond effectively to their infants when the infants are upset.

**WHEN THE NEW BABY COMES HOME** There is no way to predict what a new baby will be like. New babies don't always fit expectations, preferences or existing routines which can be quite a challenge. You don't know in advance if you will have a temperamentally reactive baby who cries often and easily and is difficult to comfort. Also, parenting is a profoundly emotional act. We tend to focus most on the positive side of that; the intense love, pride and joy inherent in parenting. But, there are times most parents will experience frustration, anxiety and embarrassment related to parenting. One of the goals of my research is to understand how mothers' experiences of negative parenting-related emotions, and their ability to regulate those emotions, is related to the quality of their parenting.

**WHEN BABIES CRY** Crying is an unpleasant sound that puts almost anybody on alert, and it is magnified when it's your own baby. When a baby cries, a mother has to notice her baby is upset, figure out why, clarify her short-term and long-term goal, consider the pros and cons of various responses, and then decide how to respond, if at all. This process requires a variety of skills, all of which can be compromised by the mother's emotional state. One of our exciting recent findings shows that mothers who better regulate their physiological stress responses to the sound of crying are more likely to focus on their infants' feelings and needs than their own – which is linked with more rapid and sensitive responding to their infant. This suggests that efforts to help mothers learn to regulate their arousal may be an effective way to promote positive parenting and may be especially important for mothers who have infants that are temperamentally prone to frequent and intense crying.

**MOTHERS' BEHAVIORS AFFECT THEIR CHILDREN** We have known for a long time that parenting is predictive of child outcomes. Evidence shows that children have better outcomes – more secure attachment to the mother, better emotion regulation skills, better social competence and less likelihood of being aggressive or depressed later in childhood – if their mothers respond to them quickly, consistently and warmly. One of the unique aspects of my research is that I have demonstrated that what mothers do when their babies are upset is particularly predictive of these outcomes. This suggests that although most children are upset for a relatively small portion of the day, what we as parents do in those moments are of profound importance for children's healthy development.

**OTHER STUDIES** I've been fortunate to collaborate with a number of colleagues and students on this work and other research as well. In the School Transition and Academic Readiness Project we are studying child and parent factors that promote preschoolers' positive transition into school. Recently, we found that mothers' emotional support in problem solving tasks is more predictive of their kids' later academic skills than how they directly tried to teach their child. Well-intentioned parents believe it's all about helping them to learn their numbers, letters and colors. That's likely true, but the quality with which you do it really matters. Helping children maintain their interest and enthusiasm and control their frustration during learning tasks is especially important. In The Women, Work and Wee Ones study, we are examining non-standard work schedules (anything other than 9 to 5) among low-income mothers. Our concern is that these jobs are stressful, and we hope to identify the supports that help women in these jobs cope in a manner that supports their well-being, positive parenting and healthy infant development.

**LEARN MORE ABOUT DR. ESTHER LEERKES' RESEARCH AT**  
[www.uncc.edu/hdffacultystaff/Leerkes/Leerkes.html](http://www.uncc.edu/hdffacultystaff/Leerkes/Leerkes.html)



# THE BIG MUDDY

RESEARCHERS TRADE A CLEAN LAB FOR JUST THE OPPOSITE, AND DOZENS OF BUDDING SCIENTISTS REVEL IN THE DISCOVERIES

BY MICHELLE HINES,  
STAFF WRITER

PHOTOGRAPHY BY CHRIS ENGLISH,  
PHOTOGRAPHY EDITOR

KAT WALSTON, an undergraduate research assistant for the HERP Project at the time of the photo, educates residential camp students about a frog they captured. Below, she holds a turtle and explains the differences between the males and females of the species.



KAT WALSTON WAS TRACKING AMPHIBIANS IN HER OWN BACKYARD, the rural back roads of Orange County.

On this spring night in 2011, Walston, then an undergraduate working as a research assistant on the HERP Project, was tagging along with a biologist from another university who was listening for calling frogs. Walston figured that where frogs were calling she might find a temporary pond — sometimes called ephemeral pools or vernal pools — where salamanders and frogs breed and lay eggs without threat from predatory fish.

As they approached a pond, Walston sensed she had found what she was looking for. She grabbed her net and discovered it in her first sample — a mature mole salamander, a species of special concern in North Carolina and the first of its kind reported in Orange County.

“It was really cute with these black, big eyes,” Walston recalls.

The biologist was surprised; he’d never seen mole salamanders in Orange County before.

“He said, ‘Well, we might want to hold on to that one.’ I had no idea it was that significant.”

Her find is now on the books in the state’s database.

Talk about a butterfly flapping its wings and changing the course of the future. In Walston’s case it was more like a salamander wriggling its tail.

Her amphibious discovery solidified the path her life was taking. All because of herpetology programs created by UNCG professors.

It started when Walston signed on for Slip Slidin’ Away, a residential program in herpetology the summer before her senior year in high school. Slip Slidin’ Away, the brainchild of a team of UNCG researchers and funded by a modest Burroughs Wellcome grant, has metamorphosed into the HERP Project (Herpetology Education in Rural Places and Spaces). Funded by a multi-million-



DR. CATHERINE MATTHEWS, RIGHT, holds a turtle while a high school student gathers morphometric data such as weight and measurement.

dollar grant from the National Science Foundation, the HERP Project is a partnership between UNCG and two other universities — Elon and UNC Pembroke.

The project has made an impact on 300-500 kids over the years. It continues to inspire students and teachers to redefine themselves — as scientists and as people. And it supplies a wealth of knowledge about the reptiles and amphibians of our state.

ORIGINS

The seeds for the HERP Project were sown several years ago, when Ann Somers, a biology instructor at UNCG, recruited Dr. Catherine Matthews, a professor in the School of Education, to help her run a box turtle program for her son's class.

Matthews was happy to help. Key to changing students' attitudes is changing how teachers teach science, she says.

"Secondary teachers are notorious for being the teachers who are most conservative, most resistant to change, driven by these end-of-year tests, and who teach from a textbook or from a set of standards they are given and gauge the success of their teaching through these standardized test scores. There's no match for high school kids because high school kids then see teachers as people who don't really know or do science but rather teach from a textbook."

Matthews lives across from Camp Chestnut Ridge in Orange County, so that site has become a stomping ground for Slip Slidin' Away and the HERP Project. Those programs were modeled after Teachers on Special Assignment, a summer herpetology program for teachers.

"My interest is twofold. First is making these types of opportunities easy for teachers and doable for teachers and for their students," Matthews says. "People can come out and collect real data, to answer real questions that no one knows the answers to and we can make a real contribution to our knowledge of reptiles and amphibians and the issues they face in this state. Then there are other questions, science education questions. Could this change teaching? Could it change career trajectories students have for themselves? Could it get them interested in herpetology?"

OUT OF THEIR SHELLS

A major facet of the HERP Project is its residential summer programs for high-schoolers, grades 9-12. The idea is to meet kids where they are, gradually giving them a gentle nudge outside their comfort zone. Some of them have not spent much time outdoors or touched a snake or a frog.

Week-long summer programs take place at Camp Chestnut Ridge and

at Camp Rockfish in Hoke County. A herpetology component is also part of a four-week summer program at Elon Academy.

Dr. Heidi Carlone, a professor in UNCG's School of Education, jumped at the opportunity to track the impact of these programs on young people. Carlone has witnessed fantastic transformations during the residential programs. Case in point, one young man who could not even look at a snake in an aquarium when he started, teared up because he could now hold a snake.

"They may not label themselves as 'that kind of person,' a 'snake person' or an 'outdoors person.' We are really encouraging them to rethink themselves as a new kind of person. And they do, they take it up," Carlone says. "Very quickly they approach these opportunities with bravery and intense curiosity and a willingness to offer themselves in new ways."

Carlone, preparing several articles on her data for journal publication, points to numerous comments showing how the HERP Project helped reform the students' self-perception.

As one girl put it: "I came into the course like, 'I'm not gonna touch a frog, I'm not gonna touch a salamander, and snakes? No way!' But I really surprised myself by handling the amphibians and reptiles."

DIG A LITTLE DEEPER

Somers agrees with Carlone. And Somers also believes the impact goes beyond scientific identity, to the core of a young person's relationship with the natural world.

Reptiles and amphibians have been deeply misunderstood and unfairly maligned almost since the beginning of recorded history, she says. Through the residential experiences students and their teachers learn to question, to develop critical thinking skills and a healthy dose of skepticism.

"You are empowered when you have secret knowledge," Somers says. "The secret knowledge is that the vast majority of these creatures have gentle natures and should not be feared but rather admired and respected for their valuable roles in our ecosystems."

Somers recalls one young lady who came into the program as a "girly-girl who probably never broke a fingernail" and wound up asking her parents for chest-waders for Christmas.

"It goes to the deepest part of what our relationship is to the natural world, realizing that we don't have to be the conquerors, the people out there who are going to beat it down," Somers says. "They are learning to see the natural world as community, not commodity."

LASSOING LIZARDS!

Lacey Huffling will tell you she has a "strong herpetology identity." Huffling, a doctoral student in the School of Education with a background in biology and ecology, assists with the HERP Project.

She heads up the new lizard project at Camp Rockfish, actually teaching students how to gently snare lizards with tiny lassos. "It's quite entertaining to watch," she says.

Before coming to UNCG for her PhD, Huffling taught for four years. "I noticed that my students tended to equate science with being smart. I wondered how I could get all my students to at least see the possibility of doing science and being a scientist."



HIGH SCHOOL STUDENT JIMMY HUNT stands in a vernal pool, looking for salamanders. Below, he displays an egg sack and a salamander found in the pool during the community day in February.



DR. HEIDI CARLONE, LEFT, talks with a festival attendee and Jimmy Hunt, right. Before participating in the HERP Project last summer, the South Robeson high school student had never thought much about science. Now he's interested in pursuing a science major when he goes to college.





AT LEFT, KAT WALSTON shows two turtles to students. At right, she records the data on the turtles while a Boykin spaniel, trained to sniff out and retrieve turtles, takes a breather.

Huffling, Matthews and others in the HERP Project also are working on apps and software programs to make tracking and identifying species more palatable for kids and more convenient for adults.

So far, Huffling says, students in the summer research programs are gathering data with Android apps and iPads — kept in plastic bags to keep them dry. They use GPS apps to track their explorations, which can then be mapped in Google Maps. They'd also like to develop a virtual reality program like the audio-visual aids that guide people through museums.

The technology allows kids to learn the same skills while they have more fun.

"Of course, some kids still like to collect data more than others," Matthews says, "but this is real data on real animals. The kids really get invested in this real science. They know it's real science and they talk about how different it is than what they do in school."

Over the last several years the students have collected data on organisms in two ephemeral pools as well as extensive morphometric data — size, shape, etc. — on reptiles and amphibians in Orange and Hoke counties. They also completed a comparative study of Orange County temporary pools.

Researchers have studied teachers' involvement in these projects and developed visual learning software for herpetology. Matthews and one of her former students, Terry Tomasek, co-wrote a chapter on their findings from Slip Slidin' Away for the book "Exemplary Science: Best Practices in Professional Development," published by the National Science Teachers Association Press. Tomasek, now a professor at Elon University, oversees the herpetology program at Elon Academy.

Elizabeth Baker, a master's student in the history department, helps with the project.

"We have a really great mix," says Baker, who vividly recalls exploring the woods near her house as a child. Her personal favorite is the story of a woman from Bosnia who, separated from her parents during wartime, found solace spending the night with the animals in a relative's barn.

While many people recounted stories of being frightened by snakes and other animals, all of them learned from the experience and came away with a better understanding and a healthy respect for the natural world.

"I think it connects to a broader societal question about structured childhood and safe play, as opposed to a spirit of discovery, exploration, imagination and independence," Filene says. "Seemingly simple pleasures may be getting left out and devalued. People who don't have enough baseline knowledge lose the ability to explore comfortably."

## CITIZEN SCIENTISTS

Educating the public and enabling people to explore comfortably is what the HERP Project's community celebrations are all about.

Vehicles lined the roads that wound into Camp Chestnut Ridge in Efland at a public celebration held in February. Kids and their parents trekked through the mud on that warm, sunny Sunday, happily more like April than late February.

Filene and Baker were on hand with a recording booth to collect Nature Chronicles.

Out on a patio, Carlone took photos as high-schoolers from Elon Academy put on a puppet show for kids.

"They are the experts now," says Carlone of the budding herpetologists. "They are teaching the young kids, and acting as community experts. It's really given them a sense of feeling competent and engaged, and of giving back."

Dr. Lynn Sametz, a social scientist with the Department of Biology, said the response to the project had been heartening. About 75 volunteers worked the celebration; about 15 high school students spent the night at the camp to help set up.

"We have 100-plus partners," Sametz said. "Most of them just come out and do it. They just come because it's fun. The whole idea is to educate the public, and to help people appreciate their environment."

And people weren't the only mammals getting into the act. In one of the campground's central buildings, John Rucker spoke about his dogs — turtle dogs.

Rucker has several dogs, mostly Boykin spaniels, who sniff out and retrieve box turtles. The dogs carry the turtles, unharmed, back to their master for measuring, weighing and marking. The turtles are released unscathed.

The Eastern Box Turtle, North Carolina's state reptile, is a species in decline.

Many turtles suffer from loss of habitat and from well-meaning people moving them from roads to distant locations far from their home territories. When this happens the turtle may spend the rest of its life trying to get back home.

Box turtles are also being collected for the pet trade.

Knowing these things, Rucker was reluctant to spread the word about his turtle finding dogs until he found a way for them to help with conservation efforts.

"If you were a turtle," he asked, "would you like to be kept in a glass box or terrarium for 30 years?"

## PAYING IT FORWARD

Kat Walston, for one, would say no.

Walston is the undergraduate researcher who caught the mature mole salamander. Her real expertise is the Eastern Box Turtle, which she has studied extensively for the last five years. She graduated from UNCG in May with a degree in biology and began an internship at Brookhaven National Laboratory in the fall, where she is participating in a conservation project focused on box turtles asking questions about nutrition, habitat use and impacts of development on the population of box turtles.

While at UNCG, Walston learned about conservation, radio telemetry and data entry. She also worked closely with Ann Somers as a project leader for the Box Turtle Project, a statewide initiative to track and record data on the Eastern Box Turtle.

When she decided to come to UNCG as a biology major, she had no idea Matthews and Somers, the same people who ran the Slip Slidin' Away programs she attended in high school, worked there and would quickly become her mentors.

"Not many people get to do this sort of thing from high school all through college," she says. "It's been an awesome gift."

As for her future, the options are wide open. She plans to get a graduate degree in conservation biology with a focus on wildlife research.

"I love turtles," she says. 🐢

FOR MORE ON THE HERP PROJECT AND INFORMATION ABOUT REPTILES AND AMPHIBIANS, VISIT THE PROJECT'S CYBERHUB AT [THEHERPPROJECT.UNCG.EDU/](http://THEHERPPROJECT.UNCG.EDU/).



effort that they hope will continue for at least 100 years.

The Eastern Box Turtle is North Carolina's state reptile, but its population is on the decline.

Students and researchers working with the HERP Project are conducting mark-recapture studies on box turtles and aquatic turtles. So far they have marked more than 100 box turtles and more than 200 aquatic turtles at Camp Chestnut Ridge.

As part of the project, researchers also use radio telemetry to track box turtles. This data enables them to create home range maps for them.

All data collected at Camp Chestnut Ridge becomes part of the Carolina Herp Atlas, a public online database partly supported by funds from the HERP Project. Visit [www.carolinaherpsatlas.org](http://www.carolinaherpsatlas.org) to enter your own data or see data entered by other citizen scientists.

## TRACKING TURTLES

Turtles are a huge part of the HERP Project's focus.

At the project's summer residential programs, students are getting plenty of hands-on experience with their hard-shelled reptilian neighbors.

Camp Chestnut Ridge in Orange County, one of the main sites for HERP Project summer programs, is one of about 30 North Carolina project sites that are contributing extensive long-term data on individual box turtles. Five state agencies and four universities, including UNCG, are involved in this research



GEORGE WASHINGTON WAS FIRST IN WAR, FIRST IN PEACE. BUT THESE STUDENTS WERE FIRST IN THE HEARTS OF THE JUDGES ON A HISTORIC ESTATE GIVEN BY THE FIRST PRESIDENT.



BY MIKE HARRIS, UNCG RESEARCH ASSISTANT EDITOR

PHOTOGRAPHY BY DAVID WILSON, ASSISTANT PHOTOGRAPHY EDITOR



BY GEORGE, THEY GOT IT

## BY GEORGE, THEY GOT IT

Why were seven interior architecture students loading up their vehicles to venture to the edge of George Washington's Mount Vernon estate?

It goes back to a phone call that came out of the blue.

The *MADE: In America* organization planned an All American House collaboration with the National Trust for Historic Preservation. It would be a showcase competition, using exclusively American furnishings in a very historic home, Woodlawn. They researched university interior architecture and design programs including UNCG's noted program, which got the call.

Ultimately, UNCG was selected to design six rooms in Woodlawn. George Washington University did two. The Corcoran College of Art + Design did a virtual design for another house on the property.

The challenge: Design the interior of 200-year-old rooms for a modern family. The National Trust would oversee everything. Students would meet some of the leading figures in the industry. Their work, if they won first place, would likely warrant a story in the Washington Post.

Sixteen UNCG students formed themselves into teams creating scenarios and designs. It would be "a reinterpretation of Woodlawn for a 21st century family," explained UNCG Professor Jo Ramsay Leimenstoll, who chairs the National Alliance of Preservation Commissions board of directors.

The 16 made presentations in December. Seven continued the work over the spring. And on two long days in April, they transformed the historic Woodlawn house.

At 8 a.m. that first day, all the students were at work, arranging furniture, making pillows, placing stencils and art works. "Divide and conquer," Leimenstoll advised, as she moved from one room to the next.

In the Lafayette Bedroom, Nicole Ware cut borders off huge printed panels that would create a wallpaper for one wall of the adjoining Linen Room.

Kacie Leisure worked on stenciling in the master bedroom with Kathryn Frye, who'd soon enter an internship with Disney.

Downstairs, Sharon Frazier considered three mirrors that would hang in the passageway.

Frazier received her bachelor's in Business from the Bryan School in 1996. She had a career with Luminaire, a prominent furnishing design showroom in Chicago. Even as a junior at the Bryan School, she said, "I dreamed of being in this program." It was always her intention to come back. But she had no portfolio. She formed a plan. She attended the School of the Art Institute's continuing studies program. Soon, she had her portfolio and was ready to apply.

"You have to learn how to follow your own artistic instincts," she explained.

### 19TH CENTURY MEETS THE 21ST

Woodlawn was completed in 1805 on land George Washington carved from the Mount Vernon estate. He gave the land to his step-granddaughter, Eleanor Parke Custis Lewis, and her husband, Lawrence Lewis, and encouraged them to build a home there. Eleanor had lived with the Washingtons since she was small. The home was designed by William Thornton, architect of the US Capitol building.



**LOOKING UP** Jo Leimenstoll considers the prints chosen for the master bedroom eastern wall, as Sharon Frazier and Kacie Leisure note her reaction.

Lafayette had slept in one of the upstairs bedrooms, which the students were turning into "Ellie's bedroom."

"I love this house. I've always had a soft spot for old homes," Alyssa Hankus said, as she entered the room.

Her focus is sustainable health care design.

What is that? Think about the materials and the paints you use, she explained. Think about cabinetry, hospital beds, ceiling tiles, flooring. Are they safe? Do they off-gas carcinogens? It's ironic that health care settings could have things that could make people sick. She wants to be a part of the solution.

As a girl, she loved history. Nursing appealed to her too, before she decided to pursue design. "I'm a cancer survivor," she noted. She had Mesothelioma in her abdomen, due to asbestos. She has been in remission 11 years.

Through design, she can make a difference in many lives. She plans to work two years before starting her master's program.

The best thing about the All American House? "The real-world experience — to see it all from beginning to end — as you're about to graduate," Hankus said. Oh, and working as a team, collaboratively. "That's how it's going to be."

Just outside the room. Lauren Postlmayr worked on a pillow. She will get her master's with a concentration in historic preservation in December. She hopes to return to California and work for a historical preservation firm and teach.

What drew her all the way from Los Angeles? There, she explained, historic preservation is undervalued.

"Everyone thinks there's no history in California — we tear it down," she said. "It's inaccurate. We have historic buildings on the National Register."

Her professors at Woodbury University advised her on the relatively



## FIRST PLACE The Family Parlor



### IN THE DETAILS

The judges praised things

big and small. They loved that the tea pots were tarnished — and that the stencil motifs alluded to the bracket design on the stairs.





**MAP QUEST** Step through the palladium door, you see the old Mt. Vernon estate. Stay inside the Linen Room, you enjoy a wall papered with a recreated map of 1850s Washington, DC.

few interior architecture programs that offer a concentration in historic preservation.

She chose UNCG. “I packed up my car, drove cross-country, and here I am.” She’ll take back to California what she has learned at places such as Woodlawn.

In the Linen Room, Anna Behrendt arranged books on a small desk. Beside her, the palladium doorway opened onto a vista of the old Mount Vernon estate.

The doorway’s wall now featured a specially designed panelling of an 1850s map of Washington. “It’s like wallpaper,” said Behrendt. Computer design is her forte. She crafted the panels using Illustrator and then PhotoShop — in collaboration with other students. The file size was nearly a gigabyte and the four panels they brought to Alexandria took 7 1/2 hours to print on campus.

“I see myself doing a lot of graphic design,” she said, looking toward her career. The experience with this yearlong project has given each student practice in real-world soft skills. How to work well with people, how to negotiate things. “You always have to be flexible.”

By the end of Tuesday, the students were making final touches. Small details can make the difference. The placement of several teapots on the mantle of the parlor. The one door knob bearing the visage of Washington, mixed in with others in a glass bowl. The antique postcards of Mount Vernon. The eight prints on the walls featuring the woodwork of Thomas Day, a free black craftsman in antebellum North Carolina. The history of free blacks at Woodlawn during part of its antebellum era.

The students needed one book for a certain table in the parlor. “How about the Thomas Day book?” they all asked. Leimenstoll, a Day expert, had co-written it. She acknowledged the gesture from her students. “It was very sweet.”

### AND THE WINNER IS....

While the students toured the Mount Vernon estate Wednesday, members of the Congressional Club — Congressional spouses with design or architecture expertise — judged each room.

At the conclusion of a special Thursday luncheon, Alexa Hampton announced the winners. First place, UNCG for the Family Parlor. Second, George Washington University for the Dining Room. Third, UNCG again, for the downstairs Center Passage.

Perhaps better than the honors was the opportunity to talk with and give a tour to industry leaders such as noted designers Hampton and Barbara Hawthorn, both on hand.

Hampton, the competition’s honorary chair, is one of Architectural Digest’s Top 100 designers, noted *MADE: In America* Chair James DeLorbe. Designer Hawthorn is chair of the *MADE: In America* National Advisory Council.

“Definitely some networking the students would not normally be engaged with,” Leimenstoll said.

DeLorbe marveled at what this meant for the students as they neared

### THIRD PLACE The Center Passage



**STEP RIGHT UP** They labored over the details: the placement of mirrors, the color of the runner carpet on the stairs, even the height of the willow stems.

graduation. “They’re making industry contacts. They’re making showroom contacts. They’re making design professional contacts,” he explained. Plus they are pioneers. “No Historic Trust house has ever allowed something like this to happen. These kids are the first...” And consider what this does for their portfolio, he added.

And yes, the Washington Post wanted to do a feature.

Leimenstoll recalled Hampton commenting, “I can’t believe how poised your students are.”

DeLorbe said, “We have been so impressed with The University of North Carolina at Greensboro. They are rivaling anything that professional designers do at the very high end.”

This would be considered a “super-high-end project,” he noted. “This is an Architectural Digest-like project level and they met that challenge, which is unbelievable.”

Chancellor Linda P. Brady hosted a luncheon for a number of UNCG alumni the next day, and the students showed off their work in another tour.

They had learned some things the judges loved. “The jury was impressed with the little touches that gave it personality,” Leimenstoll said, such as the stencil motifs in the parlor that were derived from the stair stringer bracket design. The teapots on the mantle. “They loved that they were tarnished.” And the 17 pillows.

Tourists would enjoy the rooms for the summer. The students would relish the experience for a lifetime.

The professor reflected on special contributions by the students. “Each had strengths that complemented each other.”

And they did it as a team. “We all planned this.”

READ MORE ABOUT DR. JO LEIMENSTOLL’S RESEARCH  
at [www.uncg.edu/iar/facultyStaff/faculty/leimenstoll.html](http://www.uncg.edu/iar/facultyStaff/faculty/leimenstoll.html)



**AT HOME** The seven students plus their professor pause momentarily in Woodlawn’s parlor.

# BIND

## THE TIES THAT

# BIND

**PHD STUDENT YULIANA RODRIGUEZ AND ASSOCIATE PROFESSOR HEATHER HELMS HAVE LEARNED THE VALUE OF GOOD RELATIONSHIPS – BOTH IN THE MARRIAGES THEY STUDY AND AS MENTOR AND MENTEE.**

BY TINA FIRESHEETS

PHOTOGRAPHY BY CHRIS ENGLISH, PHOTOGRAPHY EDITOR



**WORKING SIDE BY SIDE**, Yuliana Rodriguez, left, and Dr. Heather Helms studied marital quality among Mexican immigrants in North Carolina. Rodriguez, now a doctoral student, learned about research by starting with the study in her junior year.

A SIMPLE EMAIL CHANGED HER LIFE.

Yuliana Rodriguez was a sophomore when she received an email from her professor, Dr. Andrew Supple. He thought she might be interested in participating in a research project studying marital quality among Mexican immigrants in North Carolina.

There were many students in Supple's adolescent development class, and Rodriguez was honored that he thought of her.

Dr. Heather Helms, associate professor in the Department of Human Development and Family Studies, pursued the project because she saw a need for such research.

"Our knowledge of marriage and how it works is from predominantly one perspective. It's about white, middle class marriage and doesn't attend to the unique circumstances

of immigrant families," Helms says.

There was a 400 percent increase in the state's Latino population between 1990 and 2000. In the following decade, North Carolina was ranked sixth in the U.S. for Latino population growth, with an increase of 111 percent. Helms says she thought a lot about the project before its launch. She encountered naysayers, but charged ahead anyway.

"It felt right to me. It felt important," Helms says. "This was a story that needed to be told."

And she needed Spanish-speaking students to help her share it.

Rodriguez had no idea how to conduct research. She worked three part-time jobs, and was the first in her family to attend college. She was excited just to be at UNCG, earning a degree.

Now 25, Rodriguez is a second-year PhD student in the Department of Human Development and Family Studies.

"That email was the start of a journey that I could never have imagined," she says.

### **MENTORS MAKE A DIFFERENCE**

The mutual respect between Helms and Rodriguez comes through in their praise of one another.

Since their introduction when the project began in 2007, their relationship has evolved. Rodriguez was a junior when she started the project and continued conducting interviews and managing data through the completion of her master's degree. Helms has been both professor and mentor to her. Helms often recruits undergraduate and graduate

students in her research projects. It's called a "scaffolding approach to learning," and it's how she was mentored, she says.

The approach emphasizes teaching through guided experiences in which students learn with an expert, as well as more advanced peers.

While a PhD student at Penn State, her professors often included both graduate and undergraduate students in research projects. Helms says it was a way to "train and inspire" students. She also says it demystified the research process, revealed possibilities and expanded horizons.

Helms has observed Rodriguez blossom as a researcher, community engaged scholar and teacher. She emphasizes Rodriguez's combination of strengths: "Sometimes PhDs are good in one area, but not all.

"Yuliana is unique in that she is strong in multiple areas — a task that many PhDs find difficult to achieve."

Rodriguez has authored or co-authored several peer-reviewed journal articles that are in various stages of review and has presented findings at regional, national and international conferences.

Helms promotes Rodriguez's accomplishments whenever she can, nominating her for a graduate school fellowship and other awards. She also worked hard to connect Rodriguez with the community, including Greensboro's Family Life Council and the Family Life Department of Catholic Social Services. Both organizations serve local families, and Rodriguez's work with them has focused on low-income immigrant couples, parents and children.

Rodriguez says Helms taught her how to have a healthy relationship between a mentor and mentee.

"She knows when to let you breathe a little and when to push you some," Rodriguez says. "She's a wonderful listener. She takes the time to learn about you and from you."

Above all, Rodriguez says Helms inspires her with her passion. Her mentor juggles teaching, research and family responsibilities — all with incredible energy and enthusiasm.

"It's really great to have a mentor who's really excited about her work," she says.

### **THE RESEARCH**

Sustaining a healthy marriage while raising young children can test even the best relationships.

**LATINOS IN NORTH CAROLINA**

**400%** increase from 1990 - 2000

**111%** increase from 2000 - 2010

**6<sup>th</sup>** in the U.S. for growth from 2000 - 2010

**3<sup>rd</sup>** in the U.S. for number of foreign-born Latinos

**TOP 10** in the U.S. for number of foreign-born Mexican immigrants

**PARTICIPANTS**

**69%** legally married,  
**31%** in consensual unions

Marital duration averaged **7** years

**Two** children

**96%** of wives and **100%** of husbands were first-generation

**55%** lived in small towns,  
**26%** in cities, **19%** rural

**95%** lived in high-poverty neighborhoods

**49%** lived in majority Hispanic neighborhoods

**MEXICAN-ORIGIN COUPLES AND MARRIAGE**

Endorse values that support marriage  
Face challenges to maintaining marriage

- Economic hardship
- Stress related to cultural adaptation
- Depressive symptoms

Add to that financial hardship and acclimating to a new culture. Such stress is bound to affect marital quality, Helms surmised. The project’s timing couldn’t have been more relevant. Data were collected in 2007-08, at the start of the economic recession. Work was scarce, particularly for immigrants. It was also a time of heightened anti-immigrant sentiment.

“It was a really scary time to be an immigrant, particularly from Mexico,” Helms says. Establishing trust was key to collecting data. Rodriguez says it was advantageous that she shares a similar background with the families interviewed. Spanish is her first language. Her parents are Mexican immigrants who struggled financially when they first came to the U.S. in 1990.

“Because I understand the culture, it also made me nervous,” Rodriguez says.

She knew their subjects would worry about how their information would be used and if there would be repercussions for their disclosure. She also knew Mexican men would be reluctant to talk about their marriages.

“In our culture, for a man to have to talk about his problems, especially marital problems ... it’s almost like an insult. That’s information that’s really personal,” Rodriguez says.

Knowing this, they made sure to contact husbands first. Their respect and sensitivity paid off. The families trusted them, which encouraged Rodriguez. It also made her want to serve them more significantly.

“They’re willing to allow us to work with them and ask them questions – it made me realize research is very important. Research in this area is very important,” she says.

“There are not many resources for them. They are yearning for resources that will open the doors to them learning to navigate living in this new culture.”

Upon realizing this, the UNCG researchers collaborated with the N.C. State Cooperative Extension to provide the participating families with resources to help them navigate the school system, health care and immigration law.

**THE PROCESS**

The study included 120 families – 240 people within a 60-mile radius of UNCG. Most of them – 74 percent – lived in small towns and rural areas.

Many of the participants were identified through those who helped provide services

for them. Oftentimes, the families referred the researchers to others who might be willing to participate.

“I learned a lot about how to do research with populations that are less accessible,” Helms says.

The two- to three-hour interviews were conducted in their homes, often during the evenings and weekends. Rodriguez says they learned to be flexible because of their subjects’ work schedules. All of them were in relatively early years of parenthood and had been married an average of seven years. Helms says they also learned to broaden their definition of marriage. Thirty percent of families interviewed were “living as married.”

**THEIR FINDINGS**

The families wanted to share their stories. And their insights went beyond their perspectives on marriage.

“They opened up their hearts,” Rodriguez says. “It seemed they wanted the opportunity to talk about their feelings about coming here.”

They spoke about leaving their families behind in Mexico, fear of deportation and frustration with being unable to speak English.

“Not being able to communicate with Americans, experiencing racism and not being able to go to the doctor in case of emergency ... have been challenging in the United States,” said one 23-year-old mother of two.

When it came to marriage, Rodriguez learned that the strongest marriages were those in which the couples communicated well.

“It made me realize ... when you have strong bonds, strong communication with your spouse, it’s a powerful tool,” she says. “You can tell when spouses were communicating – that even in the middle of all the stressors, they were still strong, and could lean on one another.”

While the study shows that Mexican-origin couples value marriage, the biggest challenges threatening those relationships are economic hardship and stress related to cultural adaptation, which can lead to depressive symptoms. Those depressive symptoms can lead to marital negativity.

Maintaining their native culture, while adapting to a new one, can be difficult for any immigrant or refugee. But the marginalization experienced by many Mexican immigrants elevates such stress.

In this study, husbands reported more

**RESEARCH GOALS**

**EXAMINATION OF DIRECT AND INDIRECT ASSOCIATIONS FROM SPOUSES’ ECONOMIC PRESSURE AND STRESS RELATED TO CULTURAL ADAPTATION WHICH CAN LEAD TO DEPRESSIVE SYMPTOMS, MARITAL NEGATIVITY AND MARITAL SATISFACTION**

**PRELIMINARY FINDINGS**

- Wives reported more economic pressure than husbands.
- Husbands reported more stress related to acculturation and enculturation than wives.
- Husbands reported greater marital satisfaction and less marital negativity than wives.
- Spouses did not differ in their reports of stress related to English competency or depressive symptoms.

acculturation-related stress than their wives. However, they also reported greater marital satisfaction and less marital negativity than their wives, which is consistent with the larger marital literature.

But the unique finding that this study revealed was that the wives’ marital satisfaction was affected not only by their own experiences of stress – but also by their her husbands’.

The wives were juggling their own, as well as their husbands’, psychological struggles. Given that wives, more often than husbands, initiate divorce, this finding is noteworthy, Helms says. It could lead to more resources for immigrant couples, such as language training, mental health intervention/prevention and conflict-management skills.

The economic stressors measured were the extent to which the couples had difficulty making ends meet and the extent to which they had enough money to cover basic needs such as adequate housing, food, transportation, clothing and furniture. Like many of the country’s



**YULIANA RODRIGUEZ**, also a teaching assistant in the Department of Human Development and Family Studies, talks with a student after teaching.

working poor, those interviewed lacked health insurance and benefits, worked long hours and faced uncertain employment.

Ninety-eight percent of the husbands interviewed were employed, and 54 percent of wives were employed. The wives also reported more economic pressure than their husbands.

The motivation behind their willingness to face such challenges: their families. Most of the parents have strong family values and cited their children’s education and bettering their family’s financial situation as reasons for immigrating.

“We have a loving family. We think of our kids. ... We work hard for them,” said one 30-year-old father of four.

In time, Rodriguez says the parents wanted advice about how they could help their children with their education. They wanted information about college.

“I think they could see their kids through us, hoping that maybe one day their kids could be like us,” Rodriguez says.

It reminded her of the sacrifices her own parents made for her.

“I’m here now, thanks to their dream. They had a desire in their hearts for their children to have a better life,” she says. “These families are coming here with the same dreams.”

**WHAT’S NEXT**

Helms would like to conduct post-recession research with the families interviewed and is seeking funding for it. They are now asking the families if they would like to be included in the follow-up study.

The researchers are distributing college

readiness and healthy marriage material as they visit them.

Future studies may include examining additional stressors and mechanisms affecting marriage, such as discrimination and stress related to legal status and anxiety and alcohol abuse.

Rodriguez says they’re still analyzing the data. She started looking at gender roles and co-parenting. One valuable lesson she learned from the current study that will carry over to future research was to be aware of stereotypes.

“It made me realize some of the stereotypes we have – even me, as a Mexican – they’re not necessarily true,” Rodriguez says. “When thinking of immigrant families ... keep an open mind.”

For example, one mother in the study chastised her son for playing with a doll because of how it could be perceived by Americans. It was her husband who defended him, saying that doing so would teach their son how to be a good father.

The other lasting impression Rodriguez takes from the families: adaptability.

“It was amazing to see how resilient they were, even though they were making such low incomes. They didn’t have any vacation, benefits or savings accounts. ... It was an eye-opener to me,” she says. “It has encouraged me even more to work with this community. If they can get this far with so few resources, what might they do with just a little more?”

**READ MORE ABOUT DR. HEATHER HELMS’ RESEARCH** at [www.uncg.edu/hdffacultystaff/Helms/Helms.html](http://www.uncg.edu/hdffacultystaff/Helms/Helms.html)

# THINKING OUTSIDE THE BORDERS

## THEY ALL GO SOMEWHERE.

They move beyond their campus along Spring Garden Street and travel to England, Mexico and Ecuador.

For the professors, they find out firsthand how invaluable their students' curiosity — and energy — can be. The professors' research takes shape. New information is found, data are accumulated. As that happens ever so slowly, students get acclimated to seeing their world in a new frame.

Different spots on the globe become their classrooms. Some students learn more about chemistry. Others learn more about archaeology and anthropology. But mostly, they learn a lot about themselves, about who they are and what they want to be.

They function in a world without English, live with people they just met and adjust to a life of triple-digit temperatures and native cuisine that sometimes involves something called cuy.

That's guinea pig.

Still, with the help of their professors, these UNCG students turn places they've never been into classrooms, and they learn why packing peanut butter and a long-sleeve shirt is always important.

But that's not all.

On a hillside in Bristol, England, Daniel Nasrallah sees hot-air balloons rise at dusk.

He leans on his bike, taking a break from his long days spent in a chemistry lab. For days, he has spent countless hours working on creating an anti-smoking drug. Every time, he loses track

of time in his white coat and purple gloves.

That always happened to him at UNCG. But he could only spend 12 hours a week in a lab in the Sullivan Science Building. In England at Bristol University, on his research project coordinated by UNCG's longtime chemistry professor Dr. Terry Nile, he can stay all day. And he does until the very last minute of the very last day.

But on this hillside, far from his hometown of Winston-Salem, he forgets chemistry for the moment and thinks of fire-eating dragons and Woodstock, the legendary rock concert that happened way before he was born.

He hears the guttural roar of helium igniting and sees a hillside carpeted with people. They're grilling burgers, craning their necks to see everything above.

"It's kinda surreal," says Nasrallah, 21, a rising senior and chemistry major at UNCG. "The hot-air balloons are huge, and you get the opportunity to be so close, and the baskets of the balloons are flying over your head, and I watched them go until they hit the tree line and went farther and farther away.

"You hear music; it's dark and the countryside lights up when these 30 to 40 hot-air balloons start rising. They look like little grapes, little jellyfish in the distance. Just floating away."

For seven weeks in England, Nasrallah joined seven other UNCG students, and they worked in bigger labs, side by side with graduate students and professors from Bristol University's acclaimed School of Chemistry. It felt like graduate school for Nasrallah. It felt like freedom for Ayana Smith.

She has gone twice, and it's been the first time she's traveled outside the country without her parents. But she's not a chemistry major. She's a nursing major from Charlotte. As a rising senior, she knows she'll be working in the halls of hospitals where patients need her help.

So, she knows she needs to be an advocate and have confidence to question a doctor and say, "Wait a minute." And she needs to know she can question treatment or walk into any room, thick with uneasiness and dread, and say, "Hello, my name is Ayana."

The trip to Bristol introduced her to new machines and new techniques. It also gave her



an idea of how to create her own path toward graduate school where medicine will be the spine to her work.

Plus, she had fun.

She, along with Nasrallah, visited a pub. She went shopping. Nasrallah visited the prehistoric monument Stonehenge and walked the streets of London during the Olympics, where he saw people wearing their country's flags like capes around their shoulders.

And he saw the Bristol International Balloon Festival — from a bike.

All with the help of Nile. He created this research enterprise six years ago with the help of grants from the National Science Foundation.

He has introduced students to Tribute, his favorite beer, and the thrill of English soccer. But he also introduced them to the working science of chemistry. It's like cooking, and Nile calls it "truly beautiful."

He should know. He has been teaching chemistry at UNCG for 42 years, and in Bristol, he feels at home. He's a native Englishman, the only son of a machinist dad and a school administrator mom.

At age 8, he discovered his love for chemistry in a chemistry set. Now, at age 66, he uses an overhead projector, scrawls equations on a whiteboard and feeds the intellectual curiosity of his students through lab work, Bristol and hot-air balloons.

He has a nickname. A UNCG student gave it to him, and it's on a nameplate beside his office door in the Sullivan Science Building. And it seems appropriate, especially when you hear what Nasrallah tells chemistry friends who ask about his trip to Bristol.

"You have to apply for this program," he tells them. "It'll change your perspective on chemistry, on UNCG and open your eyes to the possibilities."

Nile's nickname?

Dr. Awesomeness.



In the summer of 2010, Olivia Pettigrew had a tiny pink notebook.

She carried it with her through the southern Mexican town of Teziutlan, introduced herself to women between the ages of 17 to 33 and talked to them about their memories of a mudslide more than a decade ago.

The mudslide destroyed homes, displaced families and killed at least 26 people, and Pettigrew wanted to find out how the women coped.

Many were young when the mudslides happened. Yet, they all remember. Some lost homes. Some lost family. And as Pettigrew interviewed them in Spanish, taking down their responses in her tiny pink notebook, she often had to stop.

The women wept.

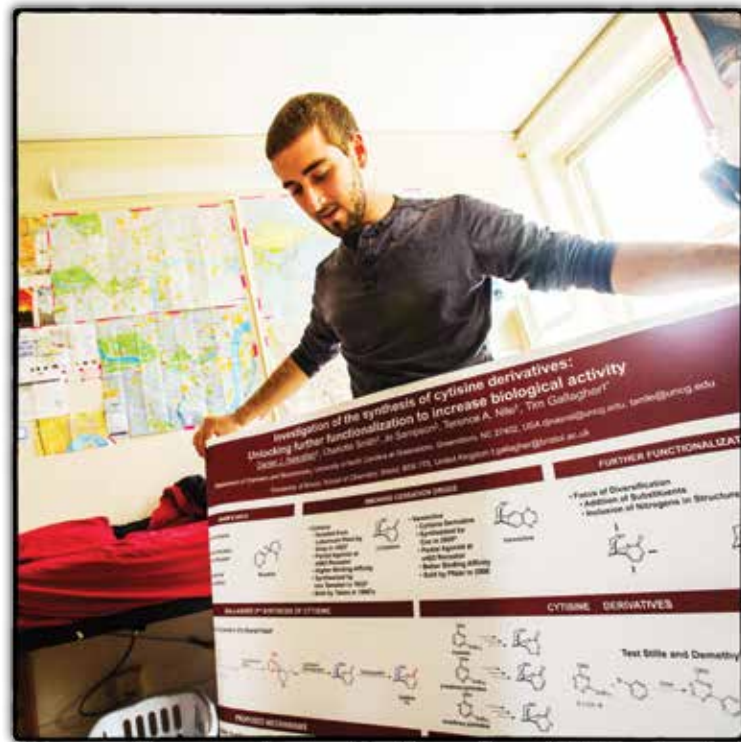
"We can talk about it later if you like," she told them.

Yet, they continued and gave Pettigrew an education she had never had before.

She had studied abroad, and she had visited Southeast Asia, Africa and the Middle East. But this nurse's daughter from China Grove found herself immersed in a different kind of cultural classroom.

She lived in a one-room, cinder-block house on top of a mountain and slept in a single bed. She took three-minute showers, lived with a Spanish woman who worked 12-hour shifts in a blue-jean factory and survived on meals of fried tortillas, enchiladas, meatballs and breakfast bars.

It rained every day.



DANIEL NASRALLAH shows a poster of his research in his UNCG residence hall room. Maps marking his travels hang in the background.

Meanwhile, Pettigrew walked the city streets and talked to strangers about tragedy. Pettigrew put her UNCG education to work in Teziutlan, a city of more than 60,000 people about 110 miles east of Mexico City.

She spent a month there and followed the advice UNCG research scientist Dr. Eric Jones often gives anyone who asks about taking students to disaster spots in Ecuador and Mexico.

"I want to find out why people do what they do," Jones says.

He takes his students to these places so they can see how people function following Mother Nature's wrath. He pushes them to dig deep and to investigate the need for social networks. In the process, he sees them wrestle with their own perceptions about the world and themselves.

That happened to Pettigrew. She remembers, even two years after graduating in May 2011 with a degree in anthropology and Spanish.

"It gave me a huge appreciation of how easy I have it," said Pettigrew, 23, a Spanish teacher at a charter high school in Albemarle. "The people I interviewed lost family members, lost friends and had to relocate and start a new life, and they were still struggling to move forward in that small community."

"They are still stuck in a time warp, and it was almost 14 years after the landslide and for them it felt like only a few. They are still struggling to move on and get a footing."

In 2007, Brittany Burke discovered the same thing in Ecuador. She lived in a two-room flat, in the village of Penipe in the Andes Mountains, and ate rice, beans, chicken and cuy — guinea pig.

Meanwhile, she talked to Ecuadorians about a volcanic eruption the year before.

It changed people forever. It changed her, too.

Burke now lives in Busan, South Korea, teaching English to students who range in age from 5 to 17.

"The further away from home I go, the more I feel I owe it to my opportunity to work and study abroad," she wrote in an email.

That is why Jones goes after grants from various foundations to cover the costs of the month-long trips.

Sure, it's the research. And it's also the reaction — and growth — of the students involved.

"One of the powerful experiences in cultural anthropology or any ethnographic field is to remove yourself from your cultural framework, figure out a new one and realize yours is not the only one that matters," Jones says.

Jones is 43, a married father of two. Twenty years ago, he worked for the Peace Corps in Guatemala. Today, he works with students like Mandy Elkins.

She went this summer to Penipe for a month, and she took with her hiking boots, a duffle bag and a jar of peanut butter.

Peanut butter is hard to find in Ecuador, Elkins said.

But not perspective.

"For me, I think this is the last grand adventure before I graduate and go out in the real world," Elkins, 22, a rising senior from Lexington, said a few weeks before she left. "I'll get the restlessness out of my system and come back recharged and ready to go. And I am ready to go."



It was just after sunrise, six hours or so before the temperature hit 100 degrees, and Meredith Mabry was wrapped in sun-protective gear from her head to her toes.

She wore a hat, a long-sleeve T-shirt, long pants and hiking boots, and she carried with her water the round-faced Greek grandmother at the local store told her to buy.

The grandmother couldn't speak English. But Mabry understood. So, with four liters of water, Mabry walked. For more than eight hours.

She walked in a straight line, eyes screwed to the ground in front of her, with her hand clutching a clicker, keeping count of the steps she took.

Sometimes, she walked no more than 10 yards. Other times, she walked farther than the length of a football field. No matter how far she went, she always looked for pieces of glass or pieces of pottery that ranged in size from as big as her hand to as small as a dime.

She knew these pieces of pottery, some with the glaze still intact, could be at least 6,000 years old.

Whatever she found she wrote in a notebook and transferred it to an iPad loaded with software and maps.

Mabry was on the other side of the world beside the Aegean Sea. She knew no one except her UNCG classical studies professor Dr. Joanne Murphy, and she was seeing archaeology in action — right there on the Greek island of Kea.

"We were all so fascinated with everything we were finding," Mabry says of her seven-week trip. "I found a type of handle my very first days there — I don't remember what kind of pot — but it was something special, and the team leaders were excited. And I was proud because this is what I've always thought about doing, and here you are. A definite cool moment."

Mabry had saved up for this trip. It cost nearly \$4,000. She got her money from family, scholarships, grants and from her \$10-an-hour job two summers ago packing blueberries on a Sampson County farm.

But Mabry realized the importance of bending over, eyes on the ground, counting steps and looking for things no larger than a dessert plate. She is a double major in archaeology and anthropology with a minor in classical studies.

And this is her thing.

Ever since she went with her mother to London as a seventh-grader, she longed for this kind of work. She walked into the British Museum, saw the Rosetta Stone — a door-sized block that helped archaeologists decipher Egyptian hieroglyphics — and told herself: "I want to work in a museum one day and be surrounded by this all the time."

Today at age 20, a UNCG junior who grew up in the tiny Harnett County town of Angier, Mabry has gone twice to Kea. She returned with Murphy this summer. And this time, she worked in the lab. Still, it's the first time that always sticks with her.

She found out about herself.

"I learned I could do things on my own and go out in the world," she says. "I had never been anywhere without my mom, and here I didn't know anyone except Dr. Murphy, and it was great to know I could handle it, you know?"

"Just for the future. If I want to travel when I get older, it's nice to know I can be thrown into another culture and be able to communicate with people and learn about them."

Murphy understands. She's been to the island of Kea seven times, and she's taken students three times.

She sees the look on their faces when they get off the plane. It's the wide eyes, the slow walk, the body posture that seems to say, "Oh my God, what have I done?"

Then, she watches the transformation. The UNCG students work in the field, work in a lab, live in cramped quarters and eat family-style meals with other participating students from the University of Akron.

"For these kids, it's like a Zen meditation," Murphy says. "It's already inside of them. You just need something to pull it out."

And Murphy does that because she sees how it helps in her own research — as well as her profession.

"You see them coming back changed and more aware of opportunities out there in the world," she says. "They're just more excited than they were before because they realize there are jobs they've never heard about before and they realize, 'Hey, I can make a career in archaeology.'"

Like Mabry, Murphy has had her own Rosetta Stone moment.

She grew up in Ireland, one of five kids. Her dad was a captain of a cargo ship, her mom a homemaker, and she used to explore the soil dunes behind their house and find old bottles, discarded bikes and old pennies.

She became enamored with the ancient Greeks after her godmother went to Greece for her honeymoon and brought back an embroidered shirt.

Murphy was only 3. She is now 42, and she enjoys seeing students immersed in the joy of discovery.

She gets it. That same thing happened to her in a seaside village where a little girl had no idea what anyone with a PhD could do.

She does now. 📍

READ MORE ABOUT DR. TERRY NILE'S RESEARCH AT  
[www.uncg.edu/che/faculty/nile.html](http://www.uncg.edu/che/faculty/nile.html)

READ MORE ABOUT DR. ERIC JONES' RESEARCH AT  
[www.uncg.edu/ant/faculty/vitae/Jones.pdf](http://www.uncg.edu/ant/faculty/vitae/Jones.pdf)

READ MORE ABOUT DR. JOANNE MURPHY'S RESEARCH AT  
[www.uncg.edu/clafaculty/murphy.html](http://www.uncg.edu/clafaculty/murphy.html)



A look at 'What Next?'

“ It’s really dazzling, exciting music. It somehow manages to be really deep but kind of weightless at the same time. I’m always challenged by it and continually humbled by it.” Dr. Guy Capuzzo

**Elliott Carter’s “What Next?: Communication, Cooperation, and Separation**  
Dr. Guy Capuzzo  
University of Rochester Press (200 pp.)

Elliott Carter is renowned in the music world not only for the quality of his work but for the remarkable span of his creativity.

Carter, who died last fall at 103, composed music for more than 80 years.

For one-quarter of that time, a UNCG professor has been researching Carter’s impact on the music world.

Dr. Guy Capuzzo, an associate professor of music theory, is the author of a new book for music theorists, composers and graduate students called “Elliott Carter’s ‘What Next?: Communication, Cooperation, and Separation.” The book is a study of Carter’s first and only opera, “What Next?,” which he “composed at the tender age of 90.” The book was released in September 2012, just two months before Carter’s death.

“I think Carter wrote music that’s built to last,” Capuzzo says of the works, which include orchestral, chamber music, solo instrumental and vocal compositions. “One hundred years from now, people will still be performing Carter. Two hundred years from now, they will still be performing Carter.”

Capuzzo first heard the composer’s work in the late 1980s during an undergraduate 20th century music class. He loved it

and completed a doctoral dissertation on him in 1999.

Capuzzo’s book dives deeply into the opera, which features six people who try to cooperate with one another so they can be rescued from a car accident. “I tried to use that idea of cooperation and communication as a way to look at the opera more closely,” he says.

The book also includes material from an interview with the composer in 1996. It was an interview that almost didn’t happen.

Capuzzo had traveled to New York to visit with Carter at the Greenwich Village apartment he shared with his wife for nearly 60 years. But the morning of the interview, the composer called him to cancel. Capuzzo politely asked why. Carter said he lived on the third floor, and the elevator had broken.

“He could only see the situation as an 88-year-old man who couldn’t take the stairs,” Capuzzo recalls with a laugh. “On the other hand, I’m this eager graduate student and there was no way I was going to lose this interview.”

He didn’t, and he was inspired even more. For both men, it seems, “there’s something to be said for sticking with something for awhile,” Capuzzo notes. “You keep learning more and realizing how little you know. It opens up all these avenues.”

He traveled to New York for Carter’s memorial service in May. “He just kept doing what he loved up until the very end,” Capuzzo says. “He led such an extraordinary life, and that’s cause for celebration.”



In and out of Africa

For Robin Gee, her Fulbright award offered a unique opportunity to live a dual existence as both student and teacher.

Gee, an associate professor of dance in the School of Music, Theatre and Dance, spent spring semester in French-speaking West Africa, documenting the cultural influences that shape dance there – and sharing her own experience of African-American dance and music.

After a two-week stop in France to re-immense herself in the French language she speaks fluently, she headed to Burkina Faso, once part of Mali, where she remained through July. She produced a film depicting native dance styles while teaching traditional African-American dance, jazz, hip hop and contemporary styles to students at the University of Ouagadougou.

“Africans have little knowledge of the African-American voice and experience in the West,” she said before she left. “There’s a lot of French influence in the arts in West Africa of course. Their exposure to what it means to be contemporary in the Western sense comes from France.”

Gee has been in and out of francophone West Africa for almost 20

years, she says. She spent the spring semester of 2007 studying in a small village in Guinea, West Africa.

Although France enjoyed a golden-age of African-American jazz infusion in the 1920s, Gee said the contemporary French art scene runs to the avant garde and abstract. The African-American style of storytelling with infused musicality is new to West African countries like Burkina Faso and Mali, which were colonized by the French.

Gee worked primarily with a large international dance center, the Ecole de Danse Internationale Irene Tassemedo in Burkina Faso, staying in “the urban and slightly Westernized” capital of Ouagadougou. The Université de Ouagadougou and the U.S. Embassy hosted her visit.

Gee’s project is called “Urban Griots: (Re) imagining the Word.” In addition to producing a documentary and dance, she studied the artist/musician caste there, known as jalis, and how their work has been impacted by urbanization and globalization.

She will also choreograph a dance performance based on what she has learned there. Look for that performance on campus in February 2014, in celebration of Black History Month.



Heart to heart

When Rachel Briley arrived in Mexico City to begin her research, she spoke very little Spanish. Between that and trying to adjust to a new culture, she sometimes felt “isolated, frustrated, alone and unable to connect.”

These feelings mirror the theme of her next play, a puppet performance that the North Carolina Theatre for Young People is developing in collaboration with Marionetas de la Esquina, an award-winning Mexican puppet company. The performance will be for a combined deaf, hard of hearing, and hearing family audience. It will include an

American Sign Language translation, which has been a particular focus for Briley during her research leave.

“One essential question that’s guiding this work is how we communicate without spoken words,” says Briley, an associate professor who directs the North Carolina Theatre for Young People and UNCG’s MFA program in Theatre for Youth.

Briley spent January through May working in two capacities in Mexico City.

First, she worked as an artist-in-residence with Marionetas de la Esquina.

She coached actors, furnished English translations and integrated ASL into their production “Sleeping Beauty Dreams.” This show was then performed at the Kennedy Center in Washington, DC.

Briley also volunteered at a school for deaf children, where she learned Mexican Sign Language and helped with drama workshops.

The combined experience taught her much about letting the work unfold and allowing the process to shape the final product, she says.

It’s a method she will use back in Greensboro. As she co-develops the new production,

Briley plans to seek input from students at Jones Elementary, Lindley Elementary and the Doris Henderson Newcomers School. At the same time, her colleagues in Mexico City will conduct a similar study there, and the data will be combined to inform the evolution of the play.

“We want to gather information about what children think of communicating without words and not being able to express their emotions,” she says. “Certainly we have a structure for the play in our adult brains now. But we also feel strongly about engaging children in the dialogue. This way, the story we present to the

audience comes not just from our own hearts but from the hearts of children who are living this situation.”

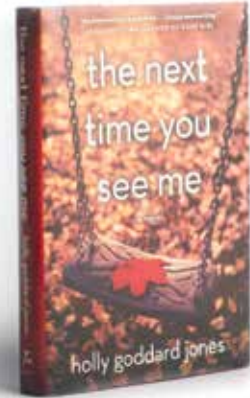
The performance will incorporate puppetry, sound and strong visual stimuli to engage the entire audience.

Ultimately, Briley intends to bring Marionetas de la Esquina to Greensboro to perform the completed work for the children who shared their input along the way.

“We want to show them that their ideas matter,” she says. “They are legitimate participants in this dialogue.”

### The Next Time You See Me

Holly Goddard Jones  
Touchstone (386 pp)



**TO HEAR HOLLY GODDARD JONES TELL IT, her fiction writing career has been at best a modest success.**

**"It used to be that I'd do a reading and maybe two or three people would show up," says Goddard Jones, an assistant professor in English who regularly makes the rounds of literary festivals in the Southeast. "Now I'll get about five or six people. If I keep doing this for a few more decades, maybe I'll get up to 20."**

**She's humble enough not to mention that she's already won over the critics.**

**Since its release by Touchstone in February, Goddard Jones' debut novel "The Next Time You See Me" has received enthusiastic reviews from The New York Times, USA Today, which called it "a genre-defying novel filled with mystery and suspicion," and Gillian Flynn, author of the runaway best-seller "Gone Girl."**

**Set in Goddard Jones' native small-town Kentucky, the book centers**

**on the disappearance of a young woman and the family members and town residents whose lives intersect, unpredictably and sometimes violently, with hers.**

**Goddard Jones' short story collection "Girl Trouble," published in 2009 by Harper Perennial, marked her as a hot new talent in Southern fiction. Her work has appeared in The Best American Mystery Stories, New Stories from the South and numerous literary magazines. She was a 2013 recipient of The Fellowship of Southern Writers' Hillsdale Prize for Excellence in Fiction.**

**Goddard Jones teaches fiction writing to undergraduates and graduate students, along with courses on the contemporary novel and creative nonfiction. She sees herself as a demanding instructor who likes to challenge her students to push themselves.**

**She's at work now on a new novel and continues to write short stories, but she's not rushing them into print.**

**As an over-eager writer earlier in her career, Goddard Jones says, her mistakes taught her to work patiently and persistently on her craft. It's an approach that has clearly worked – and that she shares regularly with her students as well: "You want to wait," she says, "until you can present the best possible version of yourself to the world."**

### Brand new

Fulbright scholar Claudia Aguilera hands you her stylish red and amber business card. One lesson she's obviously learned? How to brand herself as a designer.

"decode. translating ideas. interior product design," it says.

It suggests other things she has learned. A designer can fill their work with information ready to be decoded, but what the viewer or the customer gets out of it depends on their experiences.

When her master's thesis project was on exhibition, she saw this firsthand.

"El Salvador is the culture I know." She went through a process where she looked at traditional crafts, which she infused into her own design process.

"The weaving of baskets became the inspiration of everything."

She displayed glowing oblong and round lamps woven with white polystyrene strips. Modern meets traditional. Did everyone see weaving? "Looks like a pineapple," one said. Decoding, indeed. But many "got it."

"Ancient technology was translated to new technology and new processes — to create something new," she explains.

After completing her undergraduate program in El Salvador and teaching, she'd been selected to be a Fulbright Scholar. The Fulbright leaders helped her choose the right American university.

"UNCG was the best opportunity," she said. The Triad has the



twice-yearly Home Furnishings Market, and the Interior Architecture program is highly rated.

"As graduate students we have lots of opportunities." There are workshops, competitions and internships. And they have real projects with clients. "UNCG really prepares us well - with experience in the classroom and in the field."

From professor Jonathon Anderson she has discovered new technologies. From thesis chair Stael Burrowes she has better learned how materials she chooses will inform the finished shapes.

As part of her thesis design exploration, "Decoding Crafts," she also created stools, drawing inspiration from a petate rug. "A big challenge," she said. "Creating a 3-D object from a 2-D object."

The cardboard stools are collapsible and flat-pack. "It comes in a box, ready to assemble - like IKEA."

Her innovative stool won first place in the 2012 UNCG Graduate Research Expo in the Creative Arts category and won honorable mention at the Annual Chair Competition hosted by Appalachian State.

Upon graduating in December, she will return to El Salvador to teach at Dr. Jose Matias Delgado University.

"I'm trying to have my own identity, my future brand. Everything is about decoding."

### Virtual becomes reality

LIKE A BADLY COMPROMISED KNEE JOINT, DR. CHRIS RHEA could have gone in any number of directions.

His BS degree in physical education might have meant a career in sports coaching or training. But abiding interests in mathematics and computer programming spurred him toward advanced degrees in biomechanics, which in turn could have taken him anywhere from computer game design to military engineering.

But Rhea chose something better, at least for those hoping for faster and more complete recoveries from traumas that affect their ability to walk or run. He combined his interests, knowledge and research skills, and brought them to UNCG in 2011 to establish the VEAR Lab (Virtual Environment for Assessment and Rehabilitation Laboratory) in the Department of Kinesiology.

Under Rhea's guidance, the VEAR Lab is bringing virtual reality to bear on the recognition and rehabilitation of injuries and other problems, such as strokes and the effects of aging, that affect balance, leg muscle and joint strength, and endurance.

It's one of only about 10 such labs in the US, according to Rhea, and in combination with its neighboring Applied Neuromechanics Research Lab in the HHP Building, the VEAR Lab is adding new power to UNCG's already established reputation as a center for the study, rehabilitation and improvement of human mobility.

The lab, like much of the work done there, looks deceptively simple. It's furnished with a single, albeit expensive and multi-functional, treadmill. Mounted high on the walls at regular stations are multiple cameras pointed at the treadmill. And in one corner rests a small cluster of computers and video equipment, including a dual-monitor headset. Most often, the image generated by the equipment

and beamed either to the wall in front of the treadmill or the headset is of an animated human figure — an avatar — strolling endlessly on virtual pavement, back turned to the viewer.

The set-up can capture impressively detailed, three-dimensional information about the gaits of those who walk the treadmill, thanks to the cameras and the sensors they follow, placed at strategic points along hips and legs. That helps Rhea understand the often subtle ways subjects compensate for the pain and weakness by altering the way they walk, thus delaying optimal recovery, or thwarting it altogether.

Not only that, the lab's equipment can then be programmed to nudge a subject toward a more normal gait.

"Sometimes it's just a matter of encouraging them to watch the avatar, and to align their steps with it as closely as they can, while they're on the treadmill," Rhea said. "That's the Guitar Hero effect." The treadmill also can be programmed to alter its speed, stop momentarily or shift briefly into reverse, causing a subject (safely harnessed) to experience and quickly recover from the effects of slipping and tripping, gradually strengthening those responses.

Plus, Rhea said, he and his graduate student staff are always busy designing virtual landscapes that subjects, wearing the headset, can be asked to negotiate, requiring a wide range of motion and actions designed to restore strength and agility.

Early results of his work suggest to Rhea there's a real place for virtual reality in physical therapy, and he'll soon be testing his lab's approaches with patients from a Greensboro clinic, with a goal of freeing therapists — armed with his computer-aided diagnostic tools and therapies — to see and help more patients.

Not a bad direction for a guy who could go anywhere.



Think of it as applying the Guitar Hero computer game method for learning how to play an instrument — you know; following the moving dots — to relearn how to walk." Dr. Chris Rhea





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**ONWARD AND UPWARD** NC A&T State Chancellor Harold Martin and UNCG Chancellor Linda P. Brady take part in announcing the new Nanomanufacturing Innovation Consortium to the public. Members of the consortium will have access to state-of-the-art research facilities at the Joint School of Nanoscience and Nanoengineering.

