



NEWSLETTER

May & June 2023

Chemistry and Physics Department, Oxendine Science Building – Room 3101, Pembroke, NC 28372
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Chemistry and Physics Graduates

Congratulations to our graduates. Job well done!

College of Arts and Sciences Chemistry and Physics Department



<i>Bachelor of Science</i>	Billy Ray McLean Pait III
<i>Bachelor of Science</i>	Xanthe Pearson
<i>Bachelor of Science</i>	Nykedra Alizay Spencer
<i>Bachelor of Science</i>	Haleigh Marie Grace
<i>Bachelor of Science</i>	Bryan Axel Martinez-Lopez
<i>Bachelor of Science</i>	David John Conklin
<i>Bachelor of Science</i>	Anthonia Oladeji
<i>Bachelor of Science</i>	Harlie Kay Scott
<i>Bachelor of Science</i>	Christopher Jaymes Collins
<i>Bachelor of Science</i>	Dekiah Sapphire Parson

2023 NSO Transfer Orientation



Dr. Siva Mandjiny, Ph.D.
Chair-Chemistry & Physics

On Saturday, May 20, Dr. Mandjiny and Dr. Neupane participated in the Freshman and Transfer Resource Fair. The orientation went well.

Thank you for your commitment and dedication in making the resource fair a successful event and experience for our students and their family members.



Dr. Tikaram Neupane
Assistant Professor of Physics

2023 NSO Freshman Orientation

On Tuesday, June 20, Dr. Neupane and Dr. Mandjiny participated in the Freshman Orientation. The orientation went well. There were many students and parents interested in the Chemistry and Physics Department.

Thank you for your commitment and dedication in making this a successful event and experience for our students and their family members.

Ames National Laboratory



Tikaram Neupane, Ph.D.
Assistant Professor of Physics

Dr. Tikaram Neupane attended a Materials and Energy Solutions workshop at the Ames National Laboratory from May 31 - June 1 as a faculty of MSI. He did a presentation about UNCP, the department, and his research.

Ames National Laboratory, formerly **Ames Laboratory**, is a United States Department of Energy national laboratory located in Ames, Iowa, and affiliated with Iowa State University. It is a top-level national laboratory for research on national security, energy, and the environment. The laboratory conducts research into areas of national concern, including the synthesis and study of new materials, energy resources, high-speed computer design, and environmental cleanup and restoration. It is located on the campus of Iowa State University.

Jack Britt High School



On Monday, May 22, Dr. Siva Mandjiny visited the Jack Britt High School in Hope Mills for the Senior Awards Day. It was an exciting day for the students. Dr. Mandjiny presented a \$10,000 scholarship to a senior given by the State Employees' Credit Union.

2023 NSO Freshman Orientation



On Saturday, June 3, and Tuesday, June 13, Dr. Steven Singletary (Clinical Assistant Professor) participated in the Freshman Orientation. The orientation went well for both events.

Thank you for your commitment and dedication in making the resource fair a successful event and experience for our students and their family members.

UNCP Rocket Team Soars at First Nations Launch Rocket Competition

UNC Pembroke's rocket team took home hard-earned hardware at NASA's 14th annual First Nations Launch High-Power Rocket Competition in Kenosha, Wisconsin on April 28-29, 2023.

UNCP won the Public Outreach Award and third place for their written reports. The team—comprised mostly of physics students—also brought home one of the top prizes—the Next Step Award, signifying the team is prepared for the next level of rocketry.

The Next Step Award comes with a \$15,000 grant and an invitation to the 2024 NASA University Student Launch Initiative (USLI) competition near the Marshall Space Flight Center in Huntsville, Alabama.

Additionally, the outreach award came with a \$500 prize.

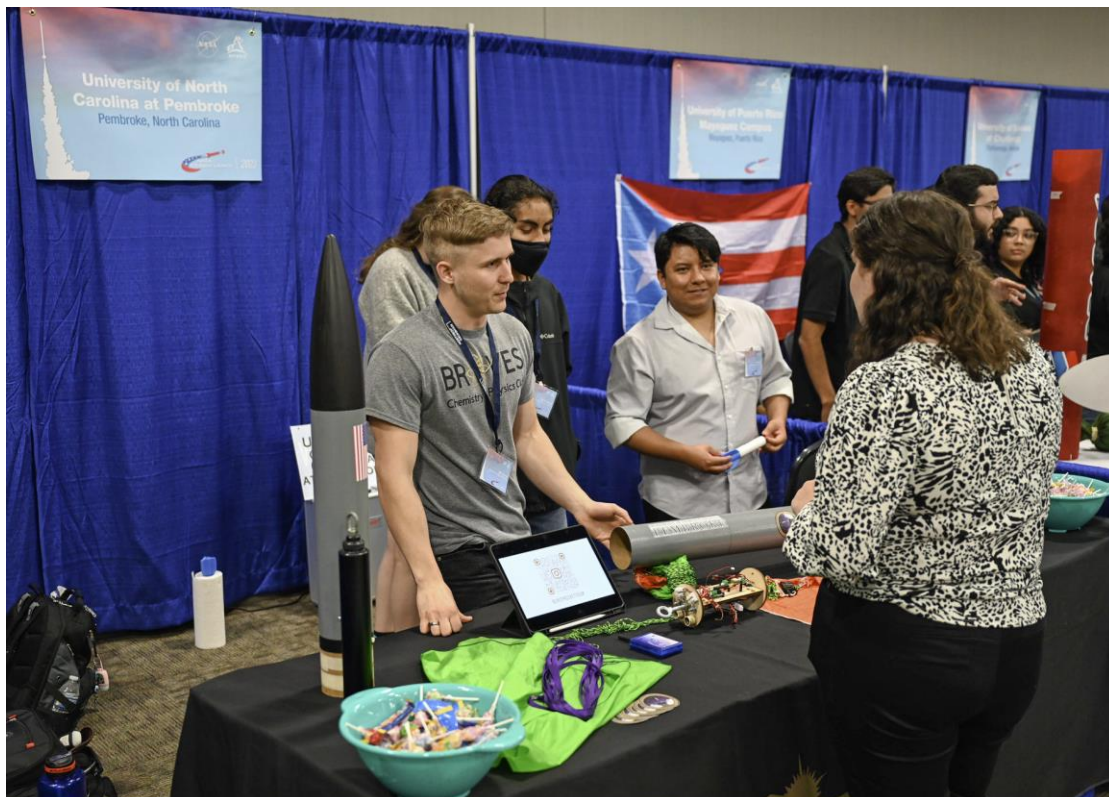
The UNCP's rocket team also competed alongside 800 students from across the U.S. and Puerto Rico at the USLI event in Huntsville in April.

NASA's Wisconsin Space Grant Consortium First Nations Launch allows students attending tribal colleges, universities, Native American-Serving Nontribal Institutions and American Indian Science and Engineering Society (AISES) collegiate chapters to design, build and fly a high-powered rocket.

"Both teams did outstanding work this year!" said Dr. Steven Singletary, physics professor and team advisor. "The NASA team—with only four members—was one of the smallest teams in the competition. The team shuffled between four team captains throughout the year due to manpower and scheduling issues but successfully completed the challenge. We are looking forward to going back!"

Team members are Billy Ray Pait, Sydney Allen, Jose "Ed" Hernandez, Xander Amores, Caleb Locklear, Sam Kauer, Seth Lowery, Riley Edwards, and Joseph Cimadamore. Pait and Locklear serve as team captains.

"The students had the opportunity to interact with NASA and industry engineers and made a lot of contacts," Singletary said. "A few have leads on potential internships and maybe jobs down the road in the aerospace industry."



Photos from Launch Week 2023 are out! Here is a link so that you can access the photos and look through them. Individual team photos are included. [Launch Week 2023 Photos](#)

It is the official photographs from the USLI competition in Huntsville. You can get a sense of how big this competition really is (and how small our team was this year!).

Wisconsin Space Grant Consortium Announces 2023 NASA Artemis Student Challenge First Nations Launch Competition Champions

2023 FNL AWARD WINNERS					
MOON		MARS			
Written Report		Written Report			
1st Place	University of Colorado-Boulder	1st Place	Queen's University		
2nd Place	Turtle Mountain Community College	2nd Place	Massachusetts Institute of Technology		
3rd Place	Northern Oklahoma College	3rd Place	University of North Carolina-Pembroke		
Oral Presentation		Oral Presentation			
1st Place	University of Colorado-Boulder	1st Place	Queen's University		
2nd Place	Fort Lewis College	2nd Place	University of Hawai'i at Mānoa		
3rd Place	Turtle Mountain Community College	3rd Place	Massachusetts Institute of Technology		
Grand Prize Award		Grand Prize Award			
1st Place	University of Colorado-Boulder (88.8)	1st Place	University of Washington-Seattle (97.5)		
2nd Place	Turtle Mountain Community College	2nd Place	Massachusetts Institute of Technology		
3rd Place	Northern Oklahoma College	3rd Place	Northern Arizona University		
	International	1st Place	Queen's University (103.3)		

OVERALL

OUTREACH AWARD: University of North Carolina, Pembroke

ALTITUDE AWARD: Leech Lake Tribal College

AESTHETIC AWARD: United Tribes Technical College

PATCH DESIGN AWARD: Peyton Meader, Massachusetts Institute of Technology

NOBILE AWARD: College of Menominee Nation

JUDGE'S AWARD: Leech Lake Tribal College

SPIRIT AWARD: University of Washington, Seattle

ADVISOR AWARD: Dr. Bret Benally Thompson, University of Wisconsin, Madison

TEAM LEAD AWARD: Phillip Prairie Chief, The University of Oklahoma

ROOKIE TEAM AWARD: Massachusetts Institute of Technology

NEXT STEP AWARDS

RockOn!2023: Northern Oklahoma College

Student Launch 2024: University of North Carolina-Pembroke

Congratulations to the 2023 winners!

Congratulations, Steven. This is the great news for the department and the University.

UNCP Rocket Team

UNCP participated in another launch last weekend (June 10 – 11, 2023) in South Carolina, where four team members achieved the High-Power Rocketry (HPR) Level 1 certification through the Tripoli Rocketry Association.

The **Tripoli Rocketry Association (TRA)** is an international organization and one of the two major organizing bodies for [high power rocketry](#) in the United States.



UNCP Rocket Team Members Billy Ray Pait (left) Riley Edwards, Seth Lowery, and Caleb Locklear recently achieved Level 1 High-Power Rocketry certification through the Tripoli Rocketry Association

Congratulations, to you all. Great job!

Engineering Camps at UNCP

Dr. Steven Singletary and Dr. Benjamin Killian participated in the engineering camps at UNCP. The camp was sponsored by Cummings Aerospace. Dr. Sheila Cummings is the founder, president, and CEO of the company. She joined Drs. Singletary and Killian to run the camps during June 19 – 30, 2023. There were 70 students in the camp the first week. The students did 3D printing and rockets. In the following week, 80 students from a different camp did coding and robotics. Everyone had a great time building rockets, robots, learning how to 3D print, and write computer codes.

Thank you all for your commitment and dedication in making this a successful event and experience for our younger students.



Dr. Steven Singletary
Clinical Assistant Professor



Dr. Benjamin Killian
Assistant Professor



Dr. Sheila Cummings
Cummings Aerospace

Cummings Aerospace Camp at UNCP Prepares Students for STEM Careers

James Bell was all smiles as he watched the rocket, he spent days building ignite and launch into the sky above the ROTC training field on the campus of UNC Pembroke.

“This was awesome!” said Bell, pointing upward to the trail of white smoke.

Bell was among the 60 middle and high school students who took advantage of the Cummings Aerospace Engineering Camp. The two-week summer camp introduced students to 3D design, coding, 3D printing and robotics. Like many after the launch on Friday, Bell said flying a rocket that he invested time into designing was the best part of the camp.

“I would definitely come back next year,” Bell said. “These camps help students choose what they want to study when they get older.”

Shelia Cummings, CEO of Cummings Aerospace, said the experience exposes students at an early age to STEM-related curriculums, which may inspire some to follow in her footsteps. Cummings began her educational career at UNCP before completing an aerospace engineering degree at the University of Maryland. The Pembroke, N.C. native is now head of an engineering company considered a leading *provider* of high-value engineering solutions in the aerospace, defense, and intelligence industry.

“We hope we are making a great impact on the community,” Cummings said. “Not only does it give great exposure to UNCP and give them a pipeline to future students, but for those of us in the STEM field, it allows us to gain some future hires in our companies, hopefully. I’m excited to give back to the community in this way.”

UNCP professors Steven Singletary, Ben Killian and UNCP student counselor Zoe Polley cheered on the campers from the launch pad sidelines Friday morning, June 23rd.

“This is a great experience for the kids,” Polley said. “STEM is an excellent field to enter right now, especially with all the job openings.”

Madison Chadwick, a rising seventh grader at Littlefield Middle School, said rocketry was her favorite part of the camp.

“I liked that we got to do a lot of hands-on activities, which is something we don’t really do at school,” she said.

The aerospace engineering camp is a great recruiting tool for UNCP and its award-winning rocket team. The team recently won a \$15,000 travel grant at a high-power rocket competition in Wisconsin. They also competed at the NASA University Student Launch at the Marshall Space Flight Center earlier this year.

“You can see that they get excited when building the rockets, but when they launch it—they get hooked,” said Singletary, who serves as team advisor. “These are the students I’m recruiting to come here to join the rocket team.

“The nice thing is everything they are learning at this camp is in demand in the engineering field, so even if they only remember a fraction of what we are teaching them, it’s putting them ahead when they begin looking for a career.”



Quinton Rice, Ph.D.

June 27, 2023, marked the last day for Dr. Quinton Rice from the position of Assistant Professor of Physics in the department. He has accepted a job and will be relocating to Greensboro, NC. Throughout his time with us, Dr. Rice has consistently performed exceptionally well, both in his teaching role and as a colleague and mentor to our students. We have all greatly appreciated his contributions to the department. Thank you for all you have done to the Department, University, and to this community. We will certainly miss you. We wish you well and may you be blessed with success in all your future endeavors.



UNCP Summer Camp with Indigenous Students

Wednesday, June 28, Mrs. Felicia Scott and Mrs. April Locklear met with students teaching them how to make a sugar scrub in the lab room. The students had a great time working with the environmentally friendly experiment.





Meredith Storms, Ph.D.



Dr. Meredith Storms resigned from the position of Professor of Chemistry with the University of North Carolina at Pembroke effective June 30, 2023. She and her family moved to Monroe, GA. Dr. Storms will be an adjunct professor teaching a graduate course in Summer II.

The department faculty and staff express our gratitude and appreciation for all that you have done for us.

Her tireless efforts have been truly remarkable, and her role as an advisor, friend, and well-wisher to our students will always be remembered. Her passion for student success has been a catalyst for positive change within our department, and we are deeply grateful for the positive impact she made on our community.

We will certainly miss you. We wish you well and may you be blessed with success in all your future endeavors.