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NEWSLETTER

March
2019

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chem_phy@uncp.edu 910/521-6247

THE NORTH CAROLINA REGION IV SCIENCE & ENGINEERING FAIR

The 2019 North Carolina Region IV Science & Engineering Fair was held on Saturday, February 16, 2019. Ambitious scientists from Robeson and surrounding counties proudly displayed their ideas in various scientific forms inside the Auxiliary Gym in the Jones Health and Physical Education Center. The Chemistry and Physics Department participants, projects, and awards are as follows:

Kaitlyn L. Zuravel, a ninth grader at Terry Sanford High School in Fayetteville, was named the overall winner. Her project was entitled *“Glue Busters II: The Effects of Accelerated Cure Time on the Ultimate Shear Strength and Efficiency of CA and PVA Glue.”* She was awarded the Grand Winner and received a \$1,000 UNCP Scholarship.

Dmytro Issac Storms, a sixth grader at Christ The Cornerstone Academy in Laurinburg, was named the junior winner. His project was entitled *“What’s UP with Hydraulics?”*

Layla Atkins, a third grader at Overhills Elementary School in Lillington, was named the elementary winner. Her project was entitled *“Does Changing an Object’s State of Matter Alter Its Other Properties Grade?”*

Rose-Mari Briones-Munoz, a fourth grader at Candor Elementary School in Candor, was named the elementary winner. She received the *Dr. Dalton Brooks Award*. Her project was entitled *“Racing Water”*.

The regional winners will advance to the state competition at N.C. State University on March 29-30.



Kaitlyn Zuravel, overall winner, with Dr. Jeff Frederick, Dean of the College of Arts and Sciences



Chemistry and Physics Department Winners

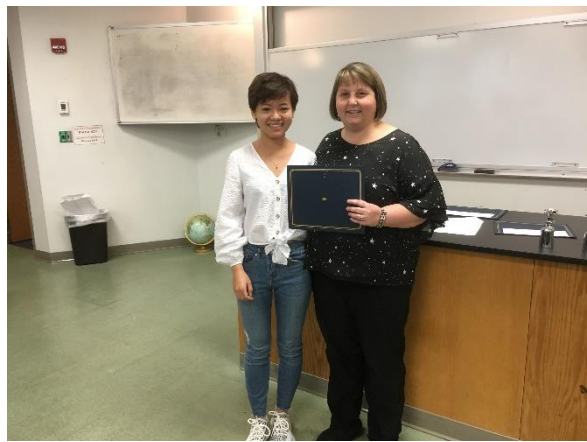
Layla Atkins, Issac Storms, Kaitlyn Zuravel

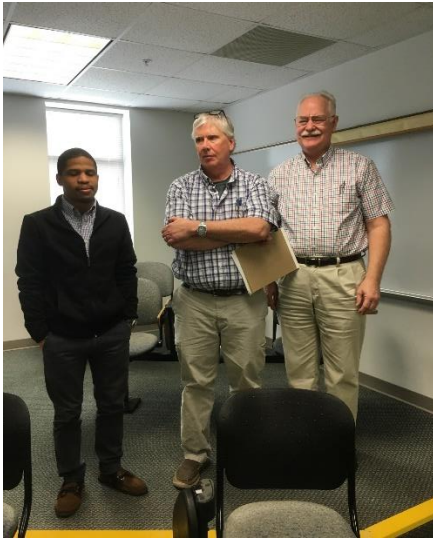
Rose-Mari Briones-Munoz, Dr. Jeff Frederick

ACADEMIC AWARDS DAY

The Chemistry and Physics Academic Awards Day Program-2019 was held March 13, 2019 in room SCI 3256. The department had 13 winning students for awards. They are **Jackson Bounds** – AIC Outstanding Senior Award; **Ethan Williamson** – Professional Promise Award; **Kathryn Flax** – Continuing in Chemistry Award; **Xin Dong** - ACS Sponsored Award in Analytical Chemistry; **Laura Bellamy** - ACS Sponsored Award in Inorganic Chemistry; **Yara Abumohsen** – ACS Sponsored Award in Organic Chemistry; **Daniel Middleton** – ACS Physical Chemistry Undergraduate Award; **Zixian Jiao** - CRC Freshman Chemistry Award; **Xin Dong** - Undergraduate Research Award; **Jamal Cromartie** - Outstanding Pre-Engineering Student Award; **Mariam Gerges** - Einstein Achievement Award in Physics; **Dana Lambertson** – ‘3+2’ Student Award; and **Brandon Lowery** - Outstanding Department Assistant Award. Congratulations, students, on your recognition and award!







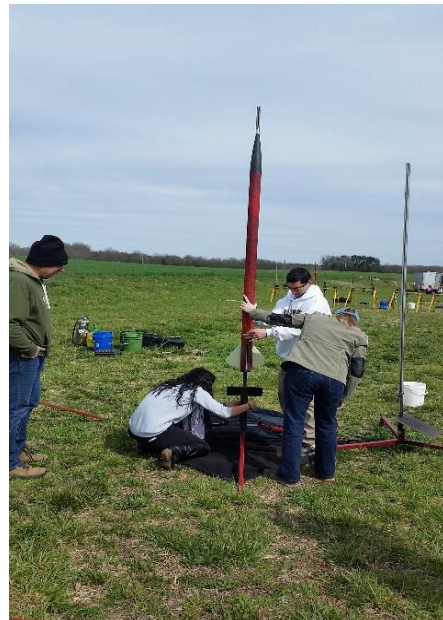


On behalf of the department, Dr. Mandjiny would like to thank the following faculty and staff members for the execution of the departmental awards day ceremony. It went extremely well.

1. Dr. Meredith Storms took complete initiative to get all the awards together which includes working with all the faculty and staff members, students and their family members. Meredith, thank you for all you do for this department. You are greatly appreciated.
2. Mrs. Hope Bullock worked very closely with Meredith to make everything happen. Faculty and students love it.
3. Mrs. Carolyn Oxendine and Mrs. Hope Bullock worked together in organizing a nice party. The food was great especially the punch and the cake pops. Thank you! Job well done.

DR. TOM DOOLING'S ROCKET TEAM

The department appreciates the effort of Dr. Tom Dooling and Dr. Jose D'Arruda in taking students to Charlotte, NC on March 16th for this wonderful student experience in sending rockets to the orbit.





UNCP ALUMNI and STUDENTS

The Abumohsen family visited the department on Friday afternoon, March 15th. It was great to visit with all of them.



Aseel, Ahmad, Yara, Dr. Mandjiny, Amal, and Rawan

OPENSTAX



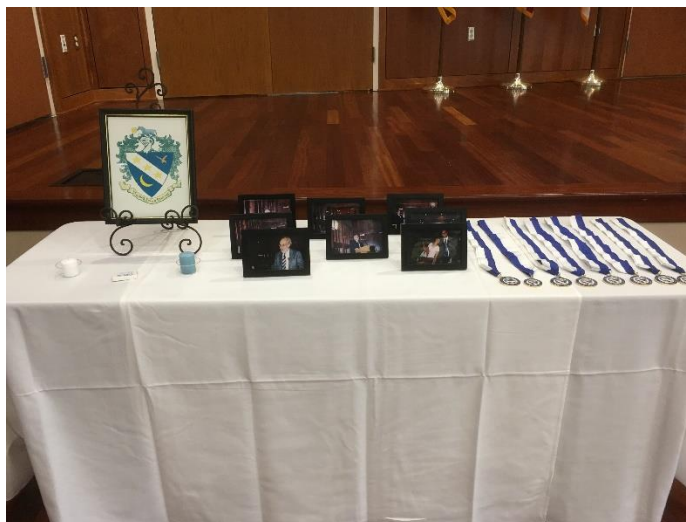
Dr. Paul Flowers of the University of North Carolina at Pembroke is the lead author for Chemistry. He first heard of Open Stax when one of his physics colleagues—he's in a joint department of chemistry and physics—adopted its physics textbook; but, a chemistry textbook wasn't yet available at the time. When the vendor that manages contracts for writing Open Stax books contacted him, Dr. Flowers jumped at the chance. The book was published in 2015, and a second edition was recently released. This article appeared in C&E News, March 18, 2019. Congratulations, Dr. Flowers for the contribution in Open Stax book in Chemistry. Job well done and we are very proud of you.

GAMMA SIGMA EPSILON CHEMISTRY HONORS SOCIETY

The Gamma Sigma Epsilon Chemistry Honors Society Induction Ceremony was a big success on March 20 in the University Center Annex. There was great fellowship with the students and their families and lots of good food. The students are **Joshua Cade, Xin Dong, Kathryn Flax, Haylee Nall, Cheyenne Lee, Kaysey Manista, Breanna Sigler, and Joseph Spinkle**. This is our 16th year of the GSE CHS at UNCP with 115 inductees. Thank you, Dr. Storms, for the preparation of this special event and making it a success for the department and our students.

Let us thank, Dr. Meredith Storms, Mrs. Felicia Scott, and Mrs. Hope Bullock for an excellent organization of Gamma Sigma Epsilon Honors Society Induction Ceremony at the UC Annex. It was a great ceremony. Devang Upadhyay gave a nice history presentation and Dr. Jose D'Arruda presented the medallions to the students. The students were excited and enthusiastic about the ceremony.





DR. WILLIAM BRANDON



Dr. Bill Brandon did several achievements in the month of March.

Contributed Talk:

W.D. Brandon, *Utilizing Laser Diodes in Introductory Optics Labs*, NCS-AAPT 2019 Spring Meeting, Wake Forest University, Winston-Salem, NC, Mar. 23, 2019

Student Poster Presentation:

"Educational Resources in Magneto-Optics: Faraday Rotation in F2 Glass," Dana Lamberton and William Brandon, NCS-AAPT 2019 Spring Meeting, Wake Forest University, Winston-Salem, NC, Mar. 23, 2019

Served as Judge:

North Carolina Region 4 Science & Engineering Fair

2019 SCIENCE FAIR DATE – February 16, 2019

Also, it was announced at the NCS-AAPT 2019 Spring Meeting, Wake Forest University, Winston-Salem, NC, Mar. 23, 2019 for the **poster presentation**:

“Malus Law Teaching Apparatus: High Quality at Near Zero-Cost,” K.K. McDonald, James Barstrom, S.D. Huneycutt, and W.D. Brandon,” RISE Summer Poster Session, University of North Carolina-Pembroke, Pembroke, NC, Aug. 27, 2017

Won first prize for undergraduate poster presentations

\$100.00 cash is part of the award

Dr. Brandon continues to provide wave drivers for area high schools and Community Colleges across the southeastern portion of North Carolina. Wave drivers are instruments used to investigate standing waves (the concept of resonance) in vibrating strings and/or springs for secondary physics courses. Dr. Brandon has worked with undergraduate and graduate students to create the devices funded by a grant he received from the Frederick and Florence Bauder Endowment for the Support of Physics teaching. Bauder Fund was “established to support special activities in the area of physics teaching.”

Congratulations, Dr. Brandon!

NCAS 116th ANNUAL MEETING, MARCH 22-23, 2019 at THE UNIVERSITY of NORTH CAROLINA - WILMINGTON

Joshua Cade, Biotech lab student, presented his research ‘*The effect of increasing carbohydrate concentrations on expressed intracellular and extracellular proteins by the Photorhabdus luminescence bacterium*’ at the North Carolina Academy of Science – NCAS 116th Annual Meeting, March 22-23, 2019 at the University of North Carolina - Wilmington. Dr. Holmes is his RISE Research Mentor. Great job, Joshua. We are proud of you. Also, Dr. Rachel Smith and the RISE Fellows attended the meeting.

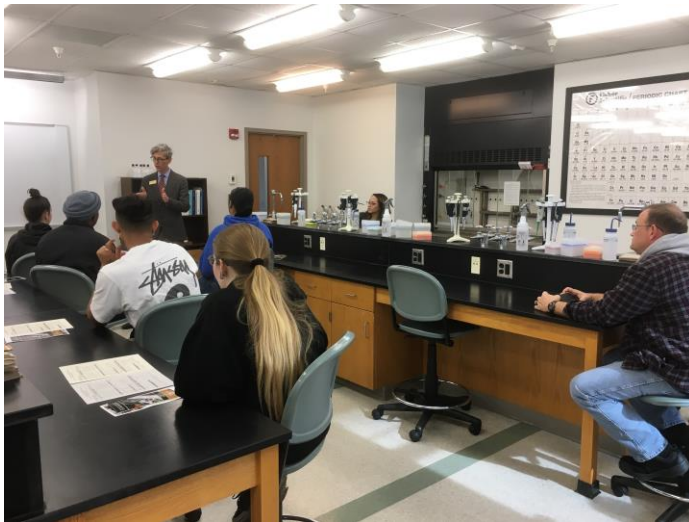


ROBESON COMMUNITY COLLEGE



Dr. Steven Singletary and five students from the Robeson Community College visited UNCP on March 25, 2019. The students are interested in transferring to the University for the next two years in Chemistry, Physics, and Engineering area. Drs. Jeff Frederick (CAS), Mark Milewicz (Honors College), Paul Flowers, Meredith Storms, Bill Brandon, and Elizabeth Hunter (Admissions) spoke with the students about the research in the department and about our '3+2' Program. On behalf of the department and the University, we appreciate your interest and enthusiasm in bringing your students here for their future. Thank you, Dr. Singletary.

Thank you, Ms. Krystin Woodell (Admissions), for speaking with the students as well.



MYRTLE BEACH ALS WALK MARCH 23, 2019

The 2019 walk to defeat ALS was held Saturday, March 23rd, at The Myrtle Beach Pelican's Stadium in Myrtle Beach, SC. The walk this year was once again a success. There was over 350 total walkers at the Pelican's Stadium. As for our team, Ritter's Recruit's, we reached new highs in both participation and donations. We had approximately 70 walkers on our team at the stadium and we raised over \$14,000!!! "I cannot begin to thank you all enough. Some of you I had not seen for many years, others traveled from great distances to be with us. I was overwhelmed with emotions during the day and especially in the evening when I had time to think about the enormous turnout of both persons and resources. Once again, thank you so very much for what you did for me this weekend. You are all heroes in my eyes and there is no way I could ever repay your kindness. It is because of friends and family like you all that Marie and I are able to make it through each and every day of this difficult journey." This is wonderful news, Dr. Ritter. Congratulations! We all miss you at UNCP!





"Ritter's Recruits" team: securing the greatest amount of donations this year.

NC ROBOTICS COMPETITION AT UNC PEMBROKE: MARCH 30-31



Thirty-six high school robotics team will battle in a FIRST Robotics event at UNC Pembroke March 30-31. Teams from across North Carolina will compete in Destination: Deep Space. This exciting and fast-paced game will show case robots built by high-school students in less than two months. Robots will be driving through 'sandstorms,' placing hatches and shooting cargo, all in the pursuit of the highest score.

The competition will be held in the Jones Athletic Center. Opening ceremonies begins at 10:30 a.m. on Saturday. Competition will continue through Sunday. It is free and open to the public.

RobCoBots, a team comprised of students from Robeson Early College High School, will be among the competitors demonstrating their skill for science, mathematics, and technology.

The field also includes teams from nearby Scotland, Cumberland and Moore counties. Students will compete for honors and recognition that reward design excellence, competitive play, sportsmanship, and high-impact partnerships between schools, businesses, and communities. Winners will advance to the North Carolina State FIRST Championship competition.

Founded by inventor Dean Kamen, who introduced the Slingshot water purification system and the "Luke" robotic prosthetic arm, FIRST (For Inspiration and Recognition of Science and Technology) was created to inspire an appreciation of science and technology in young people, their schools, and their communities.

Drs. Quinton Rice and Benjamin Killian served as judges for the FIRST NC ROBOTIC COMPETITION. They were simply great for their dedication and enthusiasm. Thank you for the great work and dedication at the special event. Job well done.





