Message from the CST Alumni Board president

It’s been 30 years since I graduated. Then, Temple was a place for hardworking students looking for cost-effective education. Campus life was...sparse. Five years ago, Alumni Board past presidents Jim Guare and Paul Curcillo invited me back to campus. I saw a different university. New buildings were rising. Accomplished research faculty and talented students doing remarkable work were everywhere. Throughout my career, I have hired Temple graduates because of their strong work ethic and creativity. When I joined the Alumni Board, I made sure the companies I work with knew about our outstanding students.

CST’s Owl to Owl Mentor Program is another way alumni can help prepare today’s students for a competitive job market. The program matches the experience of alumni mentors with the career goals of students, whether it’s biomedical research or cloud computing. I am proud of our mentors who have made Owl to Owl a mentorship model for other Temple schools and colleges.

Last year, we had the highest number of mentors ever but we could not accommodate all students who applied. Being a mentor is one of the most rewarding things I have ever done as a Temple alumnus. I want more alumni to experience helping a student set goals and achieve success.

One thing that never changes about CST graduates is their willingness to give back to Temple and to help the next generation of Owls succeed. I am thrilled to work with many outstanding new and returning members (listed on page 31) of the CST Alumni Board. I invite you to learn more about the Owl to Owl Mentor Program at cst.temple.edu/owl2owl.

Sincerely,

Sina Adibi (BA ’84, CIS; FOX ’86)

Kim Reuter (PhD ’15, Bio): Using science to drive conservation in Africa

When it comes to conservation biology, Kim Reuter is a double threat. The Conservation International (CI) biologist has garnered worldwide media coverage for her research of the world’s most endangered group of primates, the lemurs of Madagascar—a continuation of her Temple doctoral research. As CI’s director for natural capital accounting, the Nairobi-based scientist also shows African nations how to accurately account for, and to enhance, the true value of their natural assets.

Born in Germany, raised in England and then in Florida, Reuter earned a BS in biology from Florida State University in 2009. Subsequently, her first field research job involved trekking through the rain forests of Equatorial Guinea to study the impact of illegal hunting and trade of monkeys. “I realized then that I wanted to work at the nexus of conservation and human livelihoods,” she says.

Awarded a National Science Foundation fellowship, she came to CST’s Biology Department to pursue her doctorate in 2009. “I was surrounded by people who were thinking big about big problems, and you don’t get that at every school,” says Reuter, who continues to publish joint research with two of her Temple advisors, Associate Professor Eric Cordes and Assistant Professor Brent Sewall. Her Temple experience, she adds, convinced her that, “Science has to inform the work of conservation and for that reason, scientists have to work in conservation organizations.”

Supported in part by the National Geographic Society, her groundbreaking lemur research in Madagascar has concluded that over a three-year period about 28,000 lemurs are held captive as pets and hotel attractions. Some lemurs and other mammals are also consumed as bushmeat, even in restaurants where Reuter has, unknowingly, dined.

The extremely varied work invigorates her. “I’m 28 years old and I have to pinch myself sometimes when I think about the things I do every day,” she says. “For example, I’m currently organizing a workshop here in Nairobi on natural capital accounting for delegations from 12 African nations, from Liberia to eastern Africa and South Africa. If we’re successful, it could have important implications for years to come.”

— Bruce E. Beans
Panagis Galiatsatos (BS ’06, Bio): Returning home to make a difference

Dr. Panagis Galiatsatos is proof that—despite novelist Thomas Wolfe’s adage—you can go home again, and make a big difference doing so.

After earning his MD at the University of Maryland, the son of Greek immigrants returned to the Greektown neighborhood in Baltimore where he was raised, this time as an internal medicine resident at the nearby Johns Hopkins Bayview Medical Center.

An encounter he then had with a local church’s parishioners inspired him to co-found Medicine for the Greater Good (MGG), a program highlighted in the New England Journal of Medicine. It teaches medical residents to better understand the social determinants of health—such as income level and ethnicity—and to partner with communities to improve health equity.

“I went to a Greek church to discuss cancer and was struck by the disconnect between what health providers know and what community members know about prevention,” recalls Galiatsatos, now a pulmonary and critical care fellow at Johns Hopkins Hospital and National Institutes of Health.

Since its 2013 launch, MGG has become an elective course for Hopkins medical residents. The university’s medicine, nursing, music and business school students are also now involved in creating hundreds of holistic health projects—caregiver support, controlling children’s asthma—that have so far reached more than 1,000 Baltimore residents.

“Providers must have the right medical education, where social justice, socioeconomic barriers of health and an understanding of health literacy are emphasized as much as pathology and physiology,” he recently wrote in a Baltimore Sun op-ed piece. “We should know the science but also know our patients and what barriers keep them from caring for themselves.”

Galiatsatos believes the CST faculty prepared him to handle the challenges of medical school and a medical career. “It was hard to understand how the science would tie into something meaningful,” he says, “but my professors, including Jacqueline Tanaka in biology, made me realize there is humanity in science.”

—Bruce E. Beans

Kathryn Knauth (BS ’12, Math/Comp Sci): Developing Amazon’s streaming software

If you stream any of the thousands of movies and TV shows Amazon makes available to its customers, you might want to thank Kathryn Knauth. Since graduating four years ago, she has been a software development engineer for Amazon—first in Orange County, California, and for the past year in London.

She helps develop software that streamlines the experience Amazon customers have when accessing movie or TV videos. “Working with the website’s servers, we have to think a lot about the scale of the operation,” she says. “When you have millions of customers trying to do something at the same time, you have to think a lot about how to handle that kind of volume in order to make things work seamlessly and really fast all the time.”

Knauth originally came to Temple as a linguistics major. But the memory of a computer programming course she had taken at the Community College of Philadelphia before transferring to Temple inspired her ultimately to change her major.

“Across the board my professors were awesome,” recalls Knauth. “They were very supportive and gave practical career advice, including recommending internships”—such as her summer PNC Bank internship.

As an undergraduate research assistant under Li Bai, now the chair of Temple’s Electrical and Computer Engineering Department, Knauth worked on an augmented reality project in collaboration with Temple dance students. As a Diamond Research Scholar, advised by Associate Professor Rolf Lakaemper, she worked on a software project involving Microsoft Kinect and computer-generated avatars whose possible applications include therapy for children on the autism spectrum. For her senior capstone project, she helped develop an Android app for SEPTA commuters.

Finally, her attendance at the Grace Hopper Celebration of Women in Computing conference in fall 2011 led to her current Amazon job. Knauth’s ultimate goal? “I want to change the way that people interact with technology in order to make it a more seamless part of our lives.”

—Bruce E. Beans
SUPPLEMENTAL FUNDING FOR PROMISING RESEARCH

Gelest, Inc., a worldwide leader in materials science and technology, is generously supporting student research within the Department of Chemistry. Based in Morrisville, Pa., Gelest manufactures silane, silicone and metal-organic compounds serving advanced technology markets.

Gelest’s gift will provide undergraduate or graduate students who are engaged in silicon- or metal-organic-based projects with supplemental funding to ensure uninterrupted research. Funding will be offered to chemistry student recipients for six months and is renewable for additional six-month periods. The first two student recipients of Gelest’s supplemental funding are Charles Stockdale for his work in “Para Addition of Silyl Anions with Phenylsilanes” and Megan Van Vliet for her research “Layer-by-Layer Step-Growth Synthesis of Single Ion Conductors on Silanated SiO2.” Gelest will also provide in-kind support of required silicone- or metal-organic-based materials.

Barry Arkles (BA ’70, PhD ’76, Chem), president and founder of Gelest and a member of CST’s Board of Visitors, saw the need for additional research funding and helped to initiate the gift.

BOARD OF VISITORS MEMBER SUPPORTS ‘TOP-UP’ FELLOWSHIPS

Jay Novik (BA ’67, Math), a member of the CST Board of Visitors, made a generous gift to strengthen the college’s efforts to attract the highest quality doctoral students. Novik, principal at Black Diamond Capital Partners, has more than 30 years of experience in both life and property and casualty reinsurance. He has been a private investor and served in various senior management capacities at reinsurer Swiss Re from 1977 to 1999.

Currently, Temple provides doctoral students with fellowship funding that is often several thousand dollars less than peer institutions. Dean Michael L. Klein, FRS has identified ‘top-up’ funds—money that can be used to make CST fellowships competitive with peer institutions—as a key component in bringing in talented graduate students who might have enrolled in Ivy League and other top institutions. Novik’s gift is one of the first contributions to the ‘top-up’ fund initiative.

Kyle Knouse (BS ’16, Chem):
Next stop Scripps Research Institute

Before he even headed west to pursue a doctorate in organic chemistry at the highly ranked Scripps Research Institute in La Jolla, California, Kyle Knouse already had authored a list of published, peer-reviewed papers that would be the envy of most doctoral students.

He is the lead author, along with co-author William Wuest, an assistant professor and Knouse’s research advisor, of a paper published earlier this year in the Journal of Antibiotics. He also co-authored, with Wuest and other Temple researchers, two papers published in the Journal of the American Chemical Society (JACS); and one or two more future papers. In addition, his medicinal chemistry internship with Teva Pharmaceutical Industries in West Chester, Pa., resulted in another submitted paper.

His Journal of Antibiotics paper, and the two Temple JACS papers, focus on a potential new antibiotic, Promysalin, a compound produced by bacteria found in the root system of a Sri Lankan rice plant. “To survive, the bacteria produce compounds like Promysalin to fight off and hinder the growth of other bacteria, a very specific, targeted activity that you often don’t find in other antibiotics,” Knouse explains.

The New Oxford, Pa. native gravitated to chemistry his sophomore year when, Knouse says, “I couldn’t get enough of organic chemistry, which everyone else was struggling with and hating.” Once he started working in Wuest’s lab, he says, “I fell in love with it and decided this is what I want to do for the rest of my life.”

Of his acceptance to Scripps, the country’s 6th ranked organic chemistry PhD program, Knouse says, “I am blown away by the opportunity.” Whether his graduate work leads to an academic or industrial career, Knouse adds, “I want to pursue research that benefits human health.”

—Bruce E. Beans
James E. West (AS ’56, Physics) named to Temple’s Gallery of Success

James E. West, a pioneer in acoustics, has been named to the Temple Gallery of Success, a collaboration of the Office of Alumni Relations and Career Center that highlights the inspiring success of alumni.

West is currently professor at Johns Hopkins University in the departments of Electrical and Computer Engineering and Mechanical Engineering. He was formally a Bell Laboratories Fellow at Lucent Technologies.

His work at Bell in the early 1960s on charge storage and transport in polymers led to the development of electret transducers for sound recording and voice communication. This simple but rugged transducer is the heart of most new telephones and is found in microphone applications from toys to professional equipment. Almost 90 percent of all microphones built today are based on his pioneering research.

West holds more than 250 U.S. and foreign patents. He was inducted into the National Inventors Hall of Fame in 1999. He is a member of the National Academy of Engineering; Fellow and past President of the Executive Council of Acoustical Society of America, and a Fellow of the Institute of Electrical and Electronics Engineers.

West served on the Board of Directors of the National Inventors Hall of Fame and on the National Academy of Engineering’s Committee on Diversity in the Engineering Workforce. He is a board member of Ingenuity Program for advanced STEM education in the Baltimore Public Schools.

West’s numerous awards include the Franklin Medal in Engineering. He also holds six honorary degrees, including one from Temple. Originally a pre-med student at another university, West says “Temple was a real transition point for me. It is where I began to do what I really loved.”

GIFTS FROM CST GRADUATES, FACULTY AND FRIENDS NAME SPACES IN SERC

The Science Education and Research Center (SERC), helping to attract top students and faculty to the college since opening in 2014, is also inspiring the investment and generosity of CST’s donors. In spring 2016, 10 SERC spaces were named, funding a variety of college initiatives.

Angelo Armenti (MA ’65, PhD ’70, Physics), who earlier established the Peter Havas Humanitarian Scholarship for Outstanding Physics Graduate Students, made a gift to name a physics office. Lynne and Franklin Davis, Laura H. Carnell Professor of Chemistry, named a conference room. Their gift supports the Dean’s Faculty Endowment Fund and chemistry scholarships.

Terry and Lydia Dougherty, both 1974 chemistry graduates, named the office of Professor Justin Shi in honor of Terry’s parents. An investment from Robert (BA ’66, Chem) and Bonnie Fineman named a student conference room and established the Edward and Francis Fineman Scholarship, named in memory of Robert’s parents, to provide scholarships for chemistry students with financial need and academic achievement.

A gift from George and Marion Evans, both chemistry graduates from 1950, is funding chemistry scholarships and naming an office within the college’s Institute for Genomics and Evolutionary Medicine. Ralph Hillman, professor emeritus of biology, named a SERC collaboratory, an open space that invites interaction and discussion. Herman (MA ’55, PhD ’58, Chem) and Pauline (BA ’52, Chem) Levin supported another collaboratory. Physics professor Marjatta Lyra’s gift named a conference room in honor of her mentor Albin Lagerqvist, a molecular spectroscopy pioneer at Stockholm University.

Another conference room was named for Steven Petchon (FOX ’80), who established two funds to support Department of Computer & Information Sciences students. Physics professor Rongjia Tao is supporting post-doctoral fellows through a gift that also named an office on SERC’s fourth floor. A gift from John and Brooke Walker also named a SERC collaboratory and a gift from Barton (BA ’56, MA ’60, Math) and Lyanne Wassermann named a faculty office on SERC’s fourth floor.