

INFLUENCES

SUMMER 2011

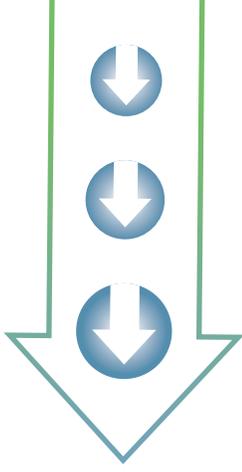


Faculty Make Good

See how faculty like Jianhan Chen, Christine Aikens, and Kendra McLauchlan are leading the College somewhere great



KANSAS STATE UNIVERSITY
COLLEGE OF
ARTS & SCIENCES



Hello Everyone,

Typically, our alumni magazine focuses on our incredible students in the College of Arts and Sciences — on the places they are going for study abroad, the national recognitions they are earning, and the good things they are doing on campus and in the community.

In this issue, we are doing something a bit different. We are highlighting a handful of our many faculty stars — individuals who are making big news with both their engaging styles of teaching and their groundbreaking research. In 2010, our



“The most important thing about having great faculty? *Faculty* achievement means *student* achievement.”

College was awarded \$23.6 million dollars in outside grants and funding, thanks to faculty members who are leading the way in their fields.

The most important thing about having great faculty? *Faculty* achievement means *student* achievement. The greater our faculty’s expertise, and the more exciting their research, the better their teaching becomes. That means students have more interesting and rigorous classes, and more (and better) research opportunities.

I hope you will note that these highlighted faculty members include representatives of the arts and humanities, the social and behavioral sciences, and the natural sciences, illustrating the quality and achievement that spans the three great branches of the College.

Faculty achievement also sets up the College for a more successful future. It helps us continue to recruit great students and faculty to our College and the University. And it gets Kansas State ever closer to our goal of being a top 50 public research university.

I hope you enjoy reading about these outstanding faculty members (who represent many more here in the College). Thank you, as always, for supporting our College and helping our students and faculty shine. To learn how you can invest in our faculty in a big way, see page 18 about the power of establishing a named faculty chair position. After all, our faculty are one of the most valuable resources our College has.

Best Wishes,

Brian Spooner, dean

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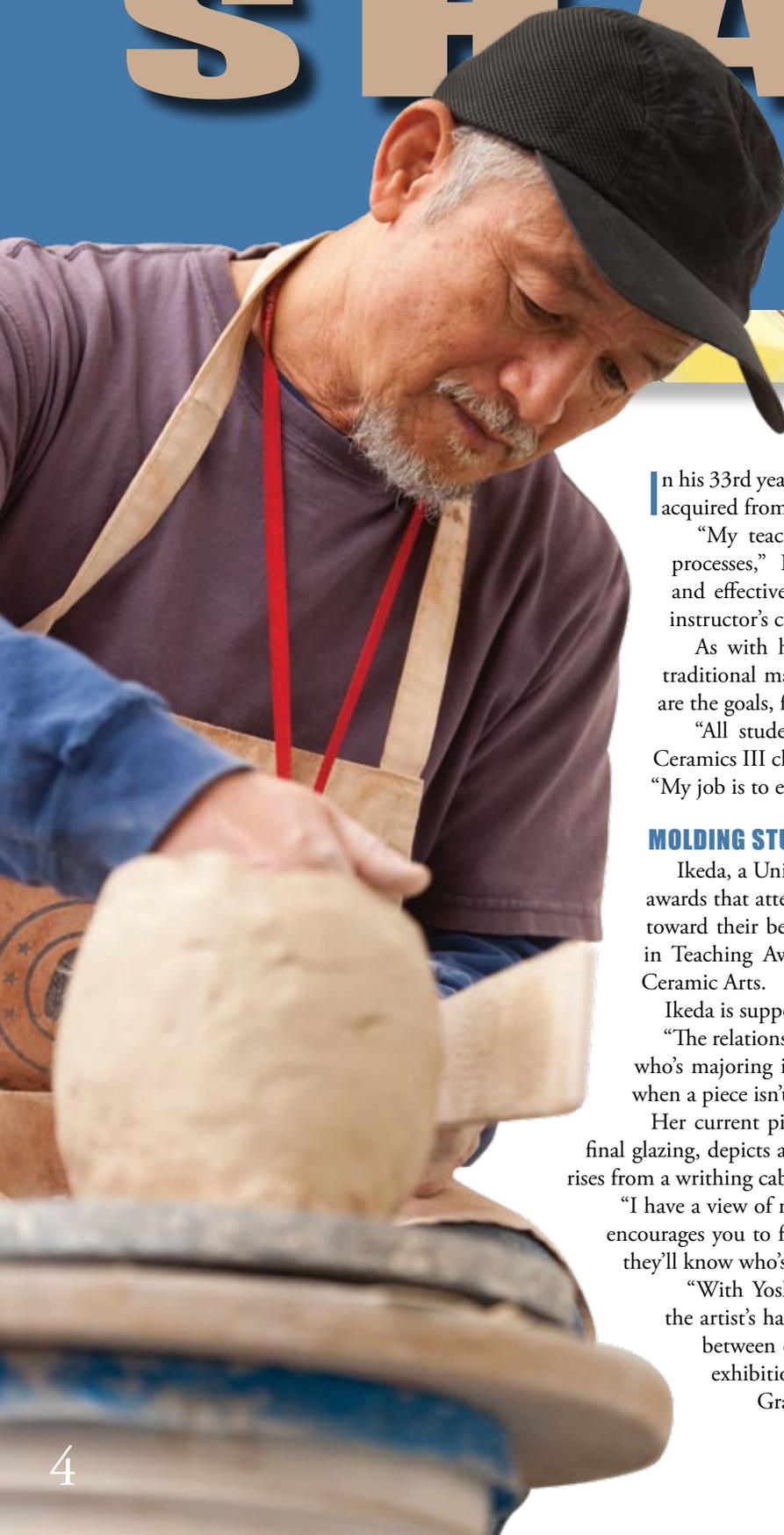
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TAKING SHAPE

Retiring ceramics professor builds confident students, and courageous art



In his 33rd year at K-State, Yoshiro Ikeda is continuing traditions that he acquired from his own ceramics mentors.

“My teachers always taught me that art and teaching are both processes,” Ikeda said. Changing between them is not difficult, and effective teaching does not have to come at the expense of the instructor’s creativity.

As with his art, Ikeda’s teaching begins with an appreciation of traditional materials and natural forms. But growth and development are the goals, for student as well as instructor.

“All students make pots differently,” Ikeda said during a recent Ceramics III class, which meets in the basement studios of Willard Hall. “My job is to encourage them in the direction they choose.”

MOLDING STUDENTS

Ikeda, a University Distinguished Professor of art, has a long string of awards that attest to his ability not only to create, but also to lead others toward their best work. His latest recognition was last year’s Excellence in Teaching Award from the National Council on Education for the Ceramic Arts.

Ikeda is supportive, but also direct, according to his students.

“The relationship is very honest,” said Beth Hanna, a Manhattan senior who’s majoring in metalwork and ceramics. Ikeda doesn’t hesitate to say when a piece isn’t up to the student’s abilities.

Her current piece, drying slowly under wraps before bisque-firing and final glazing, depicts a delicate but menacing plant whose poppy-like seedhead rises from a writhing cable of roots or stems.

“I have a view of nature that it’s tired of being bullied,” Hanna said. “Yoshi encourages you to find your own voice, so that when people see your work, they’ll know who’s behind it.”

“With Yoshi, it’s always about the handmaking, about not hiding the artist’s hand,” agreed Chris Graber, Ikeda’s graduate assistant, who between classes keeps busy preparing his large vases for upcoming exhibitions.

Graber, a Seton Hall graduate from Latrobe, Penn., was



Yoshiro Ikeda and his students work side by side in the Willard Hall studios.

recruited at a ceramics conference by Ikeda, who insisted, “You will come to K-State.”

“That’s the thing about Yoshi,” Graber said. “He really has confidence in his students. He never asks; he just tells you. And that’s refreshing.”

FOCUS ON FORM

Graber has always been a vessel-maker, a trait he shares with Ikeda, though Graber still makes more functional pieces.

Ikeda was born in 1947 in Japan but grew up in Oregon. As a ceramicist, his early influences included Japanese iconoclast Kazuo Yagi, who coached Ikeda in the philosophy behind nonfunctional work.

“Yagi said, ‘Why are you making just a pot?’ In Japan, a pot, even a functional pot, is never just a pot,” Ikeda said. “It has to be more.”

In his case, “more” includes elaborate surface treatments, such as “crawl glazes,” whose ripples and warts suggest a gourd’s skin, a coral reef, or maps. The rounded, asymmetrical forms beneath could have once been fruit, ocean life, a drum.

Teapots have long been a useful jumping-off point for Ikeda, allowing him to pay tribute to ceramics history while creating something new.

The stem-like protrusions atop later pieces are references to the stripped trunks of trees Ikeda remembers from post-eruption Mount St. Helens.

A HAND-BUILT LEGACY

Though he’s used the potter’s wheel, much of his work is hand-built, not thrown. Since having a stroke in 2004, Ikeda has been hand-building more pieces. Ranks of them, created to test glazes, stand like stocky top-knotted soldiers on the shelves behind his desk.

Ikeda will march out of Willard at the end of the 2011 to 2012 school year, headed back to Oregon for his retirement. A house waits in a small town south of Portland. “My wife is already packing,” he said.

His legacy will be not just in the works that remain on campus, but also in the students he has sent out into the world. A dozen smile from an 8x10 on his office wall, taken at a recent ceramics conference. From the center of the photo, Ikeda looks out, surrounded and serene.

RETROSPECTIVE AT THE BEACH



WHAT:
40 of Yoshiro Ikeda’s ceramic works

WHEN:
January 2012 to May 2012

WHERE:
Hempler and Vanier galleries, K-State’s Beach Museum of Art

CURATED BY:
Glen R. Brown, associate head of K-State’s Art Department

THE ART OF GIVING



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Prairie Professor



Biology professor turns the Konza into a classroom

Anthony Joern, Ph.D. and University Distinguished Professor of biology, has become well acquainted with the whole gang on the Konza Prairie — from grasshoppers to bison.

In 2004, after 27 years studying Nebraska's Sand Hills, particularly their hopper populations, Joern moved to K-State and the denser tallgrass prairie.

"The Konza was the attraction," he said, "and the strong group of scientists working on grasslands here."

An International Draw

Konza Prairie Biological Station, a joint endeavor between K-State and the Nature Conservancy, has been supplying research opportunities for 40

years. In September, it will host an anniversary symposium, "Grasslands in a Global Context."

"We're trying to find out what's general and what's unique in grasslands," Joern said. To that end, researchers from Africa as well as North America are scheduled to attend.

"It's a world-class site," Joern said, "and it attracts international visitors."

Joern fits right in on the Flint Hills. Like others conducting research at the Konza, he and his students investigate the big three of grassland ecology: climate, grazing and fire. They focus on the creatures of all sizes that play their parts in the daily and seasonal changes on the prairie.

Fun and Fieldwork

"My work has always been with herbivores," he said. And as grazing creatures, bison and grasshoppers compete with and complement each other on the prairie.

"In some of my lectures, I've called grasshoppers 'miniature bison.' It turns out they're not," he said with a poker face. "For one thing, the bison is an ungulate," or a hooved mammal. Grasshoppers, of course, are a type of insect.

Humor helps Joern make connections across the vast spaces of a lecture hall, and he always looks for "active learning" opportunities — even in a survey course such as Ecology, required of all K-State biology majors.



BACKING BIOLOGY

TO SUPPORT BIOLOGY STUDENTS AND FACULTY:

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“Students find it’s one of their most difficult courses,” Joern said, “because they have to synthesize across many levels,” including physiological reactions, community composition, and underlying evolutionary processes.

“As an instructor, you’re hoping that students are making these connections — which is what education is all about.”

Outside of class, Joern finds fieldwork the most effective way to teach: Students start with a concept, set up a hypothesis, then figure out sampling, learning the nuts and bolts of research.

When he recruits students for his lab, undergraduate and graduate alike, he’s looking for people who can adapt to “the Zen part of research, of sticking with it,”

he said. Counting the wolf spiders in a square meter of prairie, for example, can be tedious in July. “You have to be careful and attentive even when it’s 100 degrees.”

Research Within Reach

Mark Sowers, a Spring Hill junior in biology, approached Joern in 2010 about possible research opportunities. Sowers quickly ended up on the Konza, helping with the GPS tracking of those big brown ungulates.

“Being the only undergraduate working on the new bison project was really much more than I expected out of my first research position,” Sowers said. Joern makes sure that Sowers takes part in

meetings on the project, part of a recent \$750,000 National Science Foundation grant to dig deep into grazing habits and their effect on the prairie.

“Tony puts a lot of effort into being a helpful mentor rather than an intimidating professor,” Sowers said. “He’s really made me feel like something more of a collaborator, rather than just a pair of hands to do fieldwork and data processing.”

For Joern, it’s just one more way to share his love for the grasslands, and to encourage students to learn.

“I’m trying to attract students interested in science,” he said. “My feeling is that students would be much better educated if they participated in research.”



Searching With SCIENCE



Three faculty on a hunt for answers, with the National Science Foundation's support

Most of us have a healthy amount of curiosity. We ask ourselves questions about why we're here, how we can take care of our planet, how we can help others around us.

But for assistant professors Kendra McLauchlan (geography), Jianhan Chen (biochemistry), and Christine Aikens (chemistry), those questions have fueled a quest for tangible answers.

And their questions are burning ones: What are we doing to our ecosystems? How can we create energy without harming the environment? How does our physical makeup dictate who we become?

With help from the National Science Foundation's prestigious CAREER Awards — totaling about \$1.7 million among the three of them — these rising stars just might find some answers for all of us. And because the awards focus on equal parts research and teaching, students from K-State (and beyond) will reap the rewards.

Gone are the days when scientific research was confined to beakers and test tubes. The constantly advancing world of technology has created a whole slew of new possibilities. Christine Aikens, Ph.D., is proof of that.

“My lab’s a little bit different because it’s all theoretical, like Jianhan Chen’s. We both do things entirely on computers,” Aikens said.

Awarded:

Nearly \$600,000 over five years

The Question:

How can we create clean, renewable energy (producing nothing that’s harmful to the environment)?

The Idea:

“I’m certainly not the first person to have thought of this, but plants are really good at taking water and splitting it apart into oxygen and protons (hydrogen),” Aikens said.

“We need to be able to do something like that to produce hydrogen gas. If we can focus on this one system that’s really good at it (plants), and try to understand what factors make the process an effective catalyst, then hopefully we can design other catalysts that will do the same thing.”

The Research:

“What I’m working on is water-splitting, which is the idea of converting water to hydrogen and oxygen. Then we can

take the hydrogen and ‘burn’ it with the oxygen to produce water energy, and there’s nothing other than just the water that is formed,” she said.

Why It’s Important:

“The biggest thing I want to do is make some kind of difference — especially with something that’s so important. I think energy research is finally getting the recognition that it’s something we need to pay attention to.”

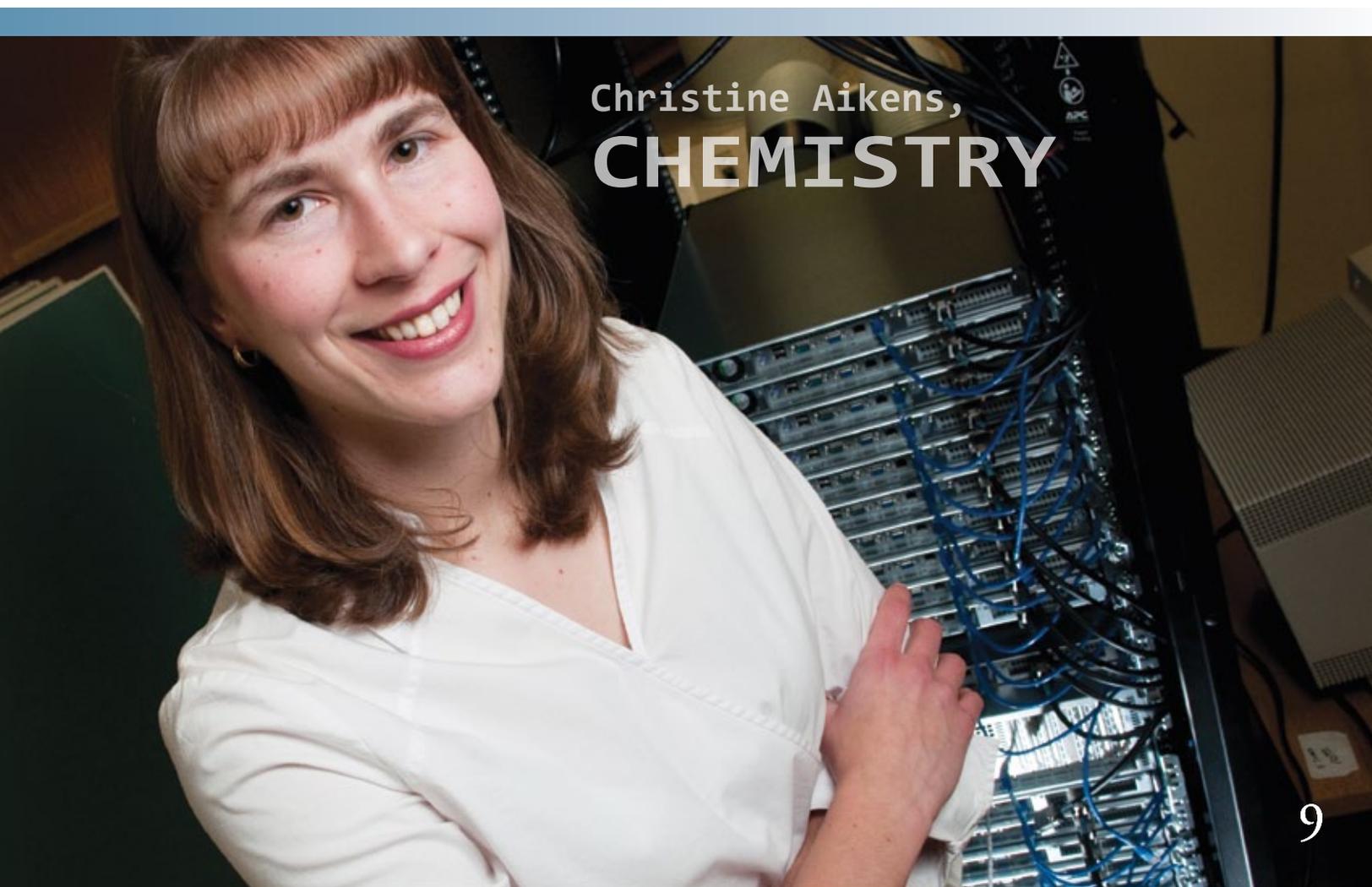
How It Helps Students:

- 1) Research opportunities for two graduate students, a postdoctoral fellow, and several undergraduates
- 2) New computer-modeling lab exercises and computer equipment in Chemistry I labs
- 3) Annual workshop for middle schoolers, introducing them to renewable energy (focus on students from western Kansas)

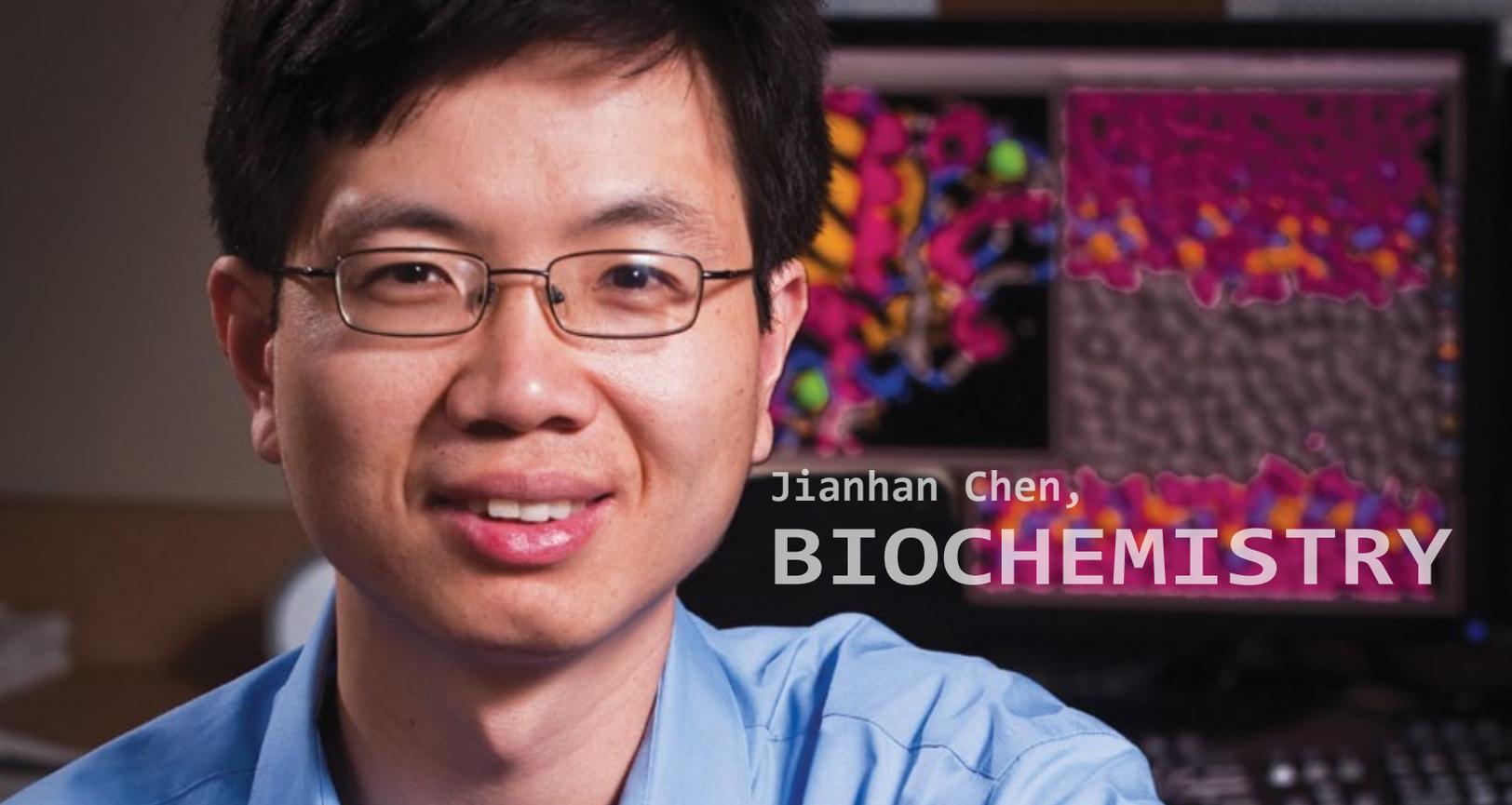
What Students Say:

“I almost switched my major in my junior year because I didn’t want to be an experimentalist,” said Makenzie Provorse, ’09 B.S. chemistry, Omaha, Neb., who is pursuing her Ph.D. in chemistry at the University of Minnesota.

“But she took me to a conference in Chicago, and I learned how many applications computational chemistry had. After that, I decided to go to graduate school, and she was the driving force for that.”



Christine Aikens,
CHEMISTRY



Jianhan Chen,
BIOCHEMISTRY

Jianhan Chen, Ph.D., is very much at home in the Department of Biochemistry...even though his work isn't *exactly* biochemistry.

"What I'm doing is really computational biophysics. I've always been interested in physical studies and biological questions. And I like computation, so it's kind of a natural fit for my interests," Chen said.

And for someone who clocks an impressive number of hours on research, Chen finds teaching to be just as natural.

"In a way, the NSF CAREER Award has pushed me to be even more committed to teaching. To me, one of the biggest pluses of working at a university is that you get to interact with students all the time, which keeps you energized."

Awarded:

More than \$670,000 over five years

The Question:

How do specific proteins in our bodies — ones that control which genes are expressed — help determine whether we wind up with diseases like cancer?

The Idea:

"Our research uses computers to model the structure and function of proteins. These are important biological molecules that perform all kinds of crucial functions in our body," Chen said.

The Research:

"For this project, we have a particular interest in the intrinsically disordered protein, a newly recognized kind

of protein. They are very flexible, they are very dynamic, which makes it difficult to understand how they function," Chen said.

"They are also involved in implicating all kinds of diseases or disorders. So our research is really trying to understand the fundamental principles of how these molecules function — and how they might malfunction."

Why It's Important:

"These proteins that we are interested in are implicated in all kinds of cancer, so it's related to cancer in a fundamental way. To me, it's an exciting opportunity to work on a really new area that could have a huge potential impact."

How It Helps Students:

- 1) Research work for one postdoctoral fellow and one graduate student
- 2) One new course and one revamped course at K-State
- 3) Summer workshops for high school and community college teachers, introducing them to computational biology

What Students Say:

"He's a really easygoing person. I really enjoy my work with him," said Weihong Zhang, Ph.D. student in biochemistry from China — who is collaborating with Chen on this research.

"I actually knew nothing about modeling until I came here, and he taught me everything from the beginning. Dr. Chen gave me a brand-new view of this whole field. He actually showed me how powerful this modeling can be."

Kendra McLauchlan, Ph.D., has pursued what for her is an ideal career path: teaching geography, *and* piecing together the history of forest and prairie ecosystems.

“I like math and science, I like being outside, I like plants. And I like having to imagine how things used to be. I am lucky to be in a profession where I have the opportunity to answer questions I find interesting,” McLauchlan said. “That’s what keeps me going: curiosity.”

And that’s good news for McLauchlan’s students — both in the classroom and in the research lab.

“If I’m staying sharp with my own research, I can bring that to my students in my classroom,” she said. “I can show them how that process works, tell them what I’m doing, show them what other people are doing. That’s what science is; it’s *doing*.”

Awarded:

Nearly \$440,000 over five years

The Question:

What kind of impact are our actions having on the Earth’s ecosystems?

The Idea:

“We’re manipulating the Earth today in really intense ways — unprecedented ways, arguably,” McLauchlan said. “I am trying to provide context for those changes, to see how the magnitude of what we’re doing to these systems compares to what they’ve experienced before (up to 10,000 years ago).”

The Research:

“I study the history of grassland and forest ecosystems: what the plants were, what the soils were, what the nutrient cycling was — and then how that changed over time, and what factors caused it to change,” she said.

“We use sediment cores and tree cores to go back in time. The wood has a story to tell; you just have to look for it.”

Why It’s Important:

“My research will hopefully help us understand the impact of our activities better — like logging, and agriculture, and road building — all the things we do that affect our Earth’s surface today.”

How It Helps Students:

- 1) Research spots for three K-State graduate students
- 2) A related course for graduate students from all over the country, taught by McLauchlan at K-State
- 3) A modified online module for the public about past environments

What Students Say:

“She has such enthusiasm for her work and for learning new things,” said Chris Morris, senior in geography and undergraduate research assistant from Libby, Mont.

“She has definitely changed how I look at the field. For instance, human impact on the environment — it’s amazing how everything affects everything else. The interconnectedness of the planet...she has definitely opened my eyes to that.”



Kendra McLauchlan, **GEOGRAPHY**

SUPPORT SCIENCE STARS



DEPARTMENTS:

Chemistry, Biochemistry, Geography

FUNDING NEEDS:

Research, lab equipment, student trips for fieldwork, speakers

TO HELP:

Damon Fairchild, development officer,
damonf@found.ksu.edu, 800-432-1578

Language

MEETS ENVIRONMENT

For this English professor, inspiration lives in the world outdoors



MAKE EVERY WORD COUNT

TO SUPPORT ENGLISH STUDENTS AND FACULTY:

Tracy Robinson, development officer,
tracyr@found.ksu.edu, 800-432-1578

To be alone in a carefully chosen patch of the natural world, to dissolve into it, is one of Elizabeth Dodd's favorite pursuits. Another is to introduce a crew of students to such places and witness the mutual discoveries.

This spring, she led her English 450: Literature and Society class to Nebraska's Platte River in time for the sandhill crane migration. And in the summer, she'll trek with English, biology and geography students to the Brazilian rainforest, where caymans and piranhas are on the syllabus.

“The great divide between the humanities and science is overplayed.”

— Elizabeth Dodd

Words and the Natural World

Dodd, Ph.D. and University Distinguished Professor of English, describes herself as “a writer who is most interested in the relationship between individual human beings and cultures, and the vastness that is not us.”

Her essays and poems embrace the natural world as well as the science — the geology, the astronomy, the prehistory — that frames our understanding of lands and their inhabitants. And not just the human ones.

“Eco-critics look at the nonhuman or more-than-human elements of our environment and existence,” Dodd said.

Seeking Wonder

Dodd began her writing life as a poet but now concentrates on creative nonfiction, mostly essay-length.

Her current work concerns “our relationship with time, as we experience it,” she said: “The passing of the seasons, the cycles of the moon.”

Dodd’s academic precision has a large component of wonder at the natural world, coupled with the power of sudden insight.

She recalls when she and a college roommate, who became an oceanographer, both read that early in Earth’s history, the moon was much closer. The future oceanographer marveled at how enormous the tidal range would have been, while Dodd imagined herself at night, awestruck under an enormous moon.

Dodd goes to great lengths in her research and travel to court such sensations. A recent trip placed her in New Mexico to witness the winter solstice sunrise at the Pueblo structure of Wijiji. She climbed to a sandstone shelf to stand in the chill dark until the sun appeared, precisely in a cleft to the south.

“It was cold, and I could feel the heat hit my face and radiate from the surrounding rock. And I thought about that rock, its age, and about the evolution of the eye. I asked myself, ‘How long have we all been waiting for the sunrise?’” The kernel of a poem sprouted on that sandstone shelf.

Blurring the Lines

Dodd’s discipline-hopping extends to her work with grad students. For example, she’s a member of Tyra Olstad’s dissertation committee. Olstad, from Tonawanda, N.Y., took Dodd’s creative nonfiction class in 2009, but is pursuing her doctorate in geography.

“Of all of the questions I had for my preliminary exams,” Olstad said, “hers challenged me most.” Dodd asked her to write up an imaginary interview with eco-critic Terry Tempest Williams; another challenge was to defend the genre of nature writing.

“She didn’t just ask me to regurgitate or synthesize information,” Olstad said. “She wanted me to probe my own beliefs and come up with some sort of manifesto to guide my research.”

Within her own department, Dodd works with young English majors and often guides them right through their master’s work. “So there’s a wonderful

opportunity to oversee their creative and intellectual development,” Dodd said.

This summer’s Brazil trip will be with biology instructor Martha Smith-Caldas and Marcellus M. Caldas, an assistant professor of geography.

In their 10 days in the Amazon, students will examine the tensions between providing local livelihoods and preserving a global resource.

“K-State is remarkable for having allowed us to have these interdisciplinary courses,” she said.

“The great divide between the humanities and science is overplayed,” Dodd added. But however fascinating she finds science, her destination lies elsewhere.

“I am most interested in language as a resourceful and multifaceted aspect of being human,” she said. “The emotional affect of utterance matters — the music of it.”



Elizabeth Dodd and students dive into a class discussion.



A Marriage of MINDS

Husband-and-wife psychology faculty get students excited about research

As colleagues and as a couple, Mary Cain and Don Saucier are quite encouraging of each other's work, as you might expect. But these associate professors of psychology have gained a reputation for extending that support and commitment to students.

Saucier received the University's 2011 Presidential Award for Excellence in Undergraduate Teaching, and the 2010 Presidential Distinguished Faculty Award for the Mentoring of Undergraduate Students in Research. The year before, Cain won K-State's Commerce Bank Outstanding Undergraduate Teaching Award.

"It's not surprising that we have a lot of the same approaches to teaching," Cain said, "because we went through graduate training at the same time and institution." They met at the University of Vermont, where they earned their doctorates. In 2004, they arrived in Manhattan just in time to experience the delights of a Kansas summer.

"The third night we were here, tornado sirens went off," Cain remembered, "and we wondered what the heck was going on."

Besides their shared history (and home life), they also bring a mutual context to their work: "We both come from a liberal arts background," she said, "and that's a common thread despite our divergent interests and research."

Saucier's lab uses human subjects to explore when they'll express prejudice and how they push their viewpoints on others. Cain, who investigates environmental influences on drug abuse, relies on rats.

For both, their classroom enthusiasm often draws undergrads into their labs.



Don Saucier shares a laugh with his graduate students.

Saucier's Great Expectations

"The earlier students start, the more we can do with them," Saucier said. "After they've cut their teeth with us, we'll often let them do their own projects, and present at conferences."

But only after they absorb Saucier's rules of research.

One rule: "If it was good enough for class, it's not necessarily good enough for me," he said. "The goal is not to get an A, which you can achieve in the classroom with 90 percent. It's to get published in journals." Students learn they're competing for space with researchers around the world.



“Her love for neuroscience, and especially teaching the related courses, is obvious and infectious.”

— Jennifer Arnold



Mary Cain talks with General Psychology students about a study on how people choose mates.

“As an instructor, you need to be known for getting undergrads to conferences, getting them published. You have to create a climate, a culture, that people want to join.”

“Dr. Saucier balances his high expectations with enough information and help to meet those expectations,” said Jericho Hockett, Liberal, Kan., a doctoral candidate who got her start in psychology as an undergrad with Saucier. “He makes all students feel that their contributions are important.”

Cain’s Big Transformations

Cain’s gateway to lab work is often via Psychobiology, a course required of all psych majors.

“Many of them come in thinking they’ll hate it,” she said. “There’s lots of terminology, and it’s viewed as hard-core science.

“Then they realize that the material is essential for all science and that they can learn it, and they get excited. So this transformation across the semester is really fun to watch.”

Jennifer Arnold, a senior in biochemistry who wants to pursue a doctorate in neuroscience, altered her postgraduate path from straight pharmacology after watching Cain teach and research. She’s been working in Cain’s lab for more than a year now.

“She had so many people interested in getting in her lab at the end of last semester that she had to turn a few away,” Arnold said. “Her love for neuroscience, and especially teaching the related courses, is obvious and infectious.”

Cain feels an obligation to get undergrads into her lab because animal work is not for everyone — and the sooner a

would-be Ph.D. finds that out, the better.

“Sometimes very talented students can’t work with rats, and that’s fine,” Cain said. “But if they’re doing well, and I’m satisfied, they can do their own projects.”

Expanding the Family

This summer, Saucier and Cain will increase their mentoring opportunities: Cain is expecting the couple’s second child in June, joining 2-year-old Delaney.

“It certainly helps you prioritize,” Cain said of balancing family, research and teaching. “It can be hard to be so tethered to the lab when you have a child,” but she is the primary caregiver to her rodents as well.

And the balancing act is worth it.

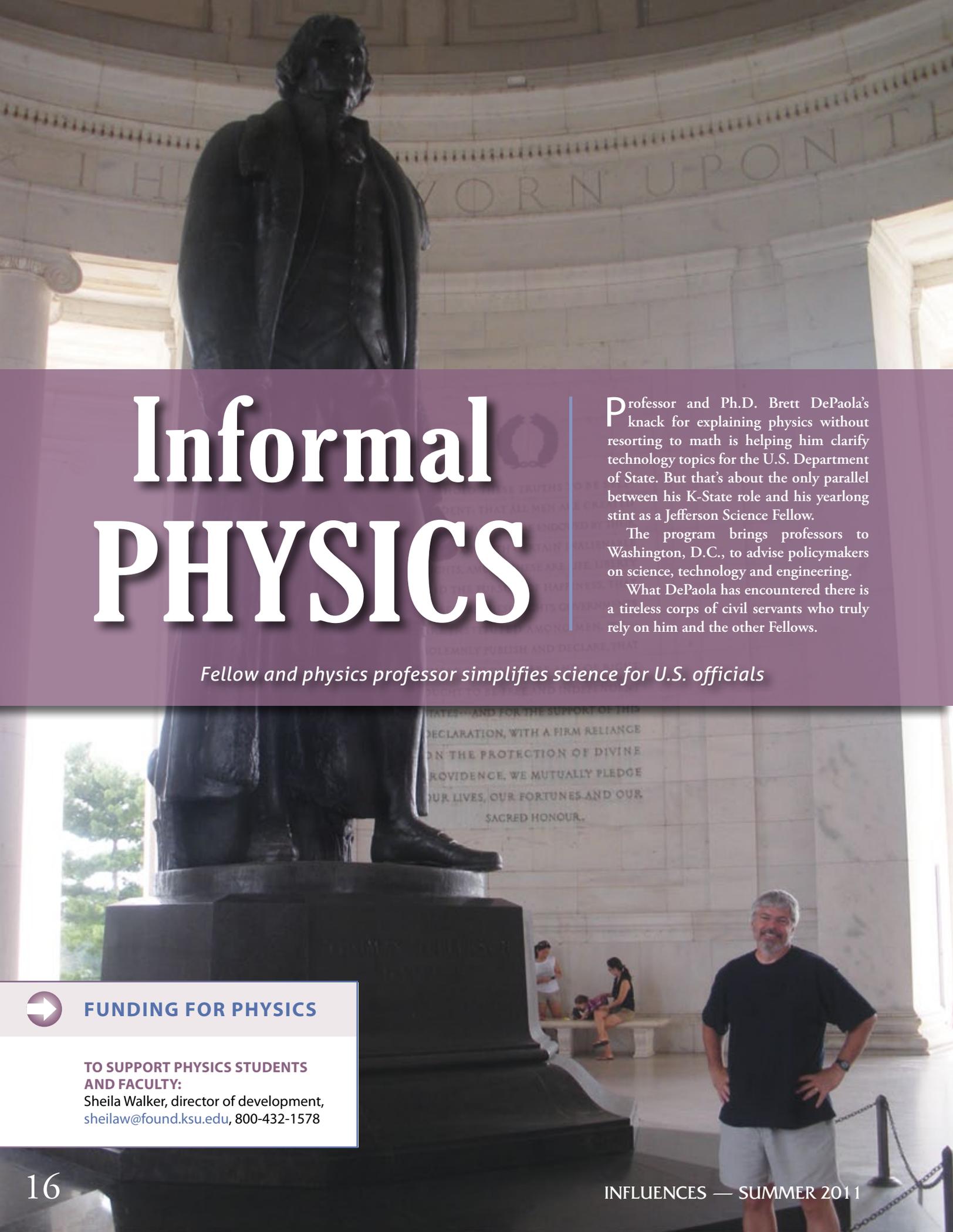
“Since gaining tenure and having a child, I think we’ve had our best years,” Saucier said. “There are things we’ve done less of, but it hasn’t been the important stuff.”

KEEP PSYCHOLOGY STRONG



TO SUPPORT PSYCHOLOGY STUDENTS AND FACULTY:

Damon Fairchild, development officer,
damonf@found.ksu.edu, 800-432-1578



Informal PHYSICS

Fellow and physics professor simplifies science for U.S. officials

Professor and Ph.D. Brett DePaola's knack for explaining physics without resorting to math is helping him clarify technology topics for the U.S. Department of State. But that's about the only parallel between his K-State role and his yearlong stint as a Jefferson Science Fellow.

The program brings professors to Washington, D.C., to advise policymakers on science, technology and engineering.

What DePaola has encountered there is a tireless corps of civil servants who truly rely on him and the other Fellows.



FUNDING FOR PHYSICS

TO SUPPORT PHYSICS STUDENTS AND FACULTY:

Sheila Walker, director of development,
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In Demand

“I didn’t expect they would be so happy to have scientists around to explain things to them,” DePaola said. “Usually, if someone at a party asks me what I do and I tell them, ‘I’m a physics professor,’ they run for the hills. At the State Department, on the first day, I had a line of people outside my door.

“And it’s tied to their dedication, that they need this information to do their jobs,” he added. “If anything, I’m more impressed every day.”

At K-State, DePaola’s research involves atomic, optical and molecular physics, a subspecies of quantum physics. At the State Department, he’s more a generalist, answering emails and phone calls while writing assessments of the technology that arises in CIA reports and the president’s daily brief.

DePaola’s most recent assessment, for instance, was taken straight to Secretary Hillary Clinton’s office.

“Not by me!” he added. “Did she read it? Probably. Did it make an impression? I don’t know. But it was cool.”

And no, he can’t tell you what it was about. The free exchange of ideas among colleagues is limited to those with security clearances.

A Reputation for Research

Back home, DePaola spends much of his time at K-State’s James R. Macdonald Laboratory, which is among the elite atomic, optical and molecular facilities in the world. DePaola says he, like the rest of the physics faculty, is always looking for ways to involve undergraduates in lab research.

“As students gain skills and knowledge, they really contribute,” DePaola said. “For example, I needed a new laser, so I had a student design and build a laser that we used in a project.”

As do many optical physicists, DePaola deep-chills bits of matter with narrow-spectrum lasers. A cold molecule is a slow molecule: “about the speed of a bicycle instead of the speed of sound.” And cold, slow atoms interact differently with each other and with light than warmer atoms do.

What separates DePaola’s work from the pack is that he goes on to use ultra-fast, broad-spectrum lasers to control the chilled atoms. Only two or three labs

in the world are combining these very different laser technologies, he said.

“Our lab is in the top 11 nationally,” said DePaola, who is keen to see K-State join the country’s top 50 research universities, a priority set by President Kirk Schulz. “The department overall is already around 50. The entire mindset that goes with such a push is very beneficial.”

Making Science Personal

DePaola’s brand of physics is far removed from the classical physics that left many high school students scratching their heads. Which means he can sympathize.

“Quite frankly, I didn’t enjoy high school physics, either,” he said. Although skilled at math, when he went to college, he chose to major in history — until he took a physics course.

“The instructor was very relaxed but very accomplished. And it was largely because of his attitude that he convinced me to switch to physics.”

This undergraduate experience helped form DePaola’s theory of education: Personalities, rather than subjects, often determine the path a student takes.

How Camp, who earned his physics doctorate from K-State in 2005, said DePaola reaches students outside the lab by hosting dinners and arranging canoe trips, or even bocce ball games in front of Cardwell Hall.

“This personal relationship makes for a more enjoyable learning environment,” Camp said, “and it creates mentoring moments that have nothing to do with physics.”

“Dr. DePaola allows students to explore their own answers,” Camp added. “He can sense when a student needs to struggle a bit through a problem, and when it might be necessary for some subtle mentoring to put students back on the right path.”

Hands-On Physics

DePaola’s informality can work especially well in no-math courses for non-majors. But avoiding the white coat and equation-packed chalkboard is about more than image.

“Physicists get their hands dirty, too. I wear jeans to work because I could find myself kneeling in a pool of pump oil.”

DePaola has reluctantly adopted the State Department’s suit-and-tie dress code. More difficult has been the separation from his wife and daughter, who remain in Manhattan. “I miss them terribly.”

In the meantime, he has to size up some hardware. The State Department has recruited him for a trip to Jordan, to see an X-ray-producing particle accelerator — the only one of its kind in the Middle East.

Maybe he’ll get to wear those jeans after all.



DePaola and fellow K-State physicists replace an acceleration tube in an accelerator on campus. Left: Brett DePaola at the Jefferson Memorial in Washington, D.C.



John Blair and Gary Conrad enjoy a hike on the Konza.

Alumni Empower Faculty

Professors discuss what chair positions mean for them and students



Outstanding teachers lead to outstanding students. Perhaps no one knew that better than Edwin and Lillian Brychta. This brother-sister duo, 1931 graduates of Kansas State, went on to long teaching careers across Kansas before passing away in 2003 and 1992, respectively. Edwin (*left, while at K-State*) taught industrial arts, and Lillian taught

home economics and in elementary and secondary classrooms.

So it seemed appropriate they would leave a legacy to support great teachers at their alma mater, establishing the \$1 million Edwin G. and Lillian J. Brychta Chairs for the Division of Biology.

The two Chair positions honor the faculty cream of the crop. And while the accolades alone are humbling, they include money from the fund's earnings — which enables serious (and expensive) research.

John Blair, Ph.D. and University Distinguished Professor of biology, is the Edwin G. Brychta Chair.

“The chair comes with additional funding that we can use to support our research programs,” Blair said. “And it helps students as well. So it’s allowed me to support research assistants *and* continue projects.”

Blair — an ecosystem ecologist who studies the Konza Prairie — says the dollars offer a welcome supplement to grant funding.

“Alumni support is a great financial resource for faculty,” Blair said. “It’s a way of recognizing the accomplishments of the faculty and encouraging them to continue their work.”

For Gary Conrad, Ph.D. — the Lillian J. Brychta Chair and University Distinguished Professor of biology — the chair has meaning precisely because of who it came from.

“Teachers had a huge impact on me,” Conrad said. “So I’m greatly honored to have the Chair named after public school teachers. I’m honored by who they were.”

A cellular and developmental biologist, Conrad’s research focuses on the makeup of the eye, in everything from humans and sharks to rabbits and chickens. And while three of those four are in good supply in Kansas, the other requires a bit of traveling.

“The Brychta money allows me to go to a marine biology lab in Maine each summer — and also to take some K-State undergraduates along,” Conrad said.

“A lot of these kids have never even been outside the borders of Kansas, so to have them see the ocean and other things they’ve never seen before...it just opens their whole mind.”

It seems that even now, 80 years after their own commencement, the Brychtas are still passing their lessons forward at K-State.



REWARD OUTSTANDING FACULTY

TO LEARN MORE ABOUT CREATING A FACULTY CHAIR:

Sheila Walker, director of development, sheilaw@found.ksu.edu, 800-432-1578

ALUMNI Spotlight

Congratulations to the first-ever alumni award winners for the College of Arts and Sciences. These outstanding alumni were recognized Thursday, Oct. 28, 2010, at the inaugural Eisenhower Circle Celebration.

The special event recognized loyal alumni and friends who gave \$250 or more to the College last year. The Eisenhower Circle recognition society is named for Milton S. Eisenhower, the ninth president of K-State.

ALUMNI MERIT AWARD

Winner:

Lanell Kemp-Finneran

Proud Alumna:

'74 B.A. theater and psychology; '77 M.S. special education

Current Position:

Registered drama therapist and teacher at the Bert Nash Community Mental Health Center in Lawrence



A Few Words:

"Lanell is fiercely dedicated to her students, spending her time, her money, and her energy making a crucial difference in these young people's lives."

— *Sally Bailey, associate professor and director of K-State's drama therapy program and graduate studies in theater, who nominated Kemp-Finneran*

YOUNG ALUMNI AWARD

Winner:

Lisa Casey

Proud Alumna:

'93 B.M. applied music

Other Education:

'94 M.M., University of Idaho; '00 D.M.A., University of Missouri-Kansas City

Current Position:

Professor of music at Missouri State University in Springfield, Mo.



A Few Words:

"As an undergraduate performance major in horn at K-State, no single student had more to do with the rise in quality of the brass ensemble at K-State than Lisa. In her dedication I saw the type of commitment that would eventually lead her to achieve the rank of full professor up to seven years earlier than expected."

— *Gary Mortenson, head of K-State's department of music, who nominated Casey*

COLLEGE OF ARTS & SCIENCES ALUMNI ADVISORY COUNCIL



Front: Janet (Whitehair) Cooper ('71), Marcia (Hesler) Bailey ('58), Julie (Ohmes) Stoner ('95), Helen (Packard) Dupre ('69), Maritza Segarra ('84)
Back: Roy Waller ('63), Tom Clark ('71), Ron Iman ('62), Kent Glasscock ('76), Steve Cooper ('70), Terry Cupps ('78), Dennis Myers ('69)
Not Pictured: Doug Blackwood ('71), Janet Butel ('63), Jane (Chandler) Holt ('71), Scott Thompson ('89)

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K-State College of Arts and Sciences: BY THE NUMBERS

\$5 million
given by alumni and
friends in fiscal year 2010

27
reporting units

464
faculty members (38% female)

\$23.6 million
in outside grants and
funding in 2010

55%
of K-State's total credit
hours taught each year

69
degree programs

1,500
graduates each year

6,300
undergraduate students

1,000
graduate students