

DEANotes

C O L L E G E O F S C I E N C E A N D T E C H N O L O G Y

W O N G N O T E S – K U D O S E D I T I O N

This is an excellent time, as we close the academic year, to celebrate our collective successes. Of course, an issue such as this could list only a small sample of the many accomplishments of our faculty and programs, but here are some Kudos and shout-outs from the Dean's Office. Way to go!!

Academic Leaves Awarded for Fall, 2015

Cameron Coates, Engineering Studies

Mirari Elcoro, Psychology

Felix Hamza-Lup, Computer Science and Information Technology

Promotions (and tenure, if applicable), Effective August, 2015

Tricia Muldoon Brown, to Associate Professor of Mathematics

Sara Gremillion, to Associate Professor of Biology

Joshua Lambert, to Associate Professor of Mathematics

Donna Mullenax, to Senior Lecturer, Department of Chemistry and Physics

Traci Ness, to Associate Professor of Biology

Lea Padgett, to Senior Lecturer, Department of Chemistry and Physics

Jeffery Secrest, to Associate Professor of Physics

Faculty Awarded Emeriti Status - 2015

Lorrie Hoffman, Professor Emerita of Mathematics

(First) Annual Lorrie and Kevin Hoffman Mathematics Faculty Research Award

Duc Huynh

Officers in National Organizations

Scott Mateer – elected CUR (Council for Undergraduate Research) Councilor – Biology Division, 2015-2018

Jonathan Roberts – President, Southern Regional Honors Council, 2014-2015

Fulbright Scholarship Recipients

Felix Hamza-Lup

Grants Funded

Coates, Cameron, Johnson, Wayne, & Goesner, Priya. Each One Teach One; Summer Undergraduate Experience; Future Leaders in Engineering & Technology. NASA: Georgia Space Grant Consortium.

Mullenax, Donna, & Williams, Elizabeth. Georgia Barrier Islands Workshop. Georgia Department of Education Teacher Quality.

Mullenax, Donna, & Williams, Elizabeth. Georgia Landforms Workshop. Georgia Department of Education Teacher Quality.

Mullenax, Donna, & Williams, Elizabeth. Georgia Rocks and Minerals Workshop. Georgia Department of Education Teacher Quality.

Schlieper, Jared, & Tiemeyer, Michael. Affordable Learning Georgia Textbook Transformation. Board of Regents Affordable Learning Georgia.

Community and Service Awards

Cynthia Graves won Armstrong's Outstanding Service of the Year Award at the Martin Luther King, Jr. Awards Dinner in recognition of the excellent support she has provided to the Armstrong community, and particularly for her dedication in promoting African American history, culture and service.

Joy Reed won Armstrong's Women's Empowerment Legacy Award in recognition of the impact she has had upon past and current students' lives and careers, particularly in relation to raising awareness of gender equity in the STEM fields.

(Cont'd on page 6)

NEW FACULTY PROFILE: DR. HO HUYNH, ASSISTANT PROFESSOR OF BIOLOGY

Ho Huynh received his BS in Psychology from and PhD in Psychology from the University of has been the power dynamic in relationships recently directs the PASS (Psychology of Athletics responses to manipulated expectations, psycho- and leaders. In addition to his research, Dr. as Careers and Professional Skills in Psychology. called "Sports Psychology" next spring. Dr. volunteers as an assistant coach for the Arm- organization. He feels that his combined experi- many of his mentorship and teaching philoso-



the University of Arizona. He then earned his MS California – Riverside. Dr. Huynh's research interest (leaders/followers, doctors/patients, etc.) He cur- and Social Situations) Lab, which examines people's logical momentum in sports, and humility in athletes Huynh has taught Introduction to Psychology as well He looks forward to offering a brand new course Huynh is also very passionate about volleyball. He strong team and coaches a youth team with a local ence in the gym, classroom, and laboratory form phies.

SUCCESS STORIES - BY: EILEEN SNYDER

The following vignettes will give the reader insight into the personal success stories of five Armstrong students that have had the opportunity to participate in undergraduate research projects during this academic year. Each student shared their enthusiasm for working in an environment of continuous discovery and reflected on how it added a valuable dimension to their academic achievements and future endeavors. Many thanks to their mentors.

Here are their stories.

*All quotations are attributed to Dr. Richard Feynman

ERIK LEON, JUNIOR, COMPUTER SCIENCE

"There is no harm in doubt and skepticism, for it is through these that new discoveries are made."

Erik Leon is finishing up his junior year at Armstrong and he is already working in the computer science field as a software developer for a wholesale distribution company with retail outlets. As a computer science major, Erik has completed an undergraduate research project under the supervision of Dr. Felix Hamza-Lup involving a 3 D graphics modeling simulation that is designed to scan a patient's body in order to facilitate a more precise treatment/training regimen by preventing collisions that would otherwise intercept treatment for some life threatening illnesses.

According to Erik, "the goal was to create a system that is fast and cheap and we did that by utilizing cameras from the Xbox Kinect gaming system. The benefit to the patient is that their treatment plan will be more accurate and it won't add radiation."

Beyond his undergraduate research experience at Armstrong Erik is looking forward to graduation and seeking other opportunities within the computer science field. He is not focusing on any one industry, instead he just wants to do work that is challenging and innovative.

DAVID DUKES, SENIOR, BIOLOGY

"I learned very early the difference between knowing the name of something and knowing something."

David is currently pursuing a BS in Biology at Armstrong and will graduate this December with the goal of attending medical school. As an undergraduate his research opportunity came while taking a class in Genetics taught by Dr. Aaron Schrey, an expert in population genetics and ecological epigenetics. David's research efforts focused on the epigenetic factors responsible for the range expansion of the Kenyan house sparrow. According to David, "the overarching goal was to find out what epigenetic processes are involved in range expansion and why the Kenyan house sparrow is such a good invasive species."

David would persuade all Armstrong undergraduates that plan to attend graduate or medical school to seek out and take advantage of research opportunities, "as a graduate student research will be a large part of the program (thesis Masters, PhD programs), for medical school even though undergraduate research may not be required it will make you a more competitive candidate."

David is looking forward to his graduation at the end of the year. His military experience as a US Army Specialist working as an emergency room medic for a small community hospital was the catalyst for pursuing a career in medicine. He has taken the MCAT and is expanding his scope of opportunity by applying to several medical schools throughout the country.

Congratulations David!

ALEXIS LORBECKI, JUNIOR, BIOCHEMISTRY

"No problem is too small or too trivial if we can really do something about it."

Alexis remarked that her undergraduate research mentor Dr. Brandon Quillian is the reason she is considering a Ph.D. program, "He is a great mentor and he really cares- he set the expectation for the research project."

It all began in high school when Alexis found that she liked both biology and chemistry, "I am very interested in how the human body works but on the other hand chemistry just clicks with me." It became clear to Alexis that Armstrong's Biochemistry program would be the perfect pairing of her two passions-biology and chemistry.

Alexis found her undergraduate research opportunity when during an organic chemistry class she initiated a conversation with Dr. Quillian. She had already looked online at his research achievements and began to build a relationship that would lead to conducting research into preparing transition metal catalysts that are able to convert petroleum commodities into value-added resources for the manufacture of commercial products such as plastics, glues, and detergents.

Research at Armstrong has led to a major discovery for Alexis, "I will be happy working in a laboratory for the rest of my life!" She hopes one day to do research for a pharmaceutical company. Alexis encourages all undergraduates to find research opportunities, "it will prepare you for a career path after graduation or graduate school- take a class, get to know your professors and find an opportunity."

Good advice.

ALEXIS FIELDS, SOPHOMORE, BIOCHEMISTRY

"I was born not knowing and have had only a little time to change that here and there."

Alexis Fields considers herself a seasoned undergraduate researcher. It was her Mother that discovered the Armstrong summer research grant (STEP) program while surfing online. She gathered the paperwork for her daughter to fill out and that is where it all started one summer, two years ago.

"In the beginning my professor told me that I had little confidence, but now my confidence has gone through the roof. My mentor Dr. Quillian had me do pre-work before going into the laboratory which helped me tremendously in my research and in my organic chemistry classes." As a result, Alexis is currently doing research that is based in organometallics. It involves trying to find a greener approach to synthesize alkyl benzenes. "The way it is done now it produces too much toxic waste and it is not energy efficient."

Alexis plans to continue on with her research this summer. "The opportunities at Armstrong will give me an edge for getting into a good graduate school and possibly a scholarship award sponsored by the ACS." Alexis encourages all students to do undergraduate research. "You can sit around all day and talk about concepts but it is the hands on experience that makes the difference."

DANE ZURWELL, FRESHMAN, CHEMISTRY

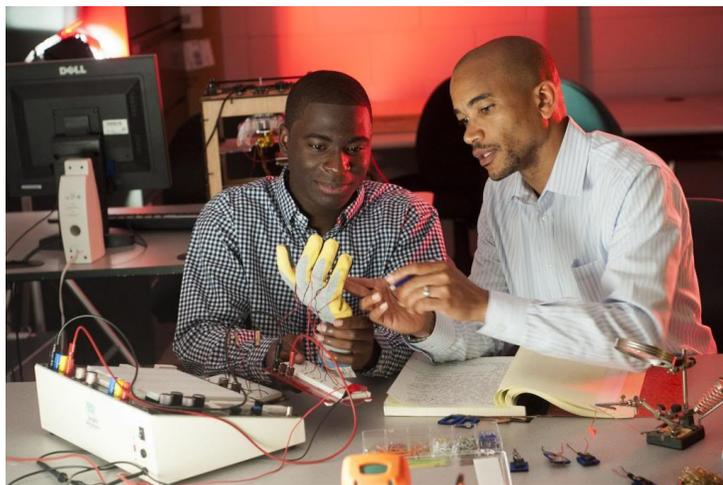
"The worthwhile problems are the ones you can really solve or help solve, the ones you can really contribute something to."

Being the son of a botanist one might think that Dane Zurwell would pursue biology, but after tasting an unusually realistic pickle-flavored lollipop his story unfolded a different way, "I knew that a chemist created that flavor and I was instantly intrigued"

Dane is no stranger to the research laboratory, his mother nurtured his love of science and her work gave him access early. "The things I am doing right now with my undergraduate research work I wouldn't be doing until my senior year if I went to another school." He describes his research as "Green Chemistry" and the ability to use equipment allows him to analyze what he has done up to a certain point. "I will do things in the lab and understand it later in classroom."

Dane is at the end of his first year as a Chemistry major and he talked enthusiastically about all that he has achieved thus far, he is a card carrying member of ACS and attended the SERMACS conference in Nashville last summer where he presented his research findings as part of the summer STEP program. Most recently he presented his undergraduate research at the Armstrong Student Scholars Symposium.

Dane's research is ongoing and will continue this summer. He feels at home in a laboratory environment and that is where he sees his future, doing work that makes a difference.



FESKE NOTES

Armstrong STEM Success Center – As an administrator I have attended several conferences over the past academic year. I have seen that a new and trending concept is the “STEM Center”. Last fall Jane and I submitted an application to Victory Media to earn the designation “STEM Jobs approved” (same group that also does Armstrong’s military designation). We were a part of a small group of universities that were awarded the designation (125 out of 1,301 schools applied). We received high marks in all areas except that we did not have a STEM center. Early this year, the Board of Regents sent us a survey that began by asking if we had a STEM Center. Unfortunately, our survey was short because we had the simple answer of “no” and the survey ended (we had a feeling that wasn’t a good answer). Just recently the BOR held a “STEM Summit” in Atlanta that I attended. They made it very clear that STEM centers (and more specifically “STEM Education Centers” – ask me the difference if you are interested) are a top priority for them. I personally expect to see targeted funding for these centers in their CCG STEM III initiative when it comes out. Jane and I decided that perhaps now we should implement Armstrong’s first STEM success center.

What is our plan for the Armstrong STEM Success Center? First, we have converted the title “director of tutoring center” to “director of the Armstrong STEM Success Center”. Congrats to Mathew Brown, our new center director, and thank you, Tim Ellis, for your many years of service to the Math department and CST tutorial center. Congrats on your retirement!! The STEM success center will be housed in the same location (the 870 sq ft tutoring center), but we also hope to have a significant online presence as well. To fund this new center, we incorporated this concept in a department of education TRIO grant written by Delana Nivens. This grant would fund personnel such as coaches and graduate assistants to help run the center. If this grant is not funded, we hope that simple initiatives could be funded internally through the creativity of CST’s faculty and staff. We have also considered forming a STEM Success Center Committee staffed by CST faculty to help drive the direction of the center. While the planning for the center is just getting started here are some ideas for Armstrong’s STEM Success Center:

- Continue offering tutoring services
- S.I. training
- Allow students to check out supplemental course related material (such as organic chemistry modeling kits or A & P skeletal models)
- Computers (that contain STEM specific Software)
- Career services
 - * web links (STEM Career.com, NIHlifeworks.org, etc) among other resources on the website
 - * Coordinate student tours/visits of local STEM related businesses
 - * Conduct mock interviews

Lastly, I would love your input!! If you have any ideas or suggestions as we move forward please email me. Do you want to serve on this committee?

ARMSTRONG

KUDOS (CONT'D FROM PAGE 1)

Bon Voyage! Best wishes for the next chapter. We'll miss you!

- Tim Ellis
- Joy Reed



PROGRAM KUDOS

AQUAPONICS– The FORAM Foundation has funded Armstrong to build the Aquaponics Research Facility, including the green house structure, aquaculture infrastructure for the fish, grow beds for the plants, solar system, and analytical equipment. Thus far, two undergraduate research students have been funded to conduct background scientific research to support the grant-writing endeavor, and the Biology Department funded Melanie Link-Perez and Matt Draud’s attendance at a national workshop on aquaponics featuring some of the world’s experts on the subject. Student volunteers are already on board for summer aquaponics research!

“SCIENCE ON TAP” – On International Darwin Day, CST kicked off this series of informal talks about various aspects of science with Richard Wallace presenting on “The Science of Thomas Edison” to a standing room only gathering at Coastal Trading Company/Savannah Coffee Roasters. Talks by Susan Schneider, Visiting Scholar at the University of the Pacific, and Frank Katz on “Actions Have Consequences” and “Happy Tax Day! Is Your Information Still Secure?” respectively, followed. After a summer hiatus (unless we have visiting scholars in town for a visit), Matt Draud will kick off the new year of “Science on Tap” with his talk “Our Changing Earth.”

TECHFEST – Armstrong hosted the third annual TechFest on April 17 toward the goal of creating stronger connections between students in the technology fields and local professionals and businesses in tech fields. Tino Mantella, the CEO of TAG (Technology Association of Georgia) and TechFest 2015 keynote speaker, spoke about the projected growth of technology jobs in Georgia. About 110 students, 40 business representatives, and 30 Armstrong faculty/staff attended. Twenty student posters were showcased and 14 business set up displays at the business expo, including the Georgia Ports Authority and OnPoint Digital, Inc. The CST Dean’s Office and Department of Computer Science and Information Technology awarded cash prizes to the top three poster entries. Kudos to Chris McCarthy for making this event happen!

ENGINEERING DESIGN COMPETITION – On April 25, Armstrong’s Engineering Studies program hosted “the wheel chair races,” “which showcased the ingenuity and creativity of students” from a number of nearby high schools. Teams worked to craft “a battery-powered, multi-terrain wheelchair,” and were mentored by Armstrong’s engineering students and faculty. WTOC-TV reported that students were given awards for how safe, creative, and well designed their entries were, noting that there was “a 40 meter race, a timed maneuver course and a demonstration of the safety features for each vehicle.” These are not our grandparents’ wheelchairs!

STUDENT SCHOLARS SYMPOSIUM – 179 CST students presented a total of 90 (poster and paper) presentations at this year’s SSS on April 16-17. Every CST department was represented in the student presentations. Jeremy Haynes, a psychology student, was the winner of the APA Research Division Award, one of five awards, in the Campus-Wide Writing Competition.

CENTER FOR APPLIED CYBER EDUCATION (CACE) – still in its conceptual stages, Armstrong, in a collaboration between the Department of Computer Science and Information Technology, the Department of Criminal Justice, Social and Political Science, and the Armstrong Police Cyber Forensics Division (CFD), aspires to offer state-of-the-art education, services, and research in cyber security and cyber crime through the new Center for Applied Cyber Education. Imagine “cyber wars” between teams of cyber security and cyber crime students! Armstrong is currently applying for designation as a NSA/DHS