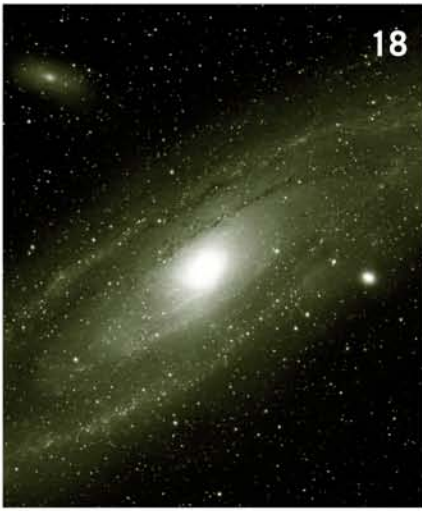




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EXCHANGE

A MAGAZINE FOR THE
COLLEGE OF LIBERAL
ARTS & SCIENCES



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New Program Connects Public School Teachers with Higher Ed.

INSIDE: The Undaunted Historian 98% Chimpanzee? Seeing Through Walls Advancing Women Faculty
Last Lecture Restore Memory Operation Driven To Succeed

EXCHANGE

THE MAGAZINE FOR THE COLLEGE OF LIBERAL ARTS & SCIENCES



10

When the Teacher Becomes the Student

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15,000 copies of this public document were printed in April 2010 at a cost of \$TBD or \$TBD per copy.

Dear Alumni & Friends,

A much-told joke I first heard during my graduate student days is as follows: “As they left the Garden of Eden, Adam turned to Eve and said, ‘we live in an age of transition’” — a joke because, of course, everyone realizes that the world does not remain still, that history is as much an awareness of the pull of the future as it is an examination of the past, and that this constant becoming is a characteristic mark of our race.

In this issue of *Exchange*, the College of Liberal Arts and Sciences celebrates “transition,” defining it not as a holding place between two different states of being, but as a dynamic principle that defines our work: as teachers, we are interested in our students not just reaching their potential, but going well beyond what they think they are capable of; as scholars, we ask questions about our areas of knowledge and then, not satisfied, ask more questions; as engaged citizens, we spend our time working in those areas that will make our communities more satisfying places to live, work and play. So we are not settled in one place, either physical or intellectual, but are constantly moving forward. We actually do live “in transition.”

This transitional state of mind is in evidence in our story about researchers pushing the boundaries of their discipline to solve real world problems, converting the elegance of mathematics into a gritty technology that will detect and identify IEDs in the Iraq and Afghanistan wars. And the dynamic principle of transition is also obvious in the Charlotte Teachers Institute, the goal of which is to transform teachers’ professional lives, and in so doing, to transform their students and their students’ future.

Transition looks backwards and forwards, back to the past in order to reach the future. India Solomon’s inventive MLK service project to repair and restore an historic African American cemetery underscores our nation’s hard-fought (and still ongoing) transition to a national community that is coming to terms with its history of racial conflict. The College Community Advisory Council’s increasing activism on the part of the College recalls and continues Bonnie Cone’s legacy of city-university partnership upon which UNC Charlotte was founded—a transformative idea that was, indeed, ahead of its time.

Transition is a “passing,” according to the reference books. In the College of Liberal Arts and Sciences, it is where we live and work. I invite you on the journey. &



Nancy A. Gutierrez

DEAN NANCY A. GUTIERREZ
COLLEGE OF LIBERAL ARTS & SCIENCES



news



1 Johnson Receives 2010 First Citizens Bank Scholars Medal

For his contributions to the knowledge and understanding of colonial Latin American history, Lyman L. Johnson is the 2010 recipient of the First Citizens Bank Scholars Medal. The prestigious award, presented by First Citizens Bank and UNC Charlotte, honors faculty scholarship and intellectual inquiry.



“Lyman Johnson is the kind of professor you’d always hoped you would have, the kind of colleague you are grateful to work with, and the kind of friend you cherish throughout your life,” wrote a colleague about Johnson, a history professor at the university since 1987.

Johnson’s research on the lives of middle-and working-class men and women in late 18th and early 19th century Argentina has helped establish the department of history as a highly active research department. He has earned a reputation as one of the nation’s preeminent historians of colonial Latin America, while helping to grow the department and attract talented scholars to UNC Charlotte.

3 Center for Global Public Relations Hosts International P.R. Experts

The Center for Global Public Relations, in collaboration with the International Section of the Public Relations Society of America, hosted a seminar featuring five noted public relations experts discussing global strategies and initiatives of internationally successful organizations April 23.

“This program was designed for public relations executives whose organizations are interested in successful public relations prac-

2 Asian Garden Open at Campus Botanical Gardens

The new Asian Garden at the UNC Charlotte Botanical Gardens was dedicated April 11. Located

within the Susie Harwood Garden, the 6,000-square-foot Asian Garden represents a fusion of cultures including Chinese, Japanese, Korean and American; it is the only Asian-inspired public garden in the Charlotte region.

“The Asian Garden is a most welcome and appropriate addition to UNC Charlotte,” remarked Lisa Lewis Dubois, during the formal dedication. “It is our hope that the Asian Garden will become a popular place in which to celebrate the meeting of Eastern and Western ideas.”

According to Botanical Gardens officials, during the past 150 years, plants from China, Japan and Korea have profoundly influenced American landscapes.

“UNC Charlotte’s Asian Garden demonstrates how principles of Asian landscape design can be used to create an intimate experience with nature,” said Paula Gross, assistant director of the gardens. “A careful selection of plants, rockwork, pathways and ornaments combine to engage the visitor on a deeper level.”

Among the attendees at the dedication was John Chen, representing the Carolinas Asian-American Chamber of Commerce. The Stanley Smith Horticultural Trust and the Arts & Science Council provided major funding for the garden.

For more information about the Botanical Gardens, go to gardens.uncc.edu.





tics worldwide,” said Center for Global Public Relations Director, Dean Kruckeberg.

The panelists included leaders in the field from such organizations as Coca-Cola and Ketchum P.R.

The Center’s goal is to help public relations practitioners, scholars, educators and students form a global professional community to share universal professional values and best practices. For more information on the Center, go to cgpr.unc.edu.

4 UNC Charlotte Ethics Bowl Team Shines

UNC Charlotte’s Ethics Bowl team was invited to participate in the national Intercollegiate Ethics Bowl competition March 4 in Cincinnati, Oh., after placing among the top four teams in the Mid-Atlantic Regionals in Richmond, Va., in November 2009.

The Ethics Bowl is a national undergraduate debate competition that centers on the discussion of ethics

cases ranging from the usual medical cases to cases concerning such issues as the environment, gender, engineering, business and education.

Coached to early success by assistant professor of philosophy Robin James, the team consists of four students: Javan Lapp (senior, philosophy and English), Kathleen Lowenstein (junior, philosophy), Megan Norton (sophomore, philosophy), and Lindsay Sprick (senior, business economics). Davis Kuykendall, a master’s student in the ethics and applied philosophy program, is the assistant coach. In addition, the team was supported by Rosemarie Tong, director of the Center for Professional and Applied Ethics, and all the faculty of the philosophy department, who provided subject matter expertise.

Although they did not place at the national competition, James says that she is very proud of the team. “They’re one of the most theoretically well-grounded and rigorous teams in the nation,” says James. “We need to work on our public speaking skills for next

year, but they do an amazing job of analyzing complex, nuanced issues in an intellectually mature and well-reasoned way.”

5 Counterterrorism Concern of New UNC Charlotte Center

UNC Charlotte recently launched the Center for Applied Counterterrorism Studies, which brings together faculty and community representatives to better understand the causes and consequences of terrorism and political violence and to devise and evaluate public policies that minimize such violence while respecting human rights and the principles of democratic rule.

“At UNC Charlotte, we have a substantial concentration of faculty from the various colleges who have expertise in terrorism and counterterrorism,” said James Walsh, director of the Center and associate professor of political science. “We want to generate interdisciplinary research that addresses these questions.”

The center was designed to bring together faculty and students from multiple UNC Charlotte departments, politicians and professionals charged with crafting and implementing security policies, and the public to better address the causes, consequences and best responses to terrorism. It will develop and share analyses of conditions that give rise to terrorism and the policies that best counter terrorism within the law.



"It's critical federal, state and local agencies talk together, work together and share ideas," said Cynthia Combs, Bonnie E. Cone Distinguished Professor of Political Science. "Counterterrorism is only effective if it's a collective effort."

UNC Charlotte currently offers undergraduate and graduate level classes on terrorism, homeland security and emergency management.

6 Model U.N. Has Record-Breaking Winning Season

UNC Charlotte's Model United Nations (MUN) team won 41 total awards this year, nearly double that of last year's winning season. All the team's members, called "delegates," won an award this year, which is unprecedented, according to the MUN student president, Matt Smither (senior, political science and history).

"We are probably the most awarded team at any competition," says Smither.

The MUN, which has been at UNC Charlotte for 30 years, is a program that combines the principles of the United Nations (collaboration, diplomacy, compromise and justice), with a necessary set of skills, such as public speaking, writing, teamwork and research.

The student team, led by Cynthia Combs, Bonnie E. Cone Distinguished Professor of Political Science, since 1990, competed

in four conferences this year: the Southern Regional MUN in Atlanta; the Southeastern Regional Modern Arab League in South Carolina; the National University Model Arab League in Washington, D.C.; and the Harvard World MUN in Taipei, Taiwan. They are planning a service trip to Haiti in late July to help with rebuilding a school and educating students.

To support their travels to conferences and their service trip, students count on support from alumni and other private donors and from local companies and community organizations. They also do a number of fundraisers, such as working at a concession stand at Carolina Panthers game.

7 Celebrating the Bard's Birthday

Shakespeare's birthday was April 23, and he would have been 394 years old. Beginning in April and continuing to Shakespeare's 400th birthday in 2016, the

Shakespeare in Action Center is presenting an ambitious project called "36 in 6."

For six years, the center will hold six annual events, each devoted to one of Shakespeare's plays. They'll include staged readings, full-blown performances, lectures and discussions.

By the time Shakespeare turns 400 in 2016, the center will have staged, in some form, all 36 plays in the canon, says center director and distinguished professor of Shakespeare, Andrew Hartley.

"We want to use this series to further link the University and the community," Hartley says. "We will host events on and off campus."

The first event was held Saturday, April 24, at the Mint Museum, and it examined "Richard II" and the subject of gardens in that play and others.

For more information about the Center and "36 in 6," go to shakespeare.uncc.edu.

8 In Memoriam

Dr. Louis Daignault, associate professor emeritus of chemistry, died Jan. 26. Daignault was highly dedicated to students in his courses and research laboratory. He joined the faculty of the College of Liberal Arts and Sciences in 1982 after a career in industry (1970-81) and after serving as an Assistant Professor (1963-67) and Associate Professor (1967-70) of Chemistry at the Rochester Institute of Chemistry. Daignault retired from UNC Charlotte in 2000.

humanities

The Undaunted Historian

John David Smith Shines the Light on Overlooked Historical Figures

Civil War officer, Reconstruction “carpetbagger,” best-selling novelist, and relentless champion of equal rights, Albion W. Tourgée battled his entire life for racial justice. He was even credited with introducing the metaphor of “color-blind” justice into legal discourse. A lawyer, farmer, and editor in Greensboro, N.C., where he and his wife moved after the Civil War, Tourgée was a prominent voice of reason amid the segregation, disenfranchisement and lynching that plagued the country in the post-Civil War era.

Although often overlooked by history, Tourgée’s important work was not overlooked by UNC Charlotte’s Charles H. Stone Distinguished Professor of American History, John David Smith. Together with UNC Greensboro history professor and noted Tourgée scholar Mark Elliott, Smith recently published a collection of the Republican activist’s writings and speeches. The book, “Undaunted Radical: The Selected Writings and Speeches of Albion W. Tourgée” (LSU Press, April 2010), includes 34 documents that illustrate the reformer’s opinions on a number of pressing issues of the day, including the Reconstruction Amendments, Jim Crow Laws and the cultural politics of North-South reconciliation.

One of Tourgée’s most notable achievements was the delivery of oral arguments before the U.S. Supreme Court for the *Plessy v. Ferguson* case, as Homer Plessy’s lead attorney. It was in this argument that Tourgée wrote, “Justice is pictured as blind and her daughter the Law, ought at least to be color-blind.” These arguments, and his previously unpublished oral argument in the case, are also included in the book.

Long interested in Tourgée as a historical and literary subject, Smith says he welcomed the opportunity to work with Elliott on the Tourgée anthology.

“No post-Civil War white figure sensed the importance of lingering proslavery ideology more so than Tourgée,” Smith explains. “Though maligned and threatened repeatedly by white North Carolinians for his defense of the freedpeople, Tourgée stood tall and worked to establish a grassroots Republican party in the state.”

“Tourgée’s perspective on Reconstruction is tremendously valuable to historians,” says Elliott. “He was not only a firsthand witness of, and an important player in, the history of Reconstruction; he was also an insightful critic.”

A seasoned historiographer and recognized expert on postbellum racial thought, Smith enjoys shining the light on historical figures who, while they may be less well known than the era’s major players, are no less important. One of Smith’s most controversial and critically acclaimed books, “Black Judas: William Hannibal Thomas and ‘The American Negro’” (2000), is the story of racial self-hatred in America and of a black man who became a pariah among his own people. It charts Thomas’ transformation from a critical but optimistic black nationalist to a cynical black Negrophobe at the dawn of the twentieth century. Critics hailed “Black Judas” as a major contribution to black intellectual history, and the book received the prestigious Mayflower Society Award for Nonfiction.

“Ironically, Thomas and Tourgée, both Ohio Carpetbaggers, shared a commitment to African American uplift,” says Smith. “But Thomas became an irascible defamer of his race while Tourgée continued to fight for true freedom for African Americans in deed as well as in word. The two men ultimately came to represent radically different solutions to the so-called ‘race problem’ during the Age of Jim Crow.”



JOHN DAVID SMITH

words: Allison Reid

pictures: John David Smith



social sciences

98% Chimpanzee?

Jonathan Marks Takes on the Big Questions in Anthropology



JONATHAN MARKS

UNC Charlotte anthropology professor Jonathan Marks won the 2009 J. I. Staley Prize for “What It Means To Be 98% Chimpanzee: Apes, People, and Their Genes” (University of California Press, 2002). The most prestigious book prize awarded in the field of anthropology, the Staley Prize is awarded annually by the School for Advanced Research in recognition of a book that not only exemplifies outstanding scholarship and writing in anthropology, but also goes beyond the discipline’s traditional frontiers.

Trained both as a geneticist and an anthropologist, Marks is often controversial and always challenging. His work reaches across the discipline of anthropology, relating the hard science of genetics to the humanists in the field. Due to its broad nature, the book is assigned widely in graduate anthropology courses.

“I’m glad to know I’m influencing the next generation of anthropology scholars in that way,” says Marks.

In “What it Means To Be 98% Chimpanzee” Marks questions what he calls the “popular modern science factoid” that we share 98 percent of our genetic material with chimps. It is a highly constructed scientific finding that is misleading, Marks explains. He says that due to the formulation of all matter’s DNA, we randomly share 25 percent of the same genetic material with every other organism.

“So in the same way that we are 98 percent chimp, we are also 25 percent asparagus,” Marks says. “Which is nonsense, of course. We are imposing meaning that simply isn’t there.”

Marks uses the chimp example as a springboard to survey and critique with razor-sharp humor a range of hot-button issues in molecular anthropology, from the role of science in society to racism, animal rights and cloning.

“We’ve been studying genomics for what, 25 years?” asks Marks. “It’s very exotic. We don’t really know the rules yet. As a result it’s a lot easier to impose meaning on DNA data that we don’t really understand than it is to see what it actually means.”

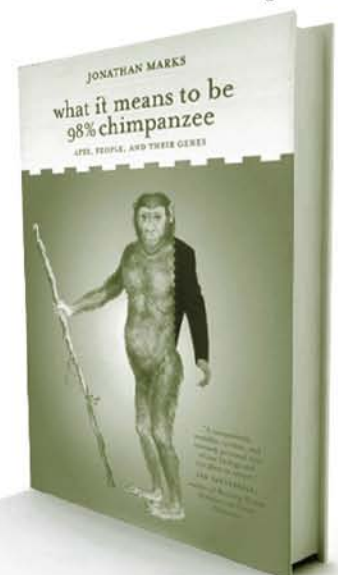
Marks came to UNC Charlotte 10 years ago from the University of California at Berkeley. He has a Master’s in genetics and a PhD in anthropology from the University of Arizona. He did his postdoctoral work in genetics at the University of California at Davis, sequencing DNA by hand back in the 1980s, “which dates me a bit, I know,” he says.

In addition to straddling the fields of genetics and anthropology, Marks is also considered a bit of a historian these days. His new book, “Why I Am Not a Scientist: Anthropology and Modern Knowledge,” is a look at the history of science. In it, Marks examines biological anthropology, the history of the life sciences, and the literature of science studies, all while upending common understandings of science and culture. Essentially, Marks says, the theme of the new book is “what does science mean in the modern world?”

“I have evolved from a faux geneticist to a faux historian,” jokes Marks. “That’s what I love about anthropology. It gives you a broad enough frame of reference that you can do a lot of different things. I’m an interdisciplinarian, and that to me is where the interesting work is. To me, the interesting questions about genetics are cultural and historical.”

words: Allison Reid

pictures: Jonathan Marks
and University of
California Press



math & science

Seeing Through Walls

Michael Klibanov Puts His Math to the Test

UNC Charlotte professor Michael Klibanov uses mathematics to see through walls. An oversimplification of the process? Perhaps, but the end result is one that has piqued the interest of the U.S. Army Research Office (ARO). They hope to use Klibanov's work to detect and identify Improvised Explosive Devices, or IEDs, particularly in Iraq and Afghanistan.

With an initial grant from the ARO, Klibanov developed an algorithm that could theoretically estimate the materials in an object based on the measure of their "dielectric constants" when probed with very short microwave pulses. The dielectric constant of a material is an expression of the extent to which it concentrates electric flux, or can store electrical energy. While this may read like Greek to those of us outside the field, the upshot is this: whatever a material's dielectric constant is, it measures higher for an explosive like that in an IED than for pretty much any other substance, such as cloth, or wood, or plastic, which may be encasing it; therefore, it should be detectable, Klibanov theorized.

After sending microwave pulses through an object and then measuring the return of the many scattered pulses, the trick is trying to figure out what the object is, based on these non-invasive measurements. That's where the mathematics comes in. Klibanov developed an inverse algorithm to model the scattering and make an estimate as to what a map of the object's dielectric properties may be. Technically speaking, Klibanov used a mathematical process called a "globally convergent numerical method for coefficient inverse problems." This is an obviously highly complicated process for a highly complicated problem, and one that Klibanov has been working on for three years, he says.

Klibanov's work in the complex and difficult field of inverse problems has been going on since 1973, when he was a graduate student in Russia, and it is his work in the emerging field that earned him the highly prestigious Russian degree "Doctor of


Science and Mathematics," one that many academics don't receive in a lifetime. His long experience with inverse problems was essential to his work for the ARO, due to the very nature of the problem at hand, which is that you don't know what you're dealing with and have to solve the problem backward.



MICHAEL KLIBANOV

When Klibanov received an ARO grant to prove his mathematical theory experimentally, he partnered with professor Michael Fiddy at UNC Charlotte's Center for Optics and Optoelectronics. Together they used equipment that sent extremely short pulses of radiation through a distribution of cubes of material of unknown dielectric constant, which modeled an IED hidden inside another material. Applying Klibanov's data analysis algorithm, they were successfully able to identify the structure's dielectric profile with surprising accuracy and without having any idea beforehand what materials were used. In other words, they were able to see through a wall.

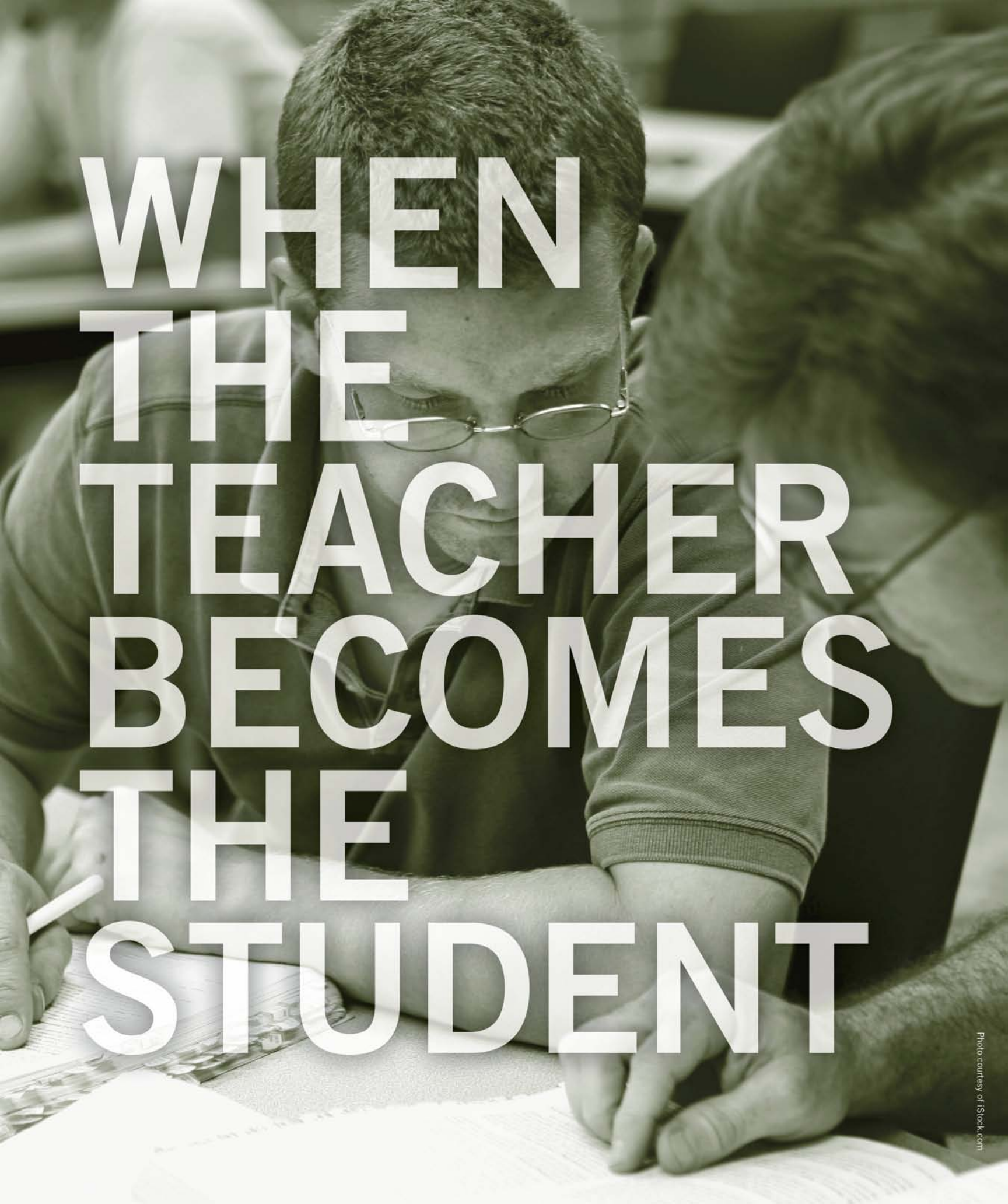
Klibanov and Fiddy are currently in talks with the Army, the DOD and Homeland Security regarding funding for further testing.

"It is a thrilling thing to me, as a mathematician, to see my work applied to solve real world problems such as these," says Klibanov. 

words: Allison Reid

pictures: Michael Klibanov



A man with short hair and glasses is leaning over a desk, looking down at papers. He is wearing a dark long-sleeved shirt. In the foreground, another person's hands are visible, holding a white marker and a ruler over the papers. The background is blurred, showing other people in a classroom or office setting. The overall tone is greenish-grey.

**WHEN
THE
TEACHER
BECOMES
THE
STUDENT**



NEW PROGRAM CONNECTS PUBLIC SCHOOL TEACHERS WITH HIGHER ED.

WORDS:
ALLISON REID

PICTURES:
BILL GIDUZ,
DAVIDSON COLLEGE

It is 6 p.m. on a chilly Thursday night in October, and after finishing their pizza, students are gathered around a worktable, playing with what looks to be an erector set. The group, chattering happily and sharing pieces to help create the best structure, is not comprised of just any students. These students are teachers, too, and they *are* playing in a sense, but they are also learning. And they are learning how to teach better.

12 When the Teacher Becomes the Student



Mathematics
professor Harold
Reiter

The erector set? That is not what it seems, either, says UNC Charlotte mathematics professor Harold Reiter. It is actually a design tool for teaching solid geometry, science, art, engineering and architecture. In this classroom, Reiter uses an assortment of “toys” to inspire his students to think about mathematical problems in new ways.

“We should all spend some time playing with mathematics, and it should not be restricted to a formal exercise,” says Reiter. “An exercise is a math problem you’ve been taught how to do. A problem is a math challenge you don’t know how to solve. We would like students to spend more time on problems than exercises.”

These students are Charlotte-Mecklenburg Schools (CMS) mathematics teachers, from elementary through high school, and while they already know how to teach well, they are learning new ways to teach students to think deeply about mathematical problems. And, beyond that, they are just learning and playing with math for the fun of it.

“Because when teachers become passionate about a subject,” says Molly Shaw director of the new Charlotte Teachers Institute (CTI), a partnership among CMS, UNC Charlotte, and Davidson College, “They pass that passion along to their students.”



CTI, the first initiative of its kind in the state of North Carolina, is based on the Teachers Institute approach begun over 30 years ago by the Yale National Initiative in New Haven, Connecticut and since executed in cities around the country.

CTI focuses on building a teacher’s knowledge base rather than addressing methods and pedagogy. The interdisciplinary seminars give CMS teachers the opportunity to study subjects that both interest them and relate to their classroom teaching. The seminar participants, referred to as CTI Fellows, attend 13 once-a-week, two hour seminars taught by a college faculty member from August until November, and write a new curriculum unit for their students based on that experience. They receive a \$1,500 stipend for successfully completing the program.

“While each CTI Fellow in a seminar will study the same topic, it’s up to them individually to figure out

When the Teacher ¹³ Becomes the Student



CTI Fellows Michael Pillsbury and Rosemary Klei work on a math problem

how to implement in the classroom what they have learned,” explains Shaw.

UNC Charlotte’s College of Liberal Arts and Sciences — along with partners CMS and Davidson — is contributing both personnel and financial resources for the program. Shaw is seeking foundation and private support to expand the program to reach more of the school system’s 9,000 teachers.

“Not An Ordinary Course”

While mathematics teachers are building their polyhedra in Reiter’s seminar, elsewhere on UNC Charlotte’s campus, an unlikely mix of social studies, language arts, psychology and art teachers from all grades are gathering to learn about “Children in War



and Conflict” from the history department’s senior lecturer and director of undergraduate and honors studies, Oscar Larsen. With a passion that his students have come to accept as his default setting when he gets rolling on the topic, Larsen talks about how children are affected by war across history and across the globe. From discussions of Hitler’s Youth, to Rwandan child soldiers, to gang members in Charlotte, Larsen says he is teaching the important lessons of the impact of conflict through the lens of the child.

That is one thing that appealed to Dana DiPerna Pillsbury, a ninth grade English teacher at North Mecklenburg High School.

“I am passionate about showing my students perspectives from children their age,” says Pillsbury. “I planned my year around the unit.”

“By using the child’s eye you can teach so much better the difficult, inaccessible lessons of history,” says Larsen. “And while it is often true that young students don’t necessarily see the significance of historical connections, we can help them become true analysts of history.”

While Larsen acknowledges that one of his primary roles is to instill with the teachers a good amount of content knowledge on the subject, he also recognizes

Professor Oscar
Larsen addresses
his seminar.

14 When the Teacher Becomes the Student



“To me learning is a continuous process....I met with most of my students individually two or three times outside of class.”

OSCAR LANSEN
history lecturer



that this is different than a strict lecture course.

“This is not an ordinary course,” says Lansen. “To me learning is a continuous process. Although we necessarily spent time on content knowledge in the seminar, I met with most of my students individually two or three times outside of class to discuss the topics and develop their lesson plans.”

“This was different from a regular course because of the collaborative element,” said Pillsbury. “It is very collegial. You are actually investing yourself in the seminar.”

Translating a Lesson into a Lesson Plan

Both Reiter and Lansen get excited when talking about the lesson plans that their teacher-Fellows developed by the end of the semester. Reiter describes one project by Randolph Middle School mathematics teacher Michael Pillsbury.

“He made a presentation one night on a topic called ‘Rational Tangles,’” says Reiter. “It is a way of associating knots with a rational number. You twist the rope up into a big knot, and then Michael will tell you the value of this knot. Then he’ll say ‘this is how you undo the knot,’ through a mathematical process. And it works every time! He gave this talk at Elon University, and they told him it was the best talk the students had ever had.”

Lansen says that the teachers in his seminar “knocked his socks off” with their final units. Elizabeth Lasure, an art history and studio art teacher at Mallard Creek High School, in particular, did the seemingly impossible by creating a lesson plan for art students from the Children in War and Conflict seminar, which is more conducive to history and literature lessons. Her lesson called for students to study the images of war, be it propaganda posters or gang graffiti, and consider the motivation behind how art is used in situations like conflict. Students were then asked to create works that reflect a personal style and awareness of the power of art to illuminate, inform, and influence opinion.

“I developed my unit with the intention of providing an opportunity for my students to learn from their peers and make history applicable,” says Lasure.

Influencing 4000 Students

Shaw says that in the four courses offered last fall (two at UNC Charlotte and two at Davidson) 50 CMS teachers were enrolled, and a total of 4,000 of their students were directly influenced by the lesson plans that their teachers took away from their seminars. Twice that many teachers and students will be involved this year, as CTI expands its offerings from four to eight seminars.

Expanding Minds with “Exploding Canons”



Photo by Wade Bruton

MOLLY SHAW, DIRECTOR
CHARLOTTE TEACHERS INSTITUTE

A new priority for CTI is the expansion of our educational opportunities into the local community. We are connected to an outstanding wealth of faculty experts, thanks to our partnership with UNC Charlotte and Davidson College, and we are bringing this expertise into more CMS classrooms and into the

broader Charlotte community with our new Exploding Canons series.

The first Exploding Canons event, which took place last February at the new Bechtler Museum in uptown Charlotte, featured five faculty members speaking about the topic of disease. Over 150 people attended, with more than half from CMS. Throughout the evening, the presenters discussed disease as it relates to human biological history, race and imperialism, racism and nationalism, and disability

studies. From UNC Charlotte, the panel included history professor and department chair Jurgen Buchenau, speaking on “How Disease Shaped the Americas,” education associate professor Charles Hutchison speaking on “The Effects and Diagnosis of ‘Dis-ease’ in School and Society” and English professor and department chair Malin Pereira, who moderated the discussion.

Exploding Canons offers a unique approach to community dialogue. CMS teachers choose each topic, and expert faculty unveil unexpected ideas and challenge traditional thought.

CTI has great plans to offer more community events in the Charlotte area. If you would like more information about future events, or if you have suggestions for topics, please contact me at MollyShaw@uncc.edu.



The seminars that will be taught this fall include:

- Exploring the Solar System
- Redefining Modernism Through the Collection of the Bechtler Museum of Modern Art
- Environmental Sustainability: Science, Society and Solutions
- Mathematics in Art
- The Rise of the New South
- How Languages Are Learned and How Best to Teach Them
- Gender, Race and Justice
- Writing for Your Life

All seminar topics are selected by CMS teachers. In addition to choosing topics, CMS teachers serve in a number of CTI leadership roles: they recruit and select seminar participants, help faculty prepare for and facilitate seminars, and work side-by-side with Shaw on a number of projects.

“That is what makes CTI different,” says Shaw, “It is driven by the needs of teachers, led and administered by teachers — a real collaborative effort and one that develops the whole person. This is not only a professional development opportunity for teachers but a leadership opportunity as well. That’s what makes it such a rich experience.” 📧

feature

Advancing Women Faculty

Scientists sometimes speak of “symbiosis” to characterize close and mutually dependent relationships.

The term aptly describes the interconnected relationship of the College of Liberal Arts and Sciences and UNC Charlotte ADVANCE. ADVANCE seeks to support the recruitment, retention and academic success of women faculty, especially



ANNE JEFFERSON

those in the science, technology, engineering and math (STEM) disciplines, and to increase faculty success campus-wide. Over half of the College’s academic units are STEM departments.

The National Science Foundation provides primary funding for ADVANCE, which focuses on policy recommendations, faculty mentoring, leadership development, competitive

grants and a speakers’ series with prestigious women in STEM. Provost Joan Lorden is Principal Investigator for the grant.

While much of the work of ADVANCE is large-scale and systemic, some efforts focus on individual faculty members. One of those initiatives is the Bonnie Cone Fellowships. These awards are intended to assist female faculty members with their personal growth and career advancement, and over a dozen members of the College’s faculty have received these grants.

Anne Jefferson, of the department of geography and earth sciences, saw her 2008 grant as pivotal to her investigation of groundwater-surface water interactions in headwater streams.

“In some ways, I felt like it was sort of a make-or-break thing for me to have gotten this money at this point,” Jefferson says. “When I applied for the Bonnie Cone, the idea was that this was going to be a vehicle to help me obtain some preliminary data, and maybe enough data to get a publication out.”

The grant for her hydrogeology work in the headwater streams at Redlair Forest in Gaston County has benefitted not only her primary research

but also has afforded her the opportunity to engage graduate students, which helps grow their knowledge and establish a solid foundation for future careers.

“I think that early career awards, which is kind of how I view this, are just incredibly helpful and, I think, a really good use of money,” Jefferson says. “For me, the money has already been a catalyst for establishing new collaborations with state agencies and faculty at other universities. It’s really formed the nucleus of two different masters thesis projects

“THE COLLEGE AND ADVANCE HAVE A LONG-STANDING COLLABORATION, WHICH HELPS BOTH OF US LEVERAGE RESOURCES AND SHARE CREATIVE IDEAS.”

DEAN NANCY GUTIERREZ
College of Liberal Arts & Sciences

and several poster presentations and talks at different conferences so far, and that’s opening up even more opportunity.”

The multiplying impact of Jefferson’s work, enabled by the grant, provides just one example of the focus by ADVANCE and the College to work creatively to leverage relationships and resources.

“The College and ADVANCE have a long-standing collaboration, which helps both of us leverage resources and share creative ideas,” says Dean Nancy Gutierrez. “The College has benefitted from an ADVANCE grant to help integrate our diversity plan into our departments’ strategic planning processes,” Gutierrez says. Meanwhile, the College contributes significant leadership to the ADVANCE initiatives. Gutierrez serves on the ADVANCE leadership team along with others from the College, including ADVANCE faculty director Yvette Huet, who is also a professor in biology.



Mentoring Programs

The College has helped launch other ADVANCE efforts. “We have shared important initiatives, such as the College’s mentoring program for new faculty, which ADVANCE has expanded throughout the university,” Gutierrez says.

The mentoring program offers professional support for tenure-track faculty, as they advance towards promotion and tenure. The program matches junior faculty members with senior colleagues who are outside their home units. The program supplements but does not replace the important mentoring that occurs within a faculty member’s discipline or program.

“The College’s mentoring program had proven invaluable to our faculty,” Huet says. “We have taken what we had learned and shared it across the campus in a university-wide effort through ADVANCE. This work helps faculty to become socialized to the university culture and to learn about resources and opportunities, to help them see success. We also believe that this effort has enhanced the intellectual community.”

Jefferson investigates headwater streams in Gaston County, N.C.



ADVANCE has added a mid-career faculty mentoring effort to support the transition of faculty to the rank of full professor. Faculty members coach each other on career development plans and give input on other issues. College faculty member Kim Buch of Psychology coordinates the work.

Building a Coalition

In another systemic effort, an ADVANCE Solutions Team Grant to the College has helped the College integrate its diversity plan into its academic units’ strategic planning. These grants seek to stimulate innovative thinking and comprehensive efforts to reduce institutional barriers.

“We’re building a coalition,” says Art Blume of Psychology, who coordinates that work. “The grant has given us the opportunity to really focus on diversity efforts in the College. We can have a point person who can help people gather the resources they need to be effective in implementing the diversity plan. The plan has brought new ideas and points of view.”

In addition to data collection and development of outcome expectations, the College plans to implement an online resource to connect the community to the expertise of faculty members.

The College and ADVANCE also have worked together on a university climate survey that was distributed to tenure-track faculty in spring 2010, to determine faculty’s views of diversity issues and job satisfaction. Blume and other faculty members and leaders from the College have collaborated with ADVANCE on the university-wide survey. &

words: Lynn Roberson

pictures: Anne Jefferson

faculty

Last Lecture

Mike Corwin Shares His Research on the Stars and His Passion for Cosmology

I joined the Physics Department at UNC Charlotte in 1974. About three years after coming to UNC Charlotte, I was asked to teach Introductory Astronomy. I had never taken a course in astronomy, but I found the subject interesting. So I said yes. I prepared as best I could and, on the first day



MIKE CORWIN

of my first class, told the students that I really didn't know much about astronomy, but that we had a good text book and we would learn a lot over the course of the semester. It may have been the best astronomy class I've ever taught.

In 1989, having taught astronomy for more than 10 years and written a textbook, I felt it was time to actually do some astronomy. I received a Reassignment of Duties grant and

took a class in astrophysical techniques at UNC Chapel Hill. There, I was lucky enough to connect with Bruce Carney, an established observational astronomer, who was willing to help me get started. It's a little unusual to have a mentor who is younger than you, but I was getting started a little late.

My area of research is RR Lyrae variable stars in globular clusters. RR Lyrae stars are among the oldest stars in our galaxy. They have consumed all of the hydrogen in their cores and are now burning helium. Alternate trapping and releasing of radiation by a layer in the star's interior causes a pulsation that in turn produces a variability in the star's luminosity. My first big project was the cluster M3. Fortunately, this was a cluster that Italian astronomers were very interested in, leading to many collaborations and several extended visits to Italy.

In December, I learned that the Honors College had decided to start a "Last Lecture" series and was asked if I would give the first lecture. I was a little intimidated, but I was assured that I could talk about anything that interested me.

Most of the things I'm interested in, I'm not qualified to speak on. But I felt that if I stuck to

astronomy I would be ok. I spent the first half of the lecture talking about RR Lyrae stars. The second half was on cosmology, the study of the Universe as a whole. I don't do research in this area; I am an amateur in every sense of the word, especially the original meaning, "a lover of the subject." To me, cosmology is the most exciting science of our time.

Our current understanding of the universe began in 1930 when it was established that the amount of space in the universe increases with time. George Gamow used this to argue that our universe must have had a beginning in time, a finite time in the past when the expansion, run backwards, would result in no space at all. In his model, which later came to be called the Big Bang, the early universe was unimaginably hot and dense. The expansion of space cooled it down, allowing elementary particles to come together to form structures, first atomic nuclei and then atoms.

Gamow realized that when the universe had cooled enough for electrons to stick to nuclei and form neutral atoms, every photon present then must still be in the universe today. He predicted that the universe is filled with electromagnetic radiation produced by the very young universe. He calculated that this radiation would have been cooled by the expansion of space to a current temperature of a few degrees above absolute zero.

This cosmic background radiation was discovered in 1964 and determined to be about 3 Kelvins (3 degrees above absolute zero). This provided extremely strong evidence for Gamow's theory. Since then, this radiation has been studied in great detail, the latest data coming from the Wilkinson Microwave Anisotropy Probe (WMAP).

The WMAP images determined the temperature of the radiation to be 2.725 Kelvins with fluctuations of about 0.0002 Kelvins. These temperature fluctuations represent density fluctuations in matter at the time the background radiation was produced, slightly higher temperature corresponding to slightly greater density. The pattern of these fluctuations in

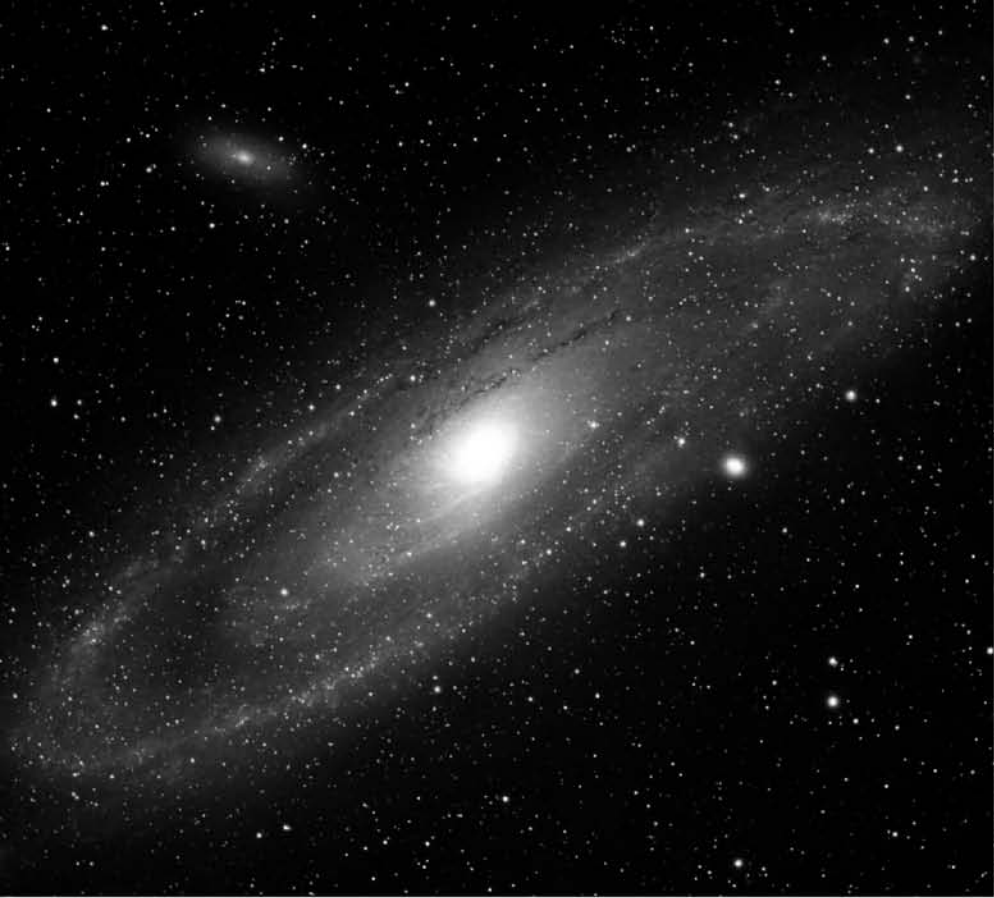


Photo courtesy of iStock.com

Max Planck, speaking of Einstein's general theory of relativity, said "the intimate union between the beautiful, the true and the real has again been proved." This quote is even more aptly applied to our current understanding of the universe.

Our species has always needed to make sense of the world we live in. For most of our history this has only been possible through myths

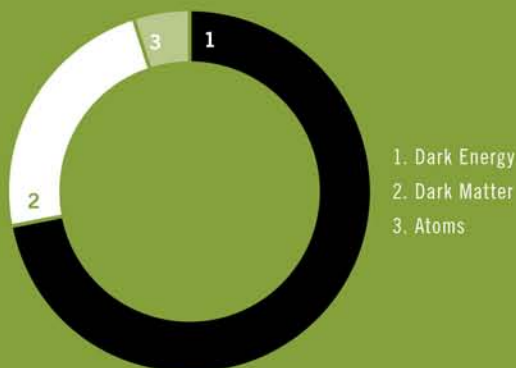
— beautiful stories that explain our otherwise inexplicable existence. Science has been the destroyer of literal myth. But scientific knowledge has not destroyed our sense of the mystery and majesty of the universe. Our new cosmological story, "this intimate union between the beautiful, the true and the real" has every bit of the mystery, wonder and awe of any of the earlier myths. &

words: Mike Corwin, Professor, Physics and Optical Science

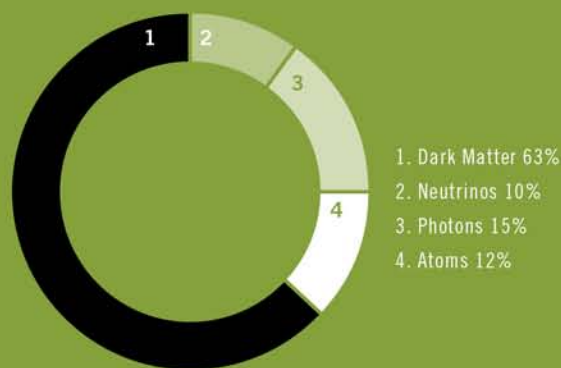
picture: Wade Bruton

turn determined with great precision many of the important cosmological parameters: the geometry of the universe (flat), the age of the universe (13.72 ± 0.11 billion years), the time at which the radiation was produced (379,000 years after the Big Bang), and the energy content of the universe, both at the present time and at the time the background radiation was produced. Cosmologists are now able to tell a detailed story of the evolution of the universe from a tiny fraction of a second after its beginning to the present.

The Contents of the Universe



Today, 13.7 billion years after the Big Bang



The early universe, 380,000 years after the Big Bang

student

Restore Memory Operation

India Solomon's Quest into the Buried Past



INDIA SOLOMON

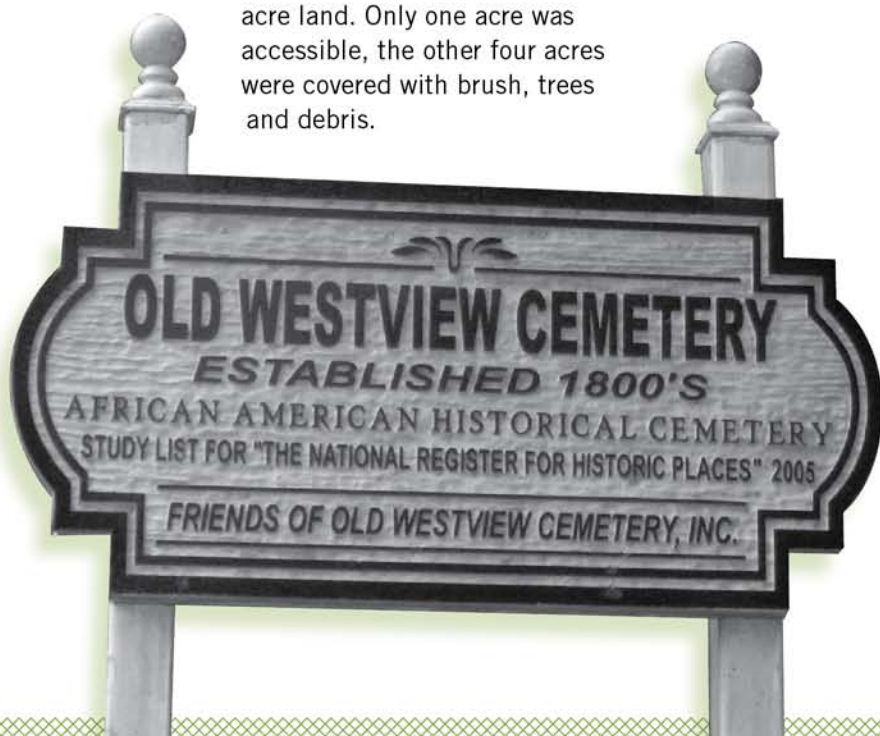
Old Westview Cemetery came to my attention as I caught the last few seconds of a report on the local Charlotte news. The words I caught: African American, cemetery, overgrown, unattended. I had just recently visited my own family's cemetery and found the grave of my great-great-great grandfather, who was born into slavery. After more background research into family history, I began to realize the importance of cemeteries in learning more about African American history, especially when we are dealing with the memory of people who left almost nothing of their own writings about their experience.

So the story of this abandoned cemetery that no one seemed to care about touched me. After a little research, I decided to contact the news station that aired the story, and they gave me the phone number of a woman who helped me set up a visit to the cemetery. Tiffany Hock, vice-president of the Africana Studies Club, my mother and I traveled to Wadesboro last October for a tour of the five-acre land. Only one acre was accessible, the other four acres were covered with brush, trees and debris.

We helped pick up trash, leaves and tree branches that the sites' permanent volunteers had cut. I also recorded the information from the visible gravestones. There were dozens of large rocks and pipes in the ground, which we assumed were markers for graves. Many of the marked graves date back to the 1800s and early 1900s. We felt that we were surrounded by great people who struggled and persevered — everyday people who made a difference in their communities but did not make it into the history books.

During our visit, we learned more about The Friends of Old Westview Cemetery (FOWC), a non-profit organization trying to raise awareness of the cemetery in the community and beyond. Many residents live only a few feet from the burial ground, and children play basketball near the site. Most of the surrounding residents have family members and ancestors who are buried in Old Westview. This cemetery, therefore, has relevance to the identity and social memory of the living African American community in the city of Wadesboro.

After my visit, I knew I wanted to do more. With the help of Africana studies department chair, Akin Ogundiran, we visualized a project that would enable us to do two things: facilitate a community service project and allow the department to engage in an untapped venue of African American culture that could be utilized as a learning tool. All of these factors led to the invention of the "Restore Memory Operation." To add to the importance of this project I thought it appropriate to couple it with the Dr. Martin Luther King Jr. holiday. This day being coined a day of service was appropriate for our project, but it differed from a host of other projects that were being held around the city. With the legacy of the MLK holiday being that of selflessness and service to others, we thought this a unique project in that we were in service to our ancestors who have passed on. In essence, we were using this project to discover and preserve their legacy.





On Jan. 18, the Africana Studies Club departed from the UNC Charlotte campus at 10 a.m. and traveled to Wadesboro to kick off our Restore Memory Operation. We returned at about 4 p.m. In all, we traveled with 10 people, and about 10 to 15 people met us there from the surrounding areas, including a gentleman whose ancestor was buried there. The extra people heard about the project through various media outlets that reported on it, including the *Charlotte Observer* and a local radio show, "Straight Talk with Bea Thompson". Our hosts included town councilmen, Lawrence Gatewood and Leon Gatewood, and we even had a visit from a former mayor of Wadesboro. While there, we toured the cemetery, and this time a total of three acres had been cleared, showing the progress they've been making. After the tour, the group helped clean up brush, debris and litter. During our efforts, we were paid a visit from local news stations. We felt like celebrities seeing ourselves interviewed on television.

The Africana studies department and student club has plans not only to make this a yearly service project, but also to make the cemetery an element

in the academic curriculum of the department and its students. We hope to use this site as a venue to teach African American history through cemetery research. I personally have used this experience to gain a greater appreciation of my own family's legacy. I hope to add cemetery research to my future educational goals, which includes my recent acceptance into the Public History graduate program here at UNC Charlotte. Beginning my study in the fall of 2010, I hope to further my knowledge in the realms of southern U.S. history, African American culture and genealogy. I also hope to do comprehensive research into the history of my hometown of Lynchburg, S.C., a feat that has yet to be done. Participation with the Restore Memory Operation project has given me the opportunity to turn my passions into reality and has aided in the development of my future research goals, character and community activism. 📍

words & pictures:

India Solomon BA '10, President, Africana Studies Club

donor

Advocates and Ambassadors

Dean's Advisory Council Connects College with Community

While campus life churns along — students in the atrium of Fretwell cramming for a quiz, professors opining in the philosophy classrooms of Macy — there is a group of community leaders quietly working behind the scenes to support the work of the College of Liberal Arts and Sciences. This group, the Dean's Advisory Council, was launched by Dean Nancy Gutierrez in the fall of 2008, and they have been playing a vital role in enhancing the educational initiatives of the College ever since.

"It is a thrilling moment to bring together this team of business and civic leaders, college alumni and community partners," said Dean Nancy Gutierrez, of the group's inaugural meeting. "Their work as advocates and ambassadors strengthen the College and the Charlotte community."

Now, nearly two years later, the Dean is asking more of her advisory council. As local thought leaders, their role as College advocates is crucial, but this

enthusiastic group made it clear to the Dean after their first year that they wanted to do more. So Gutierrez is increasingly calling on her council members to contribute their "time, talent and treasure," as she explained at a recent council meeting. And it is proving to be a task for which they are well suited.

"We rely on our advisory council to educate the community about the needs of the College," Gutierrez says.

"And, at the same time, we rely on them to inform us about areas in which the College can contribute to the local intellectual and cultural environment."

The council members brainstormed and developed three ways the College could be more involved in the Charlotte region:

- **Business Partnerships.** College faculty research often has many practical applications, and the council members underlined the need for the College to further develop the links between

faculty resources and research and local business and organizations. The College also boasts smart, capable students and graduates, and council members added that it is important to develop relationships with more local businesses, so the College can help connect them to the workforce.

- **Community Dialogues.** The advisory council members believe that there is a desire for real, intellectual conversation around interesting and relevant topics. With their help, the College plans to develop a series of community dialogues featuring College faculty in intimate gatherings at people's homes.

- **Humanities Connections.** To continue to promote the importance of the humanities to the community, the council suggested starting a lecture series either on campus or in the community, or simply making our faculty available to be speakers in existing lecture series or to the *Charlotte Observer* or other media outlets to comment on current issues.

"The first step to inviting involvement in the many wonderful College programs is to educate folks about the College, and one way to do that is to share our intellectual capital with the public," says current advisory council director Joe Cook, a retired heart surgeon. "Our council members are creative and entrepreneurial, and they have a vast network of contacts that they can reach out to and help us achieve that goal."

"All of these three areas of growth for the College have something in common: sharing the vast resources of the College with a wider population of the Charlotte region," says Gutierrez. "In some ways, we have been Charlotte's best kept secret, but with the help of the talented individuals on our advisory council, we are prepared to create new ways to connect the talent of our faculty and students to the community." &

words: Allison Reid

pictures: College of Liberal Arts & Sciences



alumni

Driven to Succeed

Philosophy Grad Promotes Ethics in the Workplace

UNC Charlotte alumna Stephanie Jenkins (BA '01, MLS '04) drives hard. And that's not just on the asphalt where she participates in one of her favorite pastimes, autocross, but also at her job, as ethics and compliance program manager for the Charlotte, N.C.-based Premier healthcare alliance. Whether it's behind the wheel of her baby, a Honda S2000 CR — "It was built to be a racecar," she says — or developing a video at Premier for the annual employee ethics training seminar, Jenkins throws herself into her pursuits with vigor.



STEPHANIE JENKINS

Although the former marine's energy and focus seems to come naturally, Jenkins says she works to model herself after her mentors, her supervisor at Premier, Megan Barry, and her UNC Charlotte ethics professor, Rosemarie Tong.

"Rosie is the person who turned me on to philosophy and applied ethics, and her passion for the subject is contagious. I want to be like her when I grow up," Jenkins laughs. "She's amazing!"

After earning her master's of liberal studies with a graduate certificate in applied ethics in 2004, Jenkins was hired by Premier. Even though at the time Jenkins had no professional experience in the field, Barry said she was convinced Jenkins had the necessary skills to succeed from her liberal arts education, particularly her ability for critical thinking and communication. She could be trained in the more technical aspects of the business.

Six years later, the arrangement seems to have worked out. Premier recently paid for Jenkins to complete her Executive MBA at Georgia State University, and Jenkins says she knows Barry is grooming her to take on a position like hers one day.

"I feel so lucky that these amazing women have seen promise in me and supported me in my educational development and career," says Jenkins. "They

have invested in me as a person."

Jenkins also feels lucky that Tong and her philosophy of education professor Steve Fishman confronted her about her learning disability while she was an undergraduate student in the philosophy department. Diagnosed with dyslexia, Jenkins scrambled through high school without gaining basic grammatical and spelling skills. While she tried to hide it in college ("A mistake, in retrospect," she says), her professors could tell she was struggling and worked with her on her writing.

"They definitely helped me academically in ways beyond their job description," says Jenkins. "So I would do anything now to pay it back and support philosophy and ethics at UNC Charlotte."

Jenkins can often still be found on campus, working with Tong on a number of projects. For example, she is an advisory board member for the Ethics Center, and she recently served as a judge for a student Ethics Bowl competition. "Even if it's just attending lectures or other events, I want to remain engaged and show my support. There are so many wonderful opportunities to stay involved."

It's a wonder Jenkins finds the time to make it back to campus very often at all. In addition to her rather unusual hobby of car racing, she is training to run her first marathon in the fall to raise money for leukemia and lymphoma. Added to her 50-60 hour work weeks, and that doesn't leave much free time.

"I definitely need to work on the work-life balance thing," says Jenkins, "But I love my work!" &



words: Allison Reid

pictures: Richard Hunter (car), Stephanie Jenkins



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Nuccio's Gem

The 'Nuccio's Gem' Camellia, located near the entrance to the Susie Harwood Garden in UNC Charlotte's Botanical Gardens. The camellia rivals the magnolia and the gardenia as a symbol of southern U.S. gardens, but long before Americans were revering this plant for its voluptuous wintertime blooms and glossy evergreen foliage, it was treasured by the peoples of its countries of origin: China, Korea, Japan. We have a significant collection of *Camellia japonica* cultivars in the Harwood Garden. Photo by Paula Gross.