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Fall 2017

College of Science and Mathematics Newsletter, Fall 2017

College of Science and Mathematics

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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



Fall 2017

Dean's Message

Please accept my personal and warmest New Year's greetings. As we move into a new calendar year, we mark the halfway point in the academic year - and what a year it has been. This fall semester was particularly special as Wright State kicked off its 50th anniversary celebration with a number of excellent events, but none better than the homecoming brunch with numerous founding faculty and alumni from the earliest graduating classes in attendance. These people were true pioneers who took a chance on a fledgling institution and laid the foundation for what we have become. Inspiring, heartwarming and historical, I will treasure the brief time spent with these folks.

As a college, we welcomed several new degree programs to the fold this fall. These have all gotten off to great starts and represent important areas of unmet need at the university. I have no doubt that the college's growth in the coming years will center on these new programs in neuroscience, biochemistry/molecular biology and public health science. We are also moving rapidly toward new options in data science, actuarial science and others - stay tuned for more on these topics. Even as the university traverses a necessary phase of reassessment and contraction, the alignment of our goals to the needs of the region, state and country will continue to inform our approach to education.



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Alumni Spotlight

CoSM Alumnus TJ Hufford receives Graduate of the Last Decade Award

On Friday, September 29, 2017 the College of Science and Mathematics joined Wright State University's Alumni Relations to recognize outstanding alumni. Among them were Department of Biological Sciences' alumnus Theodore Hufford, M.D., '08 B.S., '12 M.D. who was awarded the 2017 Graduate of the Last Decade Award.

The Graduate of the Last Decade Award recognizes the accomplishments of Wright State undergraduate alumni who have graduated within the past 10 years. These alumni have quickly excelled in the various aspects of life by demonstrating outstanding accomplishments in their professional careers; impressive volunteer service; and/or noteworthy involvement in professional and service organizations.

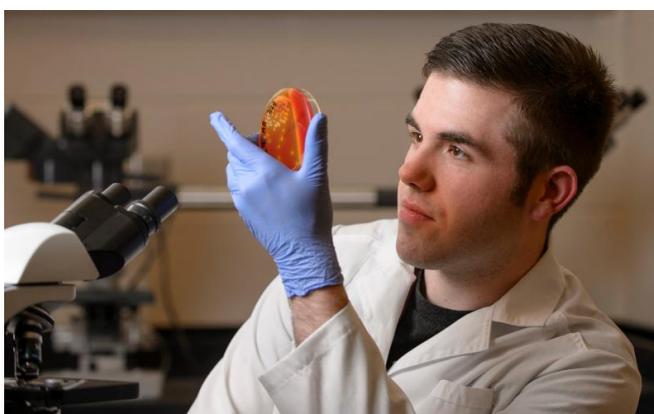


Since graduation, he completed a residency in General Surgery at the University of Illinois-Chicago where he earned acclaim for his leadership, teaching abilities, and dedication to research and patient care.

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Wright State alum Brandon Baum '17 wins prestigious honor from American Society for Clinical Pathology

The 2017 graduate of Wright State University's [Clinical Laboratory Sciences program](#) works for CompuNet Clinical Laboratories in Dayton. The company does lab work for physicians, hospitals, patients, employers and health care industry organizations in southwest Ohio.



"This job enables me to help people while doing the laboratory work that I love and using my brain to solve the puzzles," Baum said. "Every single thing I look at is always new, and it's always challenging me to use my skills to be better."

Baum's skills are already pretty good. He graduated from Wright State in April with a cumulative 3.85 GPA and just won a prestigious National Student Honor Award from the American Society for Clinical Pathology, the world's largest professional membership organization for pathologists and laboratory professionals.

[Read more](#)

COSM Spotlight

Exciting opportunities for Wright State students in actuarial science.

Make a difference in a career that counts

What does it mean to have a career in actuarial science? Year after year career surveys report that being an actuary is one of the highest rated jobs in America. In fact, when rated for job security, employment outlook, pay level, work setting and stress, the job of actuary outshines virtually all other professions.

Why then do so few know about it? We asked [Bill Partridge](#), an actuary with 30 years experience who is currently teaching actuarial science courses in the [Department of Mathematics and Statistics](#) at Wright State. His answers may surprise you.

One reason might be that it is a relatively small profession (~25,000 actuaries in the U.S. vs, say, ~1,250,000 accountants). Another reason might be that becoming an accredited actuary (in one of two professional actuarial organizations) requires



a combination of excellent math skills, a good understanding of economics, finance and business together with a willingness to spend considerable personal time studying for a series of professional exams. However, the financial rewards are substantial, and most actuaries will earn 6 figures with 5 -10 years of experience.

At Wright State University, the Department of Mathematics and Statistics has embarked on a program to provide a pathway for those students interested in actuarial science to achieve a degree that will allow them to launch a career as an actuary. Today, a student who majors in Statistics may graduate from WSU with a B.S. degree in Statistics with an [Actuarial Science Concentration](#).

[Read more](#)

NSF grant awarded to Sara Pollock, Ph.D., developing new methods to solve challenging nonlinear problems

Assistant Professor Sara Pollock, Ph.D., in the [Department of Mathematics and Statistics](#), is the Principle Investigator on a recently approved National Science Foundation grant. Her grant will fund the development of numerical tools to approximate solutions of nonlinear problems found in realistic physical models. Pollock's grant is titled: Regularized adaptive methods for classes of nonlinear partial differential equations.



The goal of the grant project is to develop efficient and robust simulation technology for classes of nonlinear diffusion equations. These equations appear often in physically realistic and environmentally relevant modeling problems, such as heat conduction and groundwater flow. Many systems in nature are inherently nonlinear, and standard methods of successive approximation may fail to produce solutions to these models.

[Read more](#)

Wright State faculty members receive outstanding engineers and scientists award

Lisa Kenyon, Ph.D., associate professor of [biological science](#) was one of two Wright State University educators who were recipients of the 2017 Affiliate Society Council (AFC) Outstanding Engineers and Scientists Award.

She is finishing two National Science Foundation-funded projects spanning 11 years called Supporting Scientific Practices in Elementary and Middle School Classrooms and a second called MoDels.

The AFC is comprised of about 50 local chapters of professional science and engineering organizations, including the Engineering and Science Hall of Fame, the Institute of Industrial and Systems Engineers, the Institute of Environmental Sciences and Technology and the Society of Manufacturing Engineers. The awards have been given out for more than 40 years.



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College of Science and Mathematics launching novel campus-wide program to boost math success

An innovative program designed to increase student success in math by offering "just-in-time" remedial courses in tandem with college credit-bearing classes is getting off the ground at Wright State University.



Wright State is only one of three public colleges and universities to win an implementation Bridges to Success award from the Ohio Department of Higher Education to support offering this type of remediation at scale.

Douglas Leaman, dean of the [College of Science and Mathematics](#), said the program promises to enhance the success of Wright State students in a big way. "It's not going to impact students in just one major. It's going to impact students in every major - a huge population across the campus," Leaman said.

Nationally, students who are placed into traditional math and English remediation courses have much lower success rates than others. One study shows that 74 percent of students complete remediation, but only 37 percent of them go on to complete the associated college course.

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Volunteer Program Assessment Launches at Wright State, Human Factors and Industrial Organizational Psychology Program

Developing future professionals through scholarship, mentorship, and community engagement

The mission of the Volunteer Program Assessment at Wright State University (VPA-WSU) is to provide non-profit organizations with quantitative and qualitative data and feedback about their volunteers' experience, at no cost to the organization, with the goal of improving volunteer and organizational outcomes. Not only is the purpose of VPA-WSU to provide non-profit organizations with free resources to help improve their impact. It also provides our [Industrial and Organizational Psychology](#) graduate students with learning and professional development opportunities through consulting experience.



The Volunteer Program Assessment (VPA) was founded through a partnership between the University of North Carolina at Charlotte (UNCC) and the Humane Society of the United States under the direction of Dr. Steven Rogelberg. Since its founding in 2009, VPA has opened chapters at universities across the United States. Wright State University is the seventh and newest chapter of VPA.

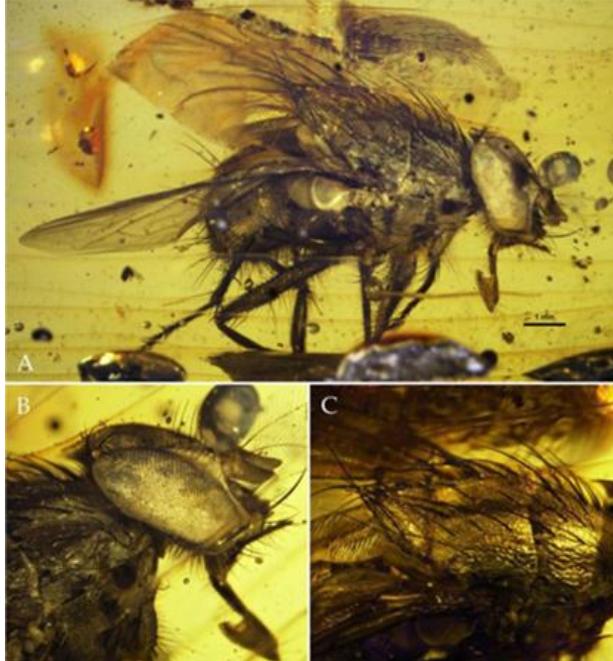
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Wright State researcher finds first fossil of "higher" fly **Linking an extinction event to fly diversification**

Because there are so many of them, flies have plenty of scope to be helpful or to be a nuisance.

Yet flies, along with other insects, are of primary interest to professor John O. Stireman, Ph.D., in the [Department of Biological Sciences](#) with the College of Science and Mathematics. Stireman's focus on insects is due to their immense taxonomic and ecological diversity. They offer countless opportunities to examine a wide range of ecological and evolutionary questions.



Stireman with collaborators P. Cerretti (U. Roma), T. Pape (U. Copenhagen), J.E. O'Hara (CNC), and others, recently published their work on the first unambiguous fossil from the botfly superfamily of a major group of flies (Calypttratae). Their article, titled "[First fossil of an oestroid fly \(Diptera: Calyptratae: Oestroidea\) and the dating of](#)

[oestroid divergences](#)", was featured in [Science Daily](#), shedding light on the rapid radiation of flies during the Cenozoic Era. For insects, this is like finding the first fossil monkey or cat.

[Read more](#)

Neuro Lab

New Wright State program to give high school students up-close look at the mysteries of the nervous system

A pioneering new program designed to give advanced high school students an interactive experience into the workings of the nervous system will begin at Wright State University. Students will conduct experiments involving prosthetics, reflexes and muscle fatigue.



The [Department of Neuroscience, Cell Biology and Physiology](#) will launch the "Neuro Lab" spring semester at the Wright State Boonshoft School of Medicine and [College of Science and Mathematics](#). The 90-minute sessions will feature six stations in three modules focusing on different aspects of neuromuscular control.

"It's very captivating. It's very interactive. And it's something they will definitely remember doing," said Thomas L. Brown, neuroscience professor and associate chair for research at the [Boonshoft School of Medicine](#).

Patrick Sonner, instructor and director of the undergraduate neuroscience program, said one of the lab's goals is to excite students about the scientific process

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Student Spotlight

Wright State student dives deep into campus opportunities

At 9 years old, Megan Reed was given an assignment to create a PowerPoint presentation. She decided on marine biology for her presentation topic and with that her passion for water ecology was ignited.

As a Greenon high school student, she had heard about Wright State since it

was close to home and several of her fellow classmates were planning to attend. Once at Wright State, Megan's passion for the water lead her to enroll in the university's scuba program where she earned her certification during her first term.

Scuba became one of her favorite courses and the scuba program coordinator and adjunct faculty member, Regina Bier, quickly became a mentor. Bier is a NAUI-certified course director - the highest level of certification the association gives to recreational diving teachers. Currently Megan is working on her certification as a dive professional and interning at the Newport Aquarium through the Wright State Underwater

Raiders. Due of the reputation of the university's scuba program, the aquarium enjoys working with their students due to their abilities and safety standards.



[Read more](#)

Supporting the College

Memories of CoSM impact your engagement with CoSM today

Think back on your studies in CoSM. What did the campus look like? Which buildings were your classes or labs taught in? Where did you study and meet up with friends? Which student organizations did you participate in? Which CoSM faculty or staff made the greatest impact on you? How did your CoSM experience prepare you for your career?



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The memories that come to mind comprise your CoSM student experience. Those memories are uniquely yours, and it is likely that some aspects of your CoSM experience are similar to those of current CoSM students. The memories that shaped your CoSM experience can impact how you actively engage with CoSM today.

[Read more](#)

Announcements

- [Stephanie Goodwin to represent Wright State in support of American Council of Education Women's Network of Ohio](#)
- [Save the date: Environmental Sciences, PhD Program Carmichael Lecture, Brandie Smith, Ph.D., associate director of Animal Care Science, Smithsonian's National Zoo in Washington D.C.](#)



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