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Summer 2018

College of Science and Mathematics Newsletter, Summer 2018

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The latest news and announcements from the
Wright State University College of Science and Mathematics

THE COLLEGE OF
SCIENCE+MATHEMATICS

Newsletter



Summer 2018

Dean's Message

In the Spring 2018 Newsletter I listed a series of “what if” questions surrounding the role of innovation and entrepreneurship in STEM education at Wright State (see [here](#) as a reminder). I’d now like to add a few more of these statements, and provide some corresponding answers this time: What if CoSM sponsored an innovation weekend event and it was wildly successful? What if students from across campus tackled a real world problem with such vigor that they impressed a group of regional content experts with their imaginative solutions? What if this opened the door to new ideas for engaging students in the core sciences to improve student retention and success? The answers to these not-so-rhetorical questions are all positive: “We did”, “They did” and “It will”.

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Alumni Spotlight

Love of the wild, Shawn Heflick, Biological Science alumnus

Shawn Heflick’s interest in wild things started back on his childhood farm in Ohio. The farm along with his two childhood heroes, Tarzan and Jacques Cousteau led him to a career in biology. Heflick threw himself into biology and later enrolled at Wright State, graduating in 1993 with a Bachelor’s of Science from the Department of Biological Sciences. He continued his studies in conservation biology and marine biology to earn a Masters in Science.

Heflick is the CEO and Founder of Crocodile Conservation International, Director of Crocodile Manor, which is a private Zoological & Conservation Facility, and founder of Crocodile University and Venom University, which provides in-depth training for professionals in their fields.

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Earth & Environmental Sciences alumnae mines for gold in Alaska

She struck gold in her career following graduation from Wright State University — real gold. Elizabeth Freeman graduated from Wright State with a bachelor's degree in earth and environmental sciences in 2015, now works as a geologist looking for gold at an underground mine in Alaska.

Freeman worked as a substitute science teacher at Summit Academy in Dayton and then a contracted teacher for a year. Then in 2016 she moved to Alaska, landing a job as a core logger 45 miles nor-northwest of Juneau.

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Biomedical Sciences alumnae Katherine Heminger, PhD, returns to give seminar

Katherine Heminger's fascination with science led her to earning a Ph.D. from the [Biomedical Sciences Ph.D. program](#) working in professor Steven Berberich's laboratory in the Department of Biochemistry and Molecular Biology and a career with the Procter & Gamble Co., where she designs and executes human clinical trials to test and confirm the effectiveness of ingredients in the company's skin-care and anti-aging products.

Heminger recently returned to Wright State to give a seminar and meet with students. Her seminar was titled "Life as a Ph.D. Scientist in Industry" and was hosted by the Biomedical Sciences Ph.D. Program. She and Ravi Ranatunga, a P&G recruiter, shared their experiences at Procter & Gamble as well as resume-building tips for Biomedical Sciences students interested in working in the private sector.

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CoSM Spotlight

2018 Science & Mathematics Outstanding Teaching Award goes to Ioana Pavel, PhD., Department of Chemistry

On behalf of the CoSM Dean's Circle, the college is pleased to announce Ioana Pavel, Ph.D. as this year's winner for the College of Science & Mathematics "Student's Choice Award for Outstanding Teaching." Pavel is an associate professor for the Department of Chemistry. She joined Wright State University in 2008. Her research interests range from Bioimaging and cancer research, environmental chemistry, nanotoxicology, and nano-education and chemical education.

Below are just a few of the numerous comments received by students:

- She is a wonderful person and teacher who genuinely cares about her students. She doesn't assume that her students are all knowing, and thoroughly explains everything. She also realizes that her students' lives don't revolve around her class 24/7 and gives reasonable assignments with ample practice. If I had more teachers like her in my previous major, it would have taken me much longer to switch.

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ALS research led by Wright State neuroengineer Sherif Elbasiouny published in prestigious physiology journal

The study by Elbasiouny, Shaker Dukkupati and Elbasiouny's team of researchers was published in *The Journal of Physiology*, a peer-reviewed scientific journal founded in 1878. The journal has published papers from more than 40 Nobel laureates. Elbasiouny's research could help develop new treatment options for Amyotrophic Lateral Sclerosis (ALS), commonly known as Lou Gehrig's Disease for the New York Yankees star who was struck down by it.

ALS starts with the progressive loss of muscle function, followed by paralysis and ultimately death due to inability to breathe. Currently, there is no cure for ALS and no effective treatment to halt or reverse the progression of the disease.

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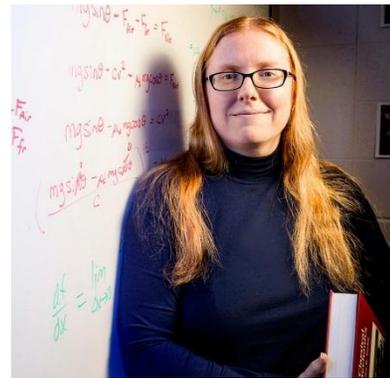


Wright State assistant professor Adrienne Traxler co-authors equity article in prestigious Physics Today magazine

An extensive article on how inequity in physics is driving talented women out of the field, co-authored by Adrienne Traxler, assistant [physics professor](#) at Wright State University, has been published in the prestigious *Physics Today*. The article is titled "Gender Matters" and written by Adrienne Traxler; Jennifer Blue, an associate professor of physics at Miami University; and Ximena Cid, an assistant professor of physics at California State University.

The article highlights studies that show systemic bias against women in physics, examines implicit bias and considers stereotypes about women and physics. It then outlines what physicists can do to improve things and offers resources. Traxler says only about 20 percent of the undergraduate degrees in physics go to women, far less than biology, chemistry and math. She said the lack of women in physics stems from factors that begin when they are very young girls.

[Read more](#)



Innovation Weekend seen as big success; four more are planned beginning in the fall

An intensive, three-day brainstorming exercise at Wright State University boosted the confidence of students, who came up with potential solutions to real-world problems in the handling of battlefield injuries and mass-casualty situations. The first-ever Innovation Weekend — hosted by the College of Science and Mathematics (CoSM) — attracted about 35 students from four different colleges to the Student Success Center in April.

Douglas Leaman, dean of the college and lead organizer, called it a huge success that was made possible by the involvement of regional companies, military and nonprofit organizations. "I saw students who weren't science or engineering majors tackling this problem and coming up with great solutions. I think they surprised even themselves," Leaman said.

[Read more](#)
[Watch video](#)



Share your spare: retiree donates kidney to fellow Wright Stater

Excerpt from the WSU Retiree Association newsletter, The Extension

Last September 19, Joyce Howes opened her email and changed two lives. (Howes is retired assistant dean for the College of Science and Mathematics and current adjunct faculty for biological sciences). She read an appeal from a man whose name she recognized from her years at Wright State, Phil Combs, who was on the staff for the Center for Teaching and Learning. Phil needed a kidney. His kidneys had been damaged by decades of diabetes. He had started dialysis the year before. He was on the wait list for a cadaver kidney, but those waits can sometimes be long. Five friends had volunteered to be donors, but none of them was a match.

Joyce responded to Phil's appeal immediately (almost impulsively, she says)...The initial blood test showed a probable match and thus began a long series of medical tests to determine whether she was sound enough physically and mentally at age 66 to go through the three-hour surgery. She cleared the last hurdle in January. Phil was thrilled and profoundly grateful to learn that he had a living donor! Joyce and Phil met for the first time soon after the good news.



[Read more](#)

Student Spotlight

College of Science & Mathematics Top Scholar Becca Ewing

Becca Ewing was familiar with Wright State since her dad had worked on campus as an Army ROTC professor. As the salutatorian of her high school class in Batavia, OH, Wright State offered her excellent financial aid, with the added benefit of being close to home.

In high school she wasn't attracted to physics. But once at Wright State, she encountered a persuasive professor who talked about how exciting physics research was, how much math was involved, and how many jobs you could get with a physics degree. Missing math and remembering how she enjoyed calculus in high school she decided to be a physics and mathematics dual major.

As a student she became a tutor, she served on the Dean's Circle, was selected as a Considine Scholar, interned at the Air Force Institute of Technology (AFIT), and started the Math Club. "Whatever you're interested in you can find something on campus to be a part of – and if there isn't anything for you, you can start it yourself".

[Read more](#)



First Place Undergraduate Poster awarded to Rebecca Reese at Inaugural Biomedical Research Conference

Rebecca Reese, a freshman in the Biochemistry Molecular Biology (BMB) department, won the first-place award of Undergraduate Research Poster Session of the Inaugural Biomedical Research Conference in 2018. As the first place award winner, she also received a \$100 honorarium. Rebecca has conducted her work under the guidance of Hongmei Ren, PhD, assistant professor in the BMB department. Dr. Ren's research interests focus on lipid metabolism, its association with autophagic clearance of mitochondria (mitophagy) and homeostasis, and its effects on cardiac and skeletal muscle function. Rebecca's research poster is titled "Lipin1 is required for skeletal muscle development".



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Supporting the College

Thank you for supporting Campus Scholarship and Innovation Campaign

Wright State University students offer their thanks to alumni, faculty, staff and retirees who gave to the Campus Scholarship and Innovation Campaign (CSIC). Your participation to the CSIC makes a powerful impact. Thank you!



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Announcements

- **Joshua Sensenbaugh** elected vice president of Student in Pediatric Neuropsychology
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- **Wright State** hosts ERP Boot Camp, researchers learned about Event-related potentials
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- **Biological Sciences** alumnae named by Dayton Business Journal as a Top Forty under 40
[Read more](#)



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