

SAVE THE DATE

3/13-3/17: CitSci 2019 Conference, Raleigh Convention Center, Raleigh, NC

3/16: NCCTM Western Region Math Conference, C.D. Owen High School, Black Mountain, NC

3/21: Regional NCCTM Math Contest, Appalachian

3/22: NCCTM Spring Leadership Seminar, Red Lion Inn, High Point, NC

3/23: NCCTM Western Region Math Fair, Appalachian

3/29-3/30: North Carolina Science and Engineering Fair, NCSU, Raleigh, NC

4/1-4/30: North Carolina Science Festival

4/3-4/6: NCTM Annual Meeting and Exposition, San Diego, CA

4/6: Sumo Bot Competition, Appalachian

4/11: NCCTM State Comprehensive Math Contest Finals, NCSSM, Durham, NC

4/11-4/14: NSTA National Conference on Science Education, St. Louis, MO

4/16: Elevating Mathematics Competition, Appalachian

4/18: Science Seminar, Appalachian

April 30: STEAM Expo Day, Appalachian

5/2: NCCTM State Level 1, 2, and 3 Math Contest Regional Finals (Western Region - UNC-Asheville, Central Region - UNC-Greensboro, Eastern Region - Fayetteville State)

5/3: NCCTM State Math Fair, NCSSM, Durham, NC

6/24-7/19: MELT, Appalachian

7/23-7/24: Eighth Annual Bridging the Gap Conference, Raleigh, NC

11/6: NCCTM Fall Leadership Seminar, Koury Convention Center, Greensboro, NC

11/7-11/8: NCCTM State Math Conference, Koury Convention Center, Greensboro, NC

11/14-11/15: NCSTA Conference, Winston-Salem, NC

12/17 (Tentative): Northwest Region Science Fair, Appalachian

MATH AND SCIENCE PROGRAMS FOR TEACHERS AND STUDENTS

MSEC is always pleased to work with school systems to offer programs that meet your specific needs, either on campus or in the schools. Please visit us at msec.appstate.edu.

Contact Leah McManus (mcmanusld@appstate.edu) for further information about these programs.

North Carolina Science Festival is April 1-30

The final MSEC seminar in this year's series will be part of the North Carolina Science Festival. Seminars are open to everyone, are free, and offer license renewal credits (0.2 per seminar) to teachers.



Carla Ramsdell from the Department of Physics and Astronomy will speak on “Cooking on Sunshine...The Physics of Solar Cooking.”

Date: Thursday, April 19. Time: 6:30-8 p.m. with refreshments at 6 p.m. Location: RCOE 124C. Parking is free in the Library Parking Deck on College Street.

STEAM (Science, Technology, Engineering, Arts and Mathematics) Expo at ASU is Tuesday, April 30.

Approximately 2000 students annually participate in Appalachian's STEAM Expo activities. The Expo is on a weekday so that schools can come to campus for a field trip and have their students experience some awesome science and math activities. MSEC's Expo booth will feature science and math displays with activities led by science and math educators.

Date: Tuesday, April 30. Time: 9 a.m. - 2 p.m. Location: Holmes Convocation Center (Stand-alone events will be held in Plemmons Student Union and other places on campus.).

Information: <http://ncsciencefestival.appstate.edu>.

For questions or to book your class or homeschool group: contact Tracey Tardiff (tardiffa@appstate.edu).

SumoBots is Saturday, April 6

Robotic sumo is a competition where two robots, known as sumo-bots, attempt to push each other out of an arena using sensors, clever programming, and innovative design.

Date: Saturday, April 6. Time: 7:30 a.m.-4 p.m. Location: Holmes Convocation Center.

Elevating Mathematics Competition for Grades 4-6

The Elevating Mathematics competition is again being hosted by the Appalachian State University Department of Mathematical Sciences.

Date: Wednesday, April 16. Time: 8:30 a.m.-1:30 p.m.

For more information about SumoBots and Elevating Mathematics visit: <http://www.appstate.edu/~marlandes/outreach.html>

Mathematics and Science Education Center

APPALACHIAN STATE UNIVERSITY®

NORTHWEST REGIONAL SCIENCE FAIR

The Region 7 Science and Engineering Fair was held at the Reich College of Education on December 18, 2018. A total of 164 projects with 221 students registered. The North Carolina Student Academy of Science competition was held during the afternoon with 50 research presentations and 75 students registered. It was a great day to celebrate students' hard work and STEM (despite many school days missed due to snow)! State finals will be held March 29-30 at NC State University.

Region 7 Coordinator, Coleman Bailey, coordinated the Fair in collaboration with the MSEC. Many Appalachian faculty as well as regional teachers helped with judging, chaperoning and presentations. We hope more schools/teachers/students will participate in both the Science and Engineering Fair and the NC Student Academy of Science in 2019 (tentatively scheduled for December 17, 2019).

Learn more: Science and Engineering Fair, <http://www.ncsciencefair.org/>

Learn more: NC Student Academy of Science, <https://www.ncsas.org/>



Northwest Regional Science Fair participant

NEWS FROM THE ROBERT NOYCE SCHOLARSHIP PROGRAM

Members of the TEAMS: Robert Noyce Scholarship program staff participated in the national summit on STEM teaching in Washington DC, hosted by the American Association for the Advancement of Science last summer. The group presented a poster on the challenges of recruiting mathematics and science teachers, particularly in states where overall recruitment into teacher education is on the decrease. Still, the TEAMS project has shown some success in recruiting in difficult to fill areas and in using the Graduate Certificate as a pathway for post-baccalaureates who are interested in a licensure program that integrates them into teacher education and provides a combination of pedagogical and content coursework. The TEAMS: Robert Noyce Scholarship program continues into its fourth year having graduated nine students who received licensure in teaching secondary mathematics and science. An additional seven students are currently continuing in their licensure coursework.

FIRST POST-LAB OF SPRING SEMESTER HOSTED BY MSEC

Post-lab is an informal gathering of Appalachian State University faculty and staff interested in Science, Technology, Engineering, and Mathematics (STEM). The MSEC hosted the first meeting of spring semester on January 23 in the Reich College of Education Rotunda. In conjunction with Post-lab, we also hosted an Open House to give everyone an opportunity to visit our new space since moving to the fifth floor of the Education Building. With occasional slight variations, Post-lab meets 4:45 - 6:30 p.m. The Department of Mathematical Sciences will host post-lab in Walker Hall on March 14 for Pi Day.

msec.appstate.edu

Spring 2019

NOTES FROM THE DIRECTOR



The MSEC was pleased to host the first Post-lab of spring semester along with Open House to give everyone an opportunity to visit the new space we moved into in spring of 2018.

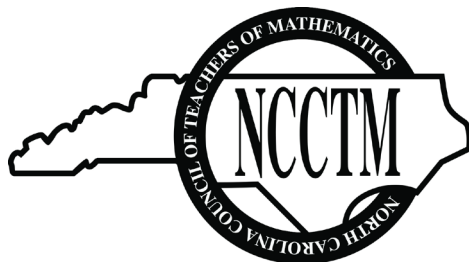
Despite cold and wet weather, there was a good turnout. If you have not yet visited us since our move, we invite you to come and see how well we have adapted the new space to house math and science materials that can be helpful in teaching.

As we are early in the semester, we do not yet have summer workshops lined up, but there will be several offerings. We do know the MELT offerings and times, which are detailed in the newsletter. The North Carolina Science and Engineering Fair folks will again offer a workshop, tentatively set for June 24. The North Carolina Department of Public Instruction will likely also have summer workshops on campus again, but plans are not yet definite. Check our website for details as they become available, and please let us know what your needs are for professional development or other programs in math and science.

Phil Johnson

Contributors: Coleman Bailey, Mike Bossé, Tonya Coffey, John Sevier, Tracie Salinas and Tracey Tardiff

NORTH CAROLINA COUNCIL OF TEACHERS OF MATHEMATICS NEWS



NCCTM WESTERN REGIONAL MATH CONFERENCE

The Western Regional Math Conference will be held on Saturday, March 16 from 9 a.m. - 12 p.m. at C.D. Owen High School in Black Mountain. Registration is free and CEU credits are available.

Register at: <http://bit.ly/2019WRC>

Contact Karen McPherson (karen.mcpherson@bcsemail.org) for more information.

NCCTM SPRING LEADERSHIP SEMINAR

The NCCTM Spring Leadership Seminar will be held on Friday, March 22 from 9 a.m. - 4 p.m. at the Red Lion Inn in High Point. The theme is "Targeted Support for Mathematics Learning."

Speakers: Jennifer Wilson (Cultivating Agency, Mathematical Understanding and Language through Math Language Routines) and Dr. Lee Stiff (will speak on the topic of "tracking")

Breakout sessions: NC DPI, Math Teacher Circles, TOOLS for Elementary and Secondary Teachers, and Elementary Instructional Frameworks

Registration fee: \$65 for NCCTM members and \$75 for non-members

Register at: <https://www.ncctm.org/payments/?amsaction=payments:main.lookup>

NCCTM WESTERN REGION MATH FAIR

The 2019 NCCTM Western Region Math Fair for students in Grades K-12 will be held on Saturday, March 23 in the Plemmons Student Union at Appalachian State University. Teachers are encouraged to enter their students in the fair. This experience enables students to work on math projects and gain experience communicating mathematics. Students placing 1st, 2nd, 3rd or receiving Honorable Mention will be invited to participate in the NCCTM State Math Fair on Friday, May 3 at the North Carolina School of Science and Mathematics in Durham.

Registration fee for the Western Region Math Fair: \$10 per student. Payment must be postmarked by March 1, 2019.

Registration and information: <http://tinyurl.com/ncctmwestmath> (Fill out the registration form located on the Participant or Parent/Teacher page.).

NCCTM MATH CONTEST

The Department of Mathematical Sciences and the MSEC will host a regional NCCTM Math Contest at Appalachian State University for Level 1 and Comprehensive on Thursday, March 21, 2019.

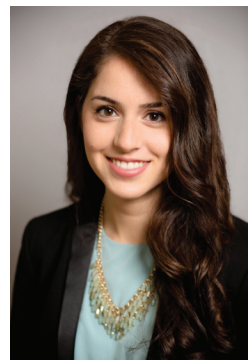
Registration cost is \$10 per student and includes a T-shirt. Deadline to register is March 6, 2019. Contact John Sevier (sevierjn@appstate.edu) with any questions.

Learn more and register: mathsci.appstate.edu/news-events/mathcontest

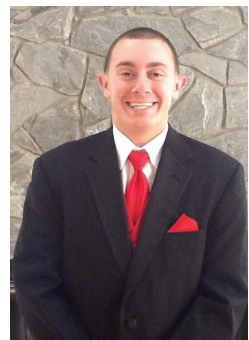
SUMMER VENTURES ALUMNI AND STAFF RECOGNITIONS



Dr. Brooke Christian (Cherryville High School/SVSM 2000) is an Assistant Professor of Chemistry at Appalachian State University. Brooke completed her undergraduate degree in Chemistry and Biology at Appalachian in 2005 and Ph.D. in Biological Chemistry at UNC Chapel Hill in 2010. She joined the Appalachian faculty in 2015 teaching biochemistry, and her research focuses on mitochondrial reactive oxygen species and the roles they play in assembly of oxidative phosphorylation complexes and in adipocyte differentiation.



Dr. Parisa Tashakkori Sjostrand (Watauga High School/SVSM-NCCU 2007) graduated from Appalachian State University with a degree in Chemistry and received a DMD degree from East Carolina University's School of Dental Medicine in 2017. Parisa has been accepted to study at Bon Secours St. Mary's Hospital in Richmond, Virginia to earn a Certificate in Pediatric Dentistry. Parisa is daughter to Summer Ventures and Appalachian faculty Rahman Tashakkori (Department of Computer Science) and Sherry Nikbakht (Department of Mathematical Sciences).



Tanner Orders (Kings Mountain High School/SVSM 2014) graduated from Appalachian State University in December 2018 with a degree in Cellular/Molecular Biology and has been accepted to medical school at UNC Chapel Hill. Tanner chose to study at Appalachian after his Summer Ventures experience working with Dr. Chishimba (Nathan) Mowa in Biomedical Science. Throughout his undergraduate career, Tanner worked in Dr. Mowa's lab as well as being a teaching assistant for Summer Ventures and the Future Doctors and Scientists camps.

Rachel Petherbridge, (Garner High School/SVSM 2013) was awarded a George J. Mitchell Scholarship to study at the University College in Cork, Ireland for a year of graduate studies in international relations and public policy, sponsored by the US-Ireland Alliance. The Mitchell is similar to the highly competitive Rhodes and Marshall postgraduate awards and only 12 are awarded each year. Rachel will graduate from Boston University in May with a degree in biomedical engineering where she has been a Goldwater Scholar and an Amgen Scholar, both top national STEM honors.

MATHEMATICS EDUCATION LEADERSHIP TRAINING SUMMER INSTITUTE

There will be 18 weeklong, face-to-face professional development institutes for K-12 mathematics teachers this summer. Six institutes will allow those who cannot travel to Boone to attend the institutes synchronously online. The weeks of the institutes are June 24-June 28, July 8-12, and July 15-19, 2019. The institutes are offered in cooperation with Appalachian State University's Department of Mathematical Sciences and the Mathematics and Science Education Center. All of the institutes are focused on the North Carolina State Standards for Mathematics. The tuition for each institute is \$300, with group discounts available. For teachers needing to stay in Boone during the institutes, discounts have been arranged at area hotels for lodging. Participants will select to earn either 3 CEUs or 2 graduate credits for each Summer Institute.

For a registration form and descriptions of the institutes, visit the MELT website, <https://mathsci.appstate.edu/melt/summer-institutes>. If you have questions about 2019 MELT institutes, please contact Dr. Michael Bossé, director of MELT, at 828-262-2862 or bossemj@appstate.edu.

SUMMER VENTURES IN SCIENCE AND MATHEMATICS

Summer Ventures will be held on four campuses this summer: Appalachian State, East Carolina, UNC-Charlotte, and UNC-Wilmington on June 29/30 - July 27, 2019. The program is coordinated by NCSSM and is a 4-week, cost-free, academic enrichment and research program for North Carolina rising juniors and seniors.

For additional information, visit <https://www.ncssm.edu/summerventures> or contact Lori Tyler (tylerle@appstate.edu) to schedule a recruitment session at your school.