

SAVE THE DATE

3/15-3/18: NSTA National Conference on Science Education, Atlanta, GA

3/17: NCCTM Western Region Mathematics Conference, Owen High School, Black Mountain, NC

3/20: Regional NCCTM Math Contest, Appalachian

3/23: NCCTM Spring Leadership Seminar, Greensboro, NC

3/23: Student Academy of Science, NCSM, Durham, NC

3/23-3/24: North Carolina Science and Engineering Fair, NCSU, Raleigh, NC

3/24: NCCTM Western Region Math Fair, Appalachian

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

4/14: Sumo Bot Competition, Appalachian

4/19: Science Seminar, Appalachian

4/24: STEAM Expo Day, Appalachian

4/25-4/28: NCTM Annual Meeting & Exposition, Washington, D.C.

4/26: NCCTM State Comprehensive Math Contest Finals, NCSM, Durham, NC

4/26: STEM West Meeting, Hickory, NC

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

5/4: NCCTM State Math Fair, NCSM, Durham, NC

6/25-7/20: MELT, Appalachian

10/23-10/24: Seventh Annual Bridging the Gap Conference, Raleigh, NC

10/31: NCCTM Fall Leadership Seminar Greensboro, NC

11/1-11/2: NCCTM State Mathematics Conference, Greensboro, NC

11/29-12/1: NSTA Area Conference, Charlotte, NC

12/18: Northwest Region Science Fair, Appalachian

NORTH CAROLINA SCIENCE FESTIVAL (APRIL 1-30, 2018)

SUMO BOTS is Saturday, April 14

Robotic sumo is a competition in which two robots, known as sumo-bots, attempt to push each other out of an area using sensors, clever programming, and innovative design. Video of last year's event: www.youtube.com/watch?v=blhGPufahK4.

Date: Saturday, April 14. Time: 8:30 a.m.-4:00p.m. Location: Holmes Convocation Center.

Information: www.appstate.edu/~marlandes/sumo/sumosumo.html.

Elevating Mathematics Competition is Tuesday, April 17

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

Date: Tuesday, April 17. Time: 8:30 a.m.-1:30 p.m. Location: Plemmons Student Union (Grandfather Mountain Ballroom)

Information: www.appstate.edu/~marlandes/elevate/elevate.html.

MSEC Seminar is Thursday, April 19

The final MSEC seminar 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.

Dr. Marty Root from the Department of Nutrition and Health Care Management will speak on misconceptions surrounding genetically modified organisms and organics and the role they can or cannot play in the sustainability of the world food supply.

Date: Thursday, April 19. Time: 6:30-8:00 p.m. (refreshments at 6:00 p.m.). Location: RCOE 124C. Parking is free in the Library Parking Deck on College Street.

STEAM (Science, Technology, Engineering, Arts and Mathematics) Expo is Tuesday, April 24

Approximately 2000 students annually participate in Appalachian's STEAM Expo activities. The Expo is on a weekday so that schools can visit campus and have their students experience some awesome science and math activities.

MSEC's Expo booth will feature displays along with science activities led by Judy Sink and Lou Moore, science educators who for many years have led the popular Center-sponsored Family Science Nights.

Date: Tuesday, April 24. Time: 9:00 a.m.-2:00 p.m. Location: Holmes Convocation Center (Stand-alone events will be held in Plemmons Student Union and other places on campus).

Information: nsciencefestival.appstate.edu. Questions or to book your class or homeschool group: contact Tracey Tardiff (tardiff@appstate.edu).



Mathematics and Science Education Center

APPALACHIAN STATE UNIVERSITY

STEM (Science, Technology, Engineering, and Mathematics) NETWORKING

Many years ago universities might have had relatively few scientists and mathematicians, and these would only be in the "classic" departments of biology, chemistry, geology, math, and physics and astronomy.

Now, a modern university like Appalachian, with more than 1,000 faculty members, has STEM faculty and staff in many departments across campus and many more faculty and staff with multi or interdisciplinary interests.

Appalachian now has STEM faculty in departments like Anthropology, Psychology, Health and Exercise Science and programs like Fermentation Sciences. With so many people in different departments, programs, and colleges spread across multiple buildings across campus, it is difficult to know what is happening in STEM fields, and faculty with similar interests may never meet.

Appalachian is striving to improve communication among STEM and STEM-interested faculty and staff through an informal gathering called Postlab.

Approximately once a month a campus department, program, or office hosts an informal reception that is open to anyone with interests in STEM teaching, research, or outreach.

The Office of Research generously funds the costs for food and beverages at these gatherings, which help each host show off its facilities. There is no formal program, so attendees are free to mingle and explore common interests.

Since its inception, Postlab has been hosted by the departments of:

- Geological & Environmental Sciences (formerly Geology),
- Anthropology,
- Biology,
- Physics and Astronomy, and
- Geography and Planning.

Other hosts have included the library, Fermentation Sciences, the Office of Research, and, in January, the MSEC.

Venues have included the Fred Webb Jr. outdoor geology laboratory ("rock garden"), McKinney Geology Teaching Museum, College of Arts and Sciences Microscopy Facility, the Rankin Science Observatory, and various other departmental facilities.

Typical Postlabs will include more than 50 faculty and staff from across campus, and we are aware of at least one published paper that resulted from a collaboration forged in Postlab. If any of this sounds interesting to you, check out some of the departments and facilities listed here and you may find out there is even more STEM activity at Appalachian than you thought.



MSEC hosted Postlab in the Reich College of Education in January 2018.

msec.appstate.edu

Spring 2018

NOTES FROM THE DIRECTOR



The big news from the MSEC is that we will be moving to the fifth floor of the RCOE this spring.

We will move into Suite 506, the space now occupied by the James Center for Advising and Student Success.

We will continue to stock the materials needed by our math and science education students, their instructors, and teachers. The move is scheduled for the week of Spring Break. We look forward to seeing you in our new space.

In the next MSEC newsletter, we will SPOTLIGHT our two newest mathematics education faculty members, assistant professors Ashley Whitehead and Travis Weiland. Stay tuned!

Phil Johnson

Contributors Thanks:

Coleman Bailey, Mike Bossé, Andy Heckert, Betty Long, Eric Marland, Leah McManus, Sue Purser, Tracie Salinas, John Sevier, Tracey Tardiff, and Lori Tyler.

If you have ideas for articles that should be considered for inclusion in future newsletters, please email johnsnpe@appstate.edu.

NORTH CAROLINA COUNCIL OF TEACHERS OF MATHEMATICS (NCCTM) NEWS

NCCTM Western Regional Math Conference is Saturday, March 17

The 2018 Western Regional Math Conference will be held on March 17 from 9:00 a.m. - 12:00 p.m. at C.D. Owen High School (99 Lake Eden Road, Black Mountain, NC).

Registration fee: FREE and CEU credits are available. **Registration:** <http://bit.ly/WRC2018>.

NCCTM Math Contest is Tuesday, March 20

The Department of Mathematical Sciences and MSEC will host a regional NCCTM Math Contest at Appalachian State University for Level 1 and Comprehensive on Tuesday, March 20, 2018.

Registration fee: \$10 per student and includes a T-shirt. **Registration and information:** mathsci.appstate.edu/news-events/math-contest. **Registration deadline: March 6.** Questions: contact John Sevier (sevierjn@appstate.edu).

NCCTM Spring Leadership Seminar is Friday, March 23

The 2018 NCCTM Spring Leadership Seminar will be held on March 23 from 9:00 a.m. - 4:00 p.m. at the Radisson Hotel in High Point, NC.

Speakers: Dr. Fran Arbaugh (*Reasoning and Proving: Do You Know It When You See It?*), Dr. Ted Coe (*What does "out of proportion" really mean?*), and Dr. Jane Wilburne (*Using Tasks to Promote Rich and Engaging Mathematical Experiences*).

Registration fee: \$65 for NCCTM members / \$75 for non-members. **Registration:** [/www.ncctm.org/payments/?amsaction=payments:main.lookup](http://www.ncctm.org/payments/?amsaction=payments:main.lookup). Details: www.ncctm.org/ncctm/assets/File/flyers/2018Leadership.pdf.

NCCTM Western Region Math Fair is Saturday, March 24

The NCCTM Western Region Math Fair will be held on March 24 in the Plemmons Student Union at Appalachian State University for students in Grades K-12. K-12 teachers are encouraged to enter students in the fair. This experience enables students to work on math projects and gain experience communicating mathematics.

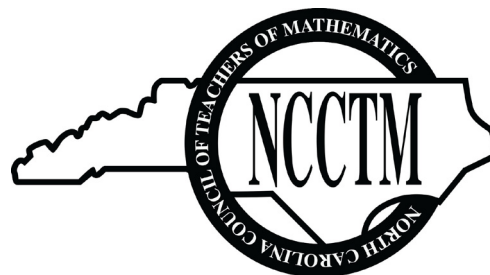
Students placing 1st, 2nd, 3rd or receiving Honorable Mentions will be invited to participate in the NCCTM State Math Fair on Friday, May 4, 2018 at the North Carolina School of Science and Mathematics in Durham.

Registration fee: \$10 per student, and payment must be postmarked by March 2, 2018. **Registration and information:** <http://tinyurl.com/ncctmwestmath> (fill out the online registration form located on the Participant or Parent/Teacher page).

2018 NCCTM Fall Leadership Seminar (Wednesday, October 31) and Annual State Mathematics Conference (Thursday, November 1 - Friday, November 2)

The Fall Leadership Seminar will be on October 31, and the State Mathematics Conference will be held on November 1-2 at the Koury Convention Center in Greensboro.

Information: ncctm.org.



SCIENCE INSTITUTES & WORKSHOPS

North Carolina Department Of Public Instruction Summer Science Institute Is June 26-28

MSEC has been selected as one of the regional sites for a North Carolina Department of Public Instruction Summer Science Institute. The Institute will be held in the RCOE, June 26-28, 2018 and will award license renewal credits.

Science Fair Workshop is Monday, June 25

MSEC will host a Science Fair Workshop from the North Carolina Science and Engineering Fair in the RCOE on June 25, 2018. License renewal credits will be awarded.

School Workshops (Dates TBD)

MSEC offers workshops in some regional school districts that are designed around needs of the schools. We are usually able to provide these workshops without cost to the schools. Questions: contact Leah McManus (mcmanusld@appstate.edu).

Visit msec.appstate.edu for up-to-date workshp details.

Science Education Professional Development Sessions for Teachers (Dates TBD / Pending Funding)

In summer 2018, the College of Arts and Sciences, in collaboration with MSEC, hopes to offer two science education professional development sessions for teachers. These sessions will be provided in week-long institute formats on the campus of Appalachian State University and will provide teachers with content-rich, hands-on experiences that will increase their science knowledge and their proficiency with inquiry-based instructional strategies. Workshops will be offered pending funding.

Questions or to receive details as they are available: contact Tracie McLemore Salinas (salinastm@appstate.edu).

MATHEMATICS EDUCATION LEADERSHIP TRAINING (MELT) SUMMER INSTITUTES

MELT will offer 18 week-long professional development institutes for K-12 mathematics teachers, focused on the North Carolina State Standards for Mathematics. **Dates: June 25-29, July 9-13, and July 16-20, 2018.**

15 will be face-to-face on the App State campus and three will be synchronously online. The institutes are offered by Appalachian's Department of Mathematical Sciences and MSEC. Participants will earn either 3 CEUs or 2 graduate credits for each Summer Institute.

Tuition: \$300 (*group discounts available*). If taken for graduate credit, the usual graduate fees apply. Hotel discounts are available for teachers needing lodging. **Registration:** melt.appstate.edu (*select Summer Institutes*). Questions: contact Dr. Michael Bossé, Director of MELT (828-262-2862 or bossemj@appstate.edu).

APP STATE ACADEMIC SUMMER CAMPS

Encourage students to apply to academic summer programs at Appalachian: **Future Doctors and Scientists camp** (July 5-27, 2018).

Others to be scheduled include: Anatomy and Physiology and Future Engineers. **Information:** conferences-camps.appstate.edu/youth-camps



North Carolina
School of Science
and Mathematics

NCSSM-Morganton Campus

- An event unveiling NCSSM-Morganton campus details was held on September 28, 2017 in downtown Morganton.
- NCSSM Chancellor Todd Roberts and Western Campus Planning and Project Management Director Kevin Baxter shared architectural plans and other information regarding the educational programming and progress.
- The school is projected to open in 2021 with 300 residential students and will be built next to Western Piedmont Community College and the NC School for the Deaf campus.
- Phase Two of the planning is now underway, including advanced education programming.

Information: www.ncssm.edu/morgantonscampus.

NCSSM Summer Ventures

- Summer Ventures will be held on four campuses this summer: Appalachian, East Carolina, UNC-Charlotte, and UNC-Wilmington.
- Summer Ventures is a 4-week, cost free, academic enrichment and research program coordinated by NCSSM.

Information: www.ncssm.edu/summerventures. Questions: contact Lori Tyler (tylerle@appstate.edu).

Join The MSEC Google Email Group! Contact Leah McManus (mcmanusld@appstate.edu).