Mathematics grad student Katherine Heller’s passion for teaching helps students overcome their fears.

by Sally Bourne

“I’m not just teaching you math; I’m teaching you how to think.”

That was Katherine Heller’s (MS Mathematics ’06, PhD Mathematics ‘10) “light-bulb moment,” when her high-school calculus teacher explained to a skeptical student why what may have seemed like an esoteric course would be worthwhile for their lives. From that point on, Heller began to consider devoting her life to mathematics.

The U.Va. Mathematics Department has quietly achieved renown for the teachers it produces. For three consecutive years, the winners of the University’s Teaching Resource Center All-University Graduate Assistant Teaching Award in the sciences, which includes engineering and nursing, have been mathematics graduate students. In her fifth year of pursuing a Ph.D. in operator theory in the College and Graduate School of Arts & Sciences, Heller is this year’s nominee.

Mathematics Professor Barbara MacCluer, the department’s director of graduate studies and Heller’s thesis advisor, helped Heller pull together her dossier for this year’s teaching award competition. “I’ve looked at lots of evaluations, but I’ve never seen anything quite so outstanding as Katherine’s,” she says. “She’s a very caring teacher, she manages to connect well with all of her students, whether they’re naturally talented in mathematics or whether they’re at the opposite extreme.

Mathematics graduate students, who do two to three years of coursework before their thesis research, typically also work as teaching assistants. “We have a few people who are supported purely on research fellowships, but most of our students are T.A.s,” says MacCluer. Unlike departments of mathematics at many universities, where graduate students teach discussion sections of large lecture classes taught by professors, U.Va. mathematics grad students are responsible for their own courses, usually introductory calculus classes; two versions are offered, for math and non-math majors, and usually they have about 40 students, typically first years.

“The two calculus classes have their own light-bulb moments, moments that will not only spark in them a passion for the subject but also ignite a sense of strength and confidence that will serve them throughout their lives,” says Heller, a South Carolina native.

“The math and science majors share that inner math nerd for what we’re actually doing. I’ve had several come by and say, ‘I think I’m going to be a math major.’”

However, for Heller it’s the non-math majors who have provided her most rewarding experiences as a teacher. “They come in with math anxiety, work hard, come by during office hours a couple times a week and at the end of the semester, they’ve worked so hard and are so proud to get their Bs or Cs. They have a look of confidence and I did it on their faces, and my hope is that they’ll take that memory and that confidence and apply it to other aspects of their lives as well—take that challenge, look back on calculus class and see that they were able to overcome their fears.”

She may just be giving her students their own light-bulb moments, moments that will not only spark in them a passion for the subject but also ignite a sense of strength and confidence that will serve them throughout their lives.  

Dear Emeritus Trustees

Up here in McLean, watching the trees blossom and leaves unfurl, I think about the delicate trees in the Pavilion Gardens, outside the serpentine walls—cherry, apple and fig blooming as I now write. However, as spectacular as the spring arboreal show is, even more spectacular is the news coming out of the College.

You can read about some College news in these pages: the University’s ranking as No. 1 “Best Value” of 650 public and private universities; the elevation of Foundation trustee Lemuel Lewis (Economics ’69) to the chairmanship of the Federal Reserve Bank of Richmond’s Board of Directors; collaborations between members of the College faculty and their graduate students; and how one graduate student in Mathematics is helping undergraduates deal with so-called “math anxiety.”

In this season of renewal, we members of the Emeritus Society must think about how we might help persons whose work carries on the mission of the College. One of the best ways to help the College is through what I believe to be our special obligation to participate in the success of the Arts & Sciences Annual Fund. In fact, our giving rate in FY ’09 is almost $35,000 below what it was at the beginning of April last year. In Mr. Jefferson’s birthday month, perhaps we all might consider how much we can give to the fund that allows Dean Woo the flexibility to meet needs as they arise in the College. Especially in this year of financial hardship, we should ensure that the College’s faculty and students do not bear the brunt of the considerable budget cuts facing the College.

And for a very personal means of giving back to our alma mater, you may also want to think about serving as a Foundation mentor to a student who needs guidance from a person of experience and a successful graduate of the College. Such an experience is enriching to the mentor as it is to the mentee. To find out more about the program, please visit www.artandsciences.virginia.edu/foundation/mentor.

This is the season of beginning and also ending. You will also want to join me in thanking and congratulating Tim Robertson (English ’77) for his excellent service on the College Foundation Board, service that started long ago in 1997. Replacing Tim on the board is Helen Dragas, a 1984 Foreign Affairs major, and a 1988 Darden graduate. I wish her all the pleasure that goes along with service to the College of Arts & Sciences.

Best regards,

Juliana Schulte O’Reilly
Chair of the Emeritus Society
Dear Friends

What a year it has been since President Casteen introduced me to the new Board of Arts & Sciences at Carr’s Hill last spring. After officially taking the reins over the summer, I have spent (and will continue to) know our faculty, and learning the strengths of the departments and interdisciplinary programs that make up the College. Although I have always admired Virginia, I must say that I find it even more impressive from the inside. Of course, I also had to come to terms with an unwelcome financial downturn. Permanent budget cuts make long range planning tough, and immediate operations is a day-to-day challenge. So we are using this time to plan. We have identified strengths we must maintain and opportunities we really want to maximize. It is as things improve, we can invest strategically for the good of our faculty and students. This spring, I have spent more time on the road meeting alumni from both coasts and many places in between. And I am pleased I find them to be smart, good-hearted and deeply devoted to their alma mater.

In short, my first year has been one of discovering the Fifth Federal Reserve District—of being impressed, I must say, by how much the Bank and our Reserve System have accomplished in a challenging environment. And to a person, I find them to be smart, good-hearted and deeply devoted to their alma mater. So, although I am new to the job, I feel as if I have already hit the ground running. The Fifth Federal Reserve District is one of only four public universities that makes up the Federal Reserve Bank of Richmond’s Board of Directors.

Lewis has been a director of the Third Federal Reserve District’s Board of Governors since December 2004 and began his term as chairman Jan. 1, 2009.

The Federal Reserve Bank of Richmond is one of 12 District Reserve Banks that, together with the Board of Governors in Washington, D.C., make up the Federal Reserve System. The Fifth Reserve Federal District includes the District of Columbia, Maryland, North Carolina, South Carolina, Virginia and most of West Virginia.

Lewis is a professor and chairman of the Virginia Commonwealth University’s Board of Visitors and is a former trustee of the Darden School Foundation. He and his wife, Sandra, live in Suffolk, Va., and have a daughter, Tanya. Lewis has spent a significant portion of his career at the University of Virginia. He has served as a professor, chair of the Department of Biology, and director of the University’s Institute of Vertebrate Biology and Center for Quantitative Biology. He has also served as the director of the University’s Center for Advancement and the University’s Institute for the Arts and Humanities.

Lewis has been a regular contributor to the University of Virginia’s alumni magazine, the Virginia Alumnus, since 1999. He has also written several articles for the University’s yearbook, Virginia Magazine, and has contributed to numerous other publications.

As University of Virginia Professor of Biology, Lewis has been a leader in the field of evolutionary biology. He has published extensively on the evolution of animal behavior, particularly the evolution of cooperation and the evolution of social systems. He has also been a leader in the study of the evolution of sexual selection and the evolution of mate choice. Lewis has been a leader in the study of the evolution of sex ratios and the evolution of sexual conflict. He has also been a leader in the study of the evolution of offspring care and the evolution of parental investment. Lewis has been a leader in the study of the evolution of social behavior and the evolution of social systems. He has also been a leader in the study of the evolution of communication and the evolution of signal systems. Lewis has been a leader in the study of the evolution of social structure and the evolution of social organization. He has also been a leader in the study of the evolution of social cognition and the evolution of social learning. Lewis has been a leader in the study of the evolution of social behavior and the evolution of social systems. He has also been a leader in the study of the evolution of social structure and the evolution of social organization. He has also been a leader in the study of the evolution of social cognition and the evolution of social learning. Lewis has been a leader in the study of the evolution of social behavior and the evolution of social systems. He has also been a leader in the study of the evolution of social structure and the evolution of social organization. He has also been a leader in the study of the evolution of social cognition and the evolution of social learning. Lewis has been a leader in the study of the evolution of social behavior and the evolution of social systems. He has also been a leader in the study of the evolution of social structure and the evolution of social organization. He has also been a leader in the study of the evolution of social cognition and the evolution of social learning.
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Of course, I also had to come to terms with an unwelcome financial downturn. Permanent budget cuts make long-range planning tough, and immediate operational decisions are day-to-day challenges. So we are using this time to plan. We have identified strengths we must maintain and opportunities we really want to maximize. To that end, things improve; we can invest strategically for the good of our faculty and students.

This spring, I have spent more time on the road meeting alumni from both coasts and many places in between. And I was pleased to find them to be smart, good-hearted people who deeply love and believe in their alma mater.

In short, my first year has been one of discovering what you have long known: the College and its people are genuinely remarkable. I feel proud to be here.

Meredith Jung-En Woo
Buckner W. Clay Dean of Arts & Sciences

University of Virginia Tops National ‘Best Value’ Ranking of Public Universities

The University of Virginia offers students the best education for their money of all the nation’s public universities, according to “Best Value Colleges for 2009,” a ranking released in January by The Princeton Review and USA TODAY.

Based on surveys of administrators and students at more than 650 public and private colleges and universities, The Princeton Review measured more than 30 factors in three general areas: academics, cost of attendance and financial aid.

Announcing the rankings on NBC’s “Today” show, Princeton Review Vice President and Publisher Robert Franek called U.Va. “an amazing school” with “engaging faculty members, exceptional students and a great value.”

“We have earned this reputation for affordable excellence because we have expert fiscal managers who handle our resources wisely, because of our top-notch faculty and students, and because of our shared commitment to access and affordability,” noted U.Va. President John T. Casteen III.

Academically, U.Va. was rated as the nation’s No. 2 public university and among the top 25 of all national universities in the most recent rankings by U.S. News & World Report. In May 2008, Forbes magazine reported that the Washington, D.C.-based Center for College Affordability and Productivity ranked U.Va. No. 1 among all national public universities, based on student-satisfaction surveys and achievements. Also, the 2007 edition of the Newsweek/Kaplan “How to Get Into College Guide” cited U.Va. as one of the “New Ivies” — one of only four public universities so mentioned.

Read more about the rankings at: PrincetonReview.com/BestValueColleges

College Foundation Trustee

Lemuel Lewis (Economics ’69, Darden ’72) has been appointed chairman of the Federal Reserve Bank of Richmond’s Board of Directors.

Lemuel had been a director of the Fed’s Richmond-based Fifth District board since December 2004 and began his term as chairman Jan. 1, 2009.

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The Fifth Federal Reserve District includes the District of Columbia, Maryland, North Carolina, South Carolina, Virginia and most of West Virginia.

Lewis is a founder and president of LocalWeather.com, a web-based, privately held media company in Suffolk. Previously Lewis was executive vice president and chief financial officer for the multimedia Landmark Communications Inc. in Norfolk, Va., where his career spanned 26 years before he retired in 2006.

In addition to his service to the College, Lewis served a four-year term on the University’s Board of Visitors and is a former trustee of the Darden School Foundation.

He and his wife, Sandra, live in Suffolk, Va., and have a daughter, Tanya.

A Win-Win Relationship

Graduate students and their advisers

by Karen Doss Bowman

It’s not every day that a salamander expert finds a kindred spirit, but Henry Wilbur, BF ’87, Runk Professor of Botany, has found plenty of scholarly soulmates at the University of Virginia. Thanks to the biology professor’s passion for the silvery critters, more than a dozen graduate students have come to the College to pursue advanced degrees under his tutelage.

Since joining the faculty 17 years ago, Wilbur has mentored graduate students on Grounds and at the University’s Mount Lake Biological Station, a research and teaching facility nestled in the Appalachian Mountains of southeastern Virginia. Though his current research focuses on forest dynamics — he jokes that he’s too old to chase down salamanders on rainy nights — many of his graduate students come to U.Va. in part because of his expertise in amphibians.

But it’s more than scholarly achievement that makes Wilbur popular among students. He truly values their perspectives.

“From the start, Henry treats his graduate students as colleagues,” says Tami Ransom, a doctoral candidate studying interactions between salamanders and earthworms.

During Wilbur’s weekly lab meetings with his graduate students, everyone takes turns leading the meeting and sharing ideas about research projects. And unlike most professors who put their graduate students to work on components of their personal research projects, Wilbur encourages independent projects. The approach is a confidence-booster for young scientists.

“I try to have an atmosphere where I’m not acting ex cathedra, handing down the wisdom of experience, Wilbur says. “This experience is a prelude to that.”

Wilbur counts his graduate students — with whom he has coauthored papers — among his closest colleagues. While he may offer the wisdom of experience, Wilbur says his students challenge him intellectually.

“They have a level of enthusiasm and curiosity that helps keep me fresh and young,” he says. “They’re interested in learning what’s new and hot, so they keep me informed and push me to keep up better than I might if I didn’t have that stimulation.”

The science departments, and especially undergraduates, benefit tremendously from the services offered by graduate students, says Wilbur. An individual professor can effectively advise just a few undergraduates in laboratory and field work, but with graduate students as teaching assistants and student mentors, the College can expand research opportunities available to undergraduates — and more undergraduates can enjoy a close working relationship with a professional scientist.

“Graduate students greatly enrich the undergrad experience as teaching assistants, if they’re enthusiastic and well trained,” Wilbur says. “Most of [my students] are interested in college or university positions, so they look at themselves as teacher-scholars, not just research technicians.”

University of Virginia

Foundation Trustee Appointed Chairman

Courtesy Federal Reserve Bank of Richmond and Lynchburg News & Advance

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by Sally Ruth Bourne

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Mathematics Professor Barbara MacCluer, the department’s director of graduate studies and Heller’s thesis advisor, helped Heller pull together her dossier for this year’s teaching award competition. “I’ve looked at lots of evaluations, but I’ve never seen any quite so quietly achieved renown for the teachers it produces. For three consecutive years, the winners of the University’s Teaching Resource Center All-University Graduate Assistant Teaching Award in the sciences, which includes engineering and nursing, have been mathematics graduate students. In her fifth year of pursuing a Ph.D. in operator theory in the College and Graduate School of Arts & Sciences, Heller is this year’s nominee.

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