

# STEM MATTERS

Mathematics and Science  
Education Center  
APPALACHIAN STATE UNIVERSITY



## PICTURE YOURSELF AS AN EARTH SCIENTIST

The Department of Geological and Environmental Sciences at Appalachian State University rolled out the *Picture Yourself as an Earth Scientist* photo booth right before the COVID-19 health crisis closed K-12 schools. The PYES booth is an outreach initiative funded by the American Geophysical Union to bring awareness about geoscience careers to kids, especially in schools with students from underrepresented populations and those in rural areas that may not have easy access to career scientists. Ashe County Middle School invited the GES outreach team try out the interactive photo booth and hands-on activities with their 7-8th graders, and students were able to put themselves in the shoes of paleontologists, geochemists, hydrologists, planetary geologists, volcanologists, and glaciologists. The PYES booth will continue visiting schools for career or science days when school campuses are open again. Visit the PYES website for more details at: [https://earth.appstate.edu/what\\_is\\_the\\_pyес\\_booth](https://earth.appstate.edu/what_is_the_pyес_booth)

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# FROM THE DIRECTOR

## TRACIE MCLEMORE SALINAS

I am a quotes person. I collect them, hang them on my wall, think about them. I share them with people. I recently read a quote that really struck a chord with me and seemed a perfect consideration for our current time and my transition into this role.

*Change is not a threat. It's an opportunity. Survival is not the goal. Transformative success is.*  
-- Seth Godin

The transitions that we have been experiencing as a society - moving to online interactions, following social distancing, speaking less often to strangers - are all big changes to how we interact. But these changes don't have to be threats to our work.

Already the Center staff and partners are finding ways not only to maintain our collaborations but also to develop new services and interactions. For example, we are working on plans for an online mini-conference for educators, a new idea for rotating book "clubs", and virtual STEM activities to provide to our community partners for use over the summer and fall. We have also been picking up the idea of drawing on a broader STEM direction to be more inclusive of technology and engineering. You'll see evidence of that as we move forward with planning for seminars and outreach activities.

I see this time period as providing us with an opportunity for a transformative success, and I am looking forward to that challenge. As the new director, I have been thrilled to see the energy and ideas that exist in the center, and I look forward to helping guide that energy into reality.

## PARTNERING TO INCREASE ACCESS TO MATERIALS

One of the most popular services of the MSEC has been its loaning library. With a variety of mathematics and science manipulatives, models, and more, the loaning library provides Appalachian students and faculty with many tools for the classroom and supplies regional teachers and parents access to materials they may not otherwise have. In recent years, the Center developed an off-site collection at Caldwell Community College for use by faculty teaching courses there for off-campus cohorts.

To build on this popular service, the Center is currently collaborating with the Academy at Middle Fork to create space for materials that teachers can use in their classrooms and that faculty and teacher candidates can access when engaged at the Academy. In addition, the Center is looking



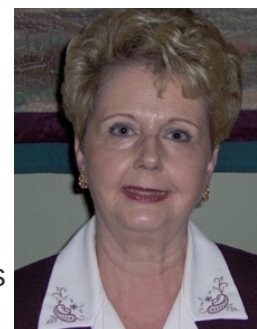
to expand access to materials by partnering with regional public libraries. Working with Watauga, Ashe, and Wilkes County libraries, the Center hopes to provide easier access to STEM-focused children's books and materials for learning mathematics and science. Collaborations online will also support students in virtual STEM activities in the absence of STEM family nights during social distancing. With a summer reading theme of "Imagine my story", the Center can support children and families across the region in imagining themselves in mathematics and science! After piloting this program, the Center will consider other ways to provide increased access to our rural communities.



## MEET THE STAFF

### DR. BETTY LONG, ASSISTANT DIRECTOR

Dr. Betty B. Long is a Professor of Mathematical Sciences. She teaches mathematics classes for pre-service teachers in elementary and middle school education and supports secondary student teachers in mathematics. Long is active in the National Council of Teachers of Mathematics where she served on the Affiliate Services Committee for three years. She is a Past President of the North Carolina Council of Teachers of Mathematics (NCCTM) and is the Director of the NCCTM State Math Fair and Chair of the NCCTM Math Fair Committee. Dr. Long has published, presented, and provided workshops for K-12 teachers on many topics in mathematics education.



### LEAH MCMANUS, ADMINISTRATIVE SUPPORT SPECIALIST & LIBRARIAN



Leah McManus received her Masters in Library Science from UNC-Greensboro in 2009 and worked in the Belk Library & Information Commons for 16 years before joining the MSEC in 2016. McManus is the first point of contact in the MSEC and manages event programming, the Resource Library, student staff, and many day-to-day operations of the Center. McManus enjoys working with schools and creating community partnerships.

### LORI TYLER, DIRECTOR OF SUMMER VENTURES

Lori Tyler is the Director of the Summer Ventures Program. With a background in teaching mathematics, outreach programs, and professional development, she demonstrates her broad interests in teacher preparation and impacts of building community through partnerships and outreach. Tyler completed Ph.D. coursework at Vanderbilt University in Teaching and Learning with a concentration in Mathematics Education and holds academic degrees in mathematics and mathematics education from Elon College (where she was a NC Teaching Fellow) and Wake Forest University. Tyler holds an Ed.S. degree in University Leadership and Higher Education from Appalachian State University. Tyler is currently pursuing a doctoral degree in Educational Leadership at Appalachian State University.



**THANK  
YOU!**

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Photo p. 1 - Marta Toran. Photo, p. 2 - canva.com. Others by contribution.*

## SAVE THE DATE

Many of the following events will be impacted in delivery method or dates by COVID-19. Check online information for updates.

**7/22-24:** STEM Forum & Expo by NSTA, Louisville, KY

**10/15-1/15/2021:** Summer Ventures in Science & Math application window open

**10/19-21:** NCTM Research Conference, St. Louis, MO

**10/21-24:** NCTM Annual Meeting and Exposition, St. Louis, MO

**11/4:** North Carolina Science Leadership Association, Winston-Salem, NC

**11/11:** NCCTM Leadership Seminar, Winston-Salem, NC

**11/11-13:** NCTM Regional Conference and Exposition, Tampa, FL

**11/12-13:** NCCTM State Math Conference, Winston-Salem, NC

**11/19-21:** NSTA Regional Conference, New Orleans, LA



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## MELT MARKS 20 YEARS

**Michael Bossé, Director**

After a terrific year with 150 teachers attending MELT Summer Institute in 2019, we already see

record registrations of over 285 participants for this summer. While some of the growth is due to COVID-19 forcing MELT to go online, over 170 teachers had already registered before we changed to an online format. This summer marks the 20th anniversary for MELT Summer Institutes, and we are offering 19 Summer Institutes, covering topics such as Math 1-4, Discrete Math, Desmos, Numbers and Operations, Fractions, Vertical Alignment, Literacy in Mathematics, Matrices, and Statistics. We are offering CEUs in Mathematics, Digital Literacy, and Literacy. We are also offering graduate credits for some participants.

While MELT Institutes will be online this summer, we are planning for dynamic, engaging formats that both meet the needs of teachers and engage them while learning appropriate content. We plan to create online institutes that are the envy of professional development in the state and beyond. After this summer, we will decide how to integrate these online institutes with our historically recognized face-to-face institutes in Boone.

The MSEC regularly partners with MELT by providing financial support contributing to the facilitation of summer institutes.

The MELT program is hosted by the Department of Mathematical Sciences and directed by Dr. Michael Bossé, Distinguished Professor of Mathematics Education. The program offers a variety of summer institutes each year and provides an opportunity for teachers to develop their skills as creators and facilitators of professional development. More information about the MELT program can be found online at the following link: <https://mathsci.appstate.edu/melt>.

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20th year!



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