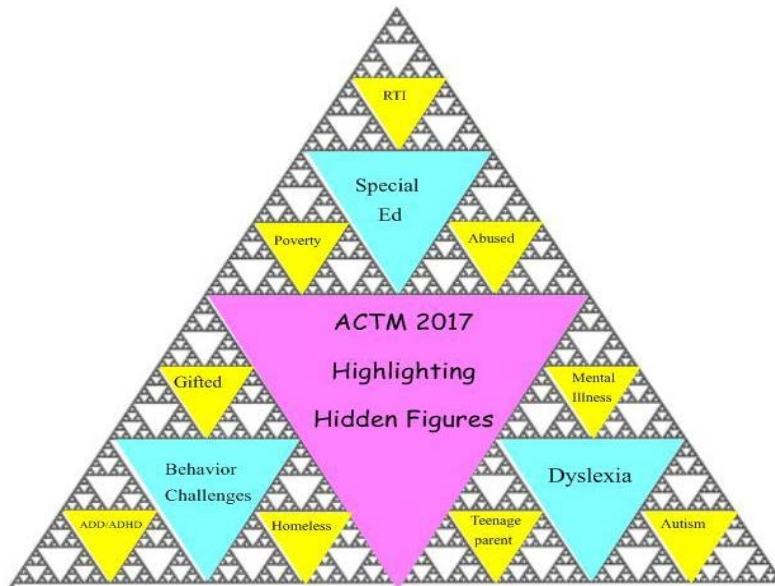




Alabama Council of
Teachers of Mathematics
presents their annual



FALL FORUM

November 2-3, 2017

McWane Science Center • Birmingham, Alabama

www.actm.education

<http://acotom.wildapricot.org>



McWane Science Center

200 19TH STREET NORTH • BIRMINGHAM, AL 35203 • (205) 714-8300

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McWane Science Center Floor & Location MAP

BACK COVER

2017 ACTM Fall Forum Committees

Conference Chair	Cathy Jones
Program Chair	Ethan Richardson
Conference Membership Chair	Rebecca Brown
Finance Chair	Michele Matin
ACTM Materials	ACTM Volunteers
Signs and Printing	Jeremy Zelkowski
Registration	Sandy McCarthy
Vendor Exhibits	Jennifer Gilbert
	Beverly Kimes
McWane Science Center	Lyndsie Garrett
Equipment	McWane IT Support
Speaker Support	McWane IT Support
Volunteer Organizers	Joel White
	Ethan Richardson
Reception	ACTM Board Members

ACTM expresses sincere appreciation to the McWane Science Center Events Staff and Leadership for assisting with the 2017 Fall Forum!

Conference Highlights

Thursday, November 2, 2017

- 8:00a **Registration Opens** – Events Center Entrance Area
Level 3 – McWane Science Center – Level C Parking
Use Elevator from first floor lobby or in parking garage to Level 3
- 9:00a—9:50a **Regular** - 50-minute morning sessions begin
10:00a-11:15a **Regular**- 50- minute & **Extended**-75- minute sessions
- 10:00p—4:30p **Exhibits Open** – Events Center Vendor & Exhibit Area, Level 3
- 11:15a-12:50-p **Lunch on Your Own**
- 1:00p—2:15p **Keynote Speaker—Matt Larson – NCTM President**
- 2:30p—3:45p **Regular – 50-minute & Extended Sessions – 75-minute sessions**
- 4:00p—4:45p ACTM Annual Business Meeting, Banquet Hall, Level 3

Friday, November 3, 2017

- 7:30a **Registration Opens** – Events Center Entrance (Level C- Parking)
- 7:45a—3:45p *Exhibits open – Events Center*
- 8:30a—9:45a **Extended** - 75-minute morning workshops
- 10:00a—10:50a **Regular** - 50-minute workshops
11:00a—11:50a **Regular** - 50-minute workshops
- 11:30a—1:00p **Lunch served in Banquet Hall – Level 3**
Scholarship winners will be announced.
- 1:15p—2:30p **Extended and Regular** afternoon workshops
2:45p—4:00p **Extended and Regular** afternoon workshops
- 3:45p **Vendors & Exhibits Close**
- 4:00—4:30p **Closing Session in Banquet Hall- Level 3**
****Door Prizes*** (must be present to win)*

**ACTM Welcomes
District and School Administrators!**

McWane Science Center Information and Announcements

Registration—Enter through glass doors on parking garage level C.
Registration & Check-in WILL BE through the “Events Center” entrance in the parking garage located on Level C.

Vendors & Exhibits—Level 3, by registration

Workshops & Sessions on Thursday and Friday:

Classrooms 301, 302, 303, 304 (Level 3)

Explore Lab (Level 2)

Regions Room (Mezzanine-by stairs from level 3 just past elevators)

Science Classroom (Mezzanine-by stairs from level 3 just past elevators)

Rushton Theater (Level 1)

GENEius Lab (Level 1)

Lunchroom Area Room A (Lower Level - LL)

Lunch Hall B (Lower Level - LL)

**All attendees are invited to the *ACTM Business Meeting*
At 4:00 pm, November 2nd
*In the Banquet Hall, Level 3***

Friday Lunch (11:30am to 1:00pm)

Banquet Hall (Level 3)

McWane Science Center

All facilities are smoke free.

Registration Dates of Interest

Information is located on the ACTM website. All registrations will be conducted online at <http://ACTM.education> or on-site at the McWane Science Center.

Parking Locations

Parking will be free in the McWane Science Center lot on Levels C and higher. Tokens will be available to ACTM conference attendees at the registration/check-in desk when you leave.

Registration

Registration and check-in for will be at the end of the entrance hallway to the Events Center on Level 3 in the parking garage.

Meal Functions

Lunch Thursday is not provided. There are a number of restaurants within walking distance of the McWane Center.

Each participant will receive a lunch ticket for Friday in their conference materials.

Lunch will be served Friday, November 3rd, in the **Banquet Hall (Level 3)** from 11:30am-1pm.

Vendor Exhibits

Vendor exhibits will be in Events Center Exhibit Area near the registration desks on Level 3.

Special Needs

It is the policy of McWane Science Center to provide reasonable accommodations for environmental and program accessibility for persons with disabilities. Individuals in need of other services should contact McWane Science Center two weeks prior to the conference. Elevators are onsite for navigating floor to floor.

Certificate of Attendance

All conference attendees will be emailed a certificate of attendance 72 hours after the completion of the conference. It is the responsibility of each attendee to register his or her own professional development hours with their school system.

*****ACTM does not provide CEU credits *****

Vendors, Sponsors, and Exhibitors

Vendors and exhibitors will be located in Events Center Exhibit Area.
The exhibit area will be open Thursday after 9:00 a.m. and
Friday from 7:45 a.m. until 3:45 p.m.

Breakfast Sponsors 2017

National Geographic Learning/CENGAGE

Sadlier Math

Teachers 'N Tools

ACTM Exhibitors 2017

Alabama Education Association (AEA)

Alabama Learning Exchange (ALEX)

Alabama State Department of Education (ALSDE)

Carnegie Learning

CPM Educational Program

Curriculum Associates

Houghton Mifflin Harcourt

Explore Learning

McWane Center

National Geographic Learning/Cengage

National Council of Teachers of Mathematics (NCTM)

ORIGO Education

Pearson Education

Sadlier Math

Everfi

Bby Publications at the University of West Alabama

9 AM Sessions, Thursday, November 2nd

Lead Speaker	TITLE OF PROPOSED SESSION THURSDAY, NOV 2	Grade Band Focus						Room and Level
		K - 2	3 - 5	6 - 8	9 - 10	11 - 12	13 +	
Pamela Norris	Unconscious Bias in the Mathematics Classroom	X	X	X	X	X	X	304 Level 3
Melissa A. Campbell	Mathematizing Your Read Alouds		X					303 Level 3
Danielle Stocks	STEM in the Middle School Mathematics Classroom for Beginners			X				302 Level 3
Sarah A. Roller	Noticing and Wondering: A Feedback Structure to Illuminate Hidden Figures	X	X	X	X	X		Regions Room Mezzanine Level
Derrick Ward	Beyond The I.E.P. Using Numerology to Understand Students		X	X	X	X		Explore lab Level 2
Jeremy Zekowski	Research about new math teachers' needs/wants for administrators		X	X	X	X		Rushton Science Theatre Level 1
Rudy Neufeld	Modeling Makes Thinking Visible in work with Linear Relations and Slope			X	X			301 Level 3
Lisa Etheridge	Math Games That Connect Understanding to Learning		X					Science Workshop Mezzanine Level
Paige Brown	Hyperdocs... What's all the Hype?				X	X		GENEius Lab Level 1
Alaina Pettus	BEST Robotics			X	X	X		Banquet Hall Level 3
Jim Gleason	Using GeoGebra in the Secondary Mathematics Classroom			X	X	X	X	Lunchroom A Lower Level

Thursday Registration is from 8:00 AM - 4:30 PM
Event Center Entrance (Level C from Parking Garage)

*****All Forum Attendees Must Register*****

Thursday, Nov 2. 9:00—9:50 AM Session Descriptions

Presenter **Unconscious Bias in the Mathematics Classroom** **Room 304**
Pamela **Target Audience-Teachers** **Level 3**
Norris **Target Grades K-12, 13+**
AMSTI-Auburn University

Unconscious bias is defined as prejudice in favor of or against one thing, person, or group compared with another, usually in a way considered to be unfair. Unconscious bias can manifest in many ways, such as how we judge and evaluate others, or how we act toward members of different groups. The existence of unconscious bias in the mathematics classroom becomes problematic for students. This session will explore various biases that might exist and offer solutions for addressing.

Presenter **Mathematizing Your Read Alouds** **Room 303**
Melissa A. **Target Audience-Teachers** **Level 3**
Campbell **Target Grades K-5**
Williams Avenue Elementary School

During this session, the attendee will learn the importance of including fiction books during their math instruction. Book lists will be shared, as well as ways reading to self or reading to someone can be a beneficial every day math station.

Presenter **STEM in the Middle School Mathematics Classroom for** **Room 302**
Danielle **Beginners** **Level 3**
Stocks **Target Audience-Teachers**
 Target Grades 6-8
Winfield City Schools

What is STEM? STEM stands for science, technology, engineering, and mathematics. STEM education creates critical thinkers, increases science literacy, and enables the next generation of innovators. STEM activities provide real-life, hands-on learning activities for the student. Making math both fun and interesting helps the student to do much more than just learn. Come learn about the engineering design process. Examples will be given of STEM projects and cross-curricular projects.

**CANCELLED SESSION -
SORRY**

Presenter **Noticing and Wondering: A Feedback Structure**
Sarah A. **to Illuminate Hidden Figures** **Regions Room**
Roller **Target Audience-Coaches, Administrators** **Mezzanine**
 Target Grades K-12 **Level**

The University of Alabama in Huntsville

Have you ever considered the ways observational feedback can illuminate hidden figures? As a coach or administrator, are you searching for ways to provide educative feedback after a classroom observation and also promote conversation about effective mathematics teaching practices? If so, join me to learn about noticing and wondering language! In this session you will learn a language structure for inquiring about and discussing math teaching, identify a lens for guiding observations and feedback, and practice this structure with short cases and video.

Presenter **Beyond The I.E.P. Using Numerology to**
Derrick **Understand Students** **Explore Lab**
Ward **Audience-Teachers, Coaches, & Administrators** **Level 2**
 Target Grades 3-12

Conyers Middle School

In this fun filled session, you will learn how the science of Numerology (developed by Pythagoras) can assist educators in teaching students with all levels of ability and behavior. Using my book Numerology for Teachers, we will learn how to identify distinct personality types to meet the needs of each individual student. We will also learn about ourselves as educators, family members, and colleagues.

Presenter **Research about new math teachers' needs/wants** **Rushton**
Jeremy **for administrators** **Science**
Zelkowski **Target Audience- Administrators** **Theatre**
 Target Grades 3-12 **Level 1**

The University of Alabama

This session will present national survey results of what new mathematics teachers (0-2 years experience) indicated as what is most important to support their beginning career experiences. The results of this national survey highlight the most important findings published to date specific to mathematics teachers' needs and supports that promote retention and growth.

<u>Presenter</u> Rudy Neufeld	<u>Modeling Makes Thinking Visible in work with</u> <u>Linear Relations and Slope</u> Audience- Teachers, Coaches, & Administrators Target Grades 6-10	Room 301 Level 3
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Thames Schools/UMathX by Neufeld

This workshop will model blended learning within diverse learning environments through appropriate tools to build it, draw it, talk it, write it before OWNING IT!! Participants will explore 3-part lessons, discuss pedagogical considerations, and choose appropriate tools, including – digital manipulatives, hand held manipulatives, tables, graphs to make sense of and solve problems in Linear Relations and Real World Problems involving Slope.

<u>Presenter</u> Lisa Etheridge	<u>Math Games That Connect Understanding to</u> <u>Learning</u> Target Audience- Teachers Target Grades 3-5	Science Workshop Mezzanine Level
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Troy University

Participants will have the opportunity to learn and engage in a variety of math games that focus on conceptual understanding of a variety of mathematical concepts covered at the elementary level as well as provide opportunities for differentiation through increasing or decreasing the level of cognitive demand.

<u>Presenter</u> Paige Brown	<u>Hyperdocs... What's all the Hype?</u> Target Audience- Teachers Target Grades 9-12	GENEius Lab Level 1
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Childersburg High School/Talladega County

If you have heard about HyperDocs and wondered what all the hype is about, this is the session for you! HyperDocs are an innovative way to package the content of your lesson that will shift your classroom to a student centered learning environment. Hyperdocs are for teachers who are already utilizing Google Apps, and are ready to take their tech integration to another level. Learn what a HyperDoc is, how to create HyperDocs, and see how teachers have implemented different styles of HyperDocs to transform teaching and student learning. Leave inspired with examples and resources to explore to help you begin your own journey of teaching with HyperDocs.

Presenter **BEST Robotics** **Banquet Hall**
Alaina **Audience- Teachers, Administrators** **Level 3**
Pettus **Target Grades 6-12**
Brooks High School

Brooks High School BEST Robotics Team, Robocon, has won numerous top awards at their local level of competition and also at the regional level. The team and sponsor, Alaina Pettus, will be sharing on how to build a successful team as well as sharing aspects of their most recent seasons. The team members will tell you the benefits of having a BEST Robotics Team, and how being a part of a STEM competition has positively affected them.

Presenter **Using GeoGebra in the Secondary Mathematics** **Lunchroom A**
Jim **Classroom** **Lower Level**
Gleason **Target Audience- Teachers, Coaches**
 Target Grades 6-12,13+
The University of Alabama

During this session I will introduce the participants to GeoGebra, an open source (free) mathematics software useful in the secondary mathematics classroom for explorations in data analysis, understanding functions, and studying geometric concepts. I will walk through some of the capabilities of the software and present where such tools can be used throughout the secondary curriculum with connections to the Alabama Course of Study.

**ACTM would like to extend a special
thanks to**

National Geographic Learning/CENGAGE

Sadlier Math

Teachers 'N Tools

**for being Breakfast Sponsors
at the 2017 Fall Forum.**

10:00 AM Sessions, Thursday, November 2nd

Lead Speaker	TITLE OF PROPOSED SESSION THURSDAY, NOV 2	Grade Band Focus						Room
		K - 2	3 - 5	6 - 8	9 - 10	1 1 - 1 2	1 3 +	
Le Shell Smith	Where Do We Go From Here? Closing the Learning Gaps		X	X	X	X		304 Level 3
Melanie Martin	Middle and High School Number Talks to Close the Gaps			X	X			Regions Room Mezzanine Level
Kori Fulford	We Choose to Go to the Moon: Doing what is best, not what is easy.			X				Rushton Science Theatre Level 1
Milea Kirby	Putting the M in STEAM	X	X	X				Lunchroom A Lower Level
W. Gary Martin	Staying on Message: Effectively Communicating about Mathematics Education	X	X	X	X	X	X	301 Level 3
Cynthia Stenger	Using STEM activities to Teach Generalizations			X	X	X	X	Banquet Hall Level 3
Kristin Harbour	Solve it! Using a "Structured" Approach to Problem Solving	X						303 Level 3
Rudy Neufeld	Modeling Makes Thinking Visible in Addition with Regrouping, Fraction Multiplication and Partial Products		X					Explore Lab Level 2
Loria A. Allen	Number Sense for Success	X						GENEius Lab Level 1
Gary Kubina	Hands-On, Minds-On Geometry				X	X		302 Level 3
Tyrone Holmes	Tools that Drive Mathematical Discourse	X	X	X				Science Workshop Mezzanine Level

**NCTM President Matt Larson
will deliver our Keynote Session
in the Banquet Hall, Level 3
from 1:00-2:15PM**

Thursday, Nov 2. 10:00—11:15 AM Session Descriptions

Presenter **Where Do We Go From Here? Closing the** **Room 304**
LeShell **Learning Gaps** **Level 3**
Smith **Audience-Teachers, Coaches & Admins**
 Target Grades 3-12,
UAH/AMSTI Secondary Math Specialist

Participants will discuss RTI and how to properly implement it in the classroom/school/district. Participants will see how benchmark tests and data help to drive instruction towards closing the achievement gaps of students. Research and actual data will be provided to support all ideas.

Presenter **Middle and High School Number Talks to Close** **Regions Room**
Melanie **the Gaps** **Mezzanine**
Martin **Audience-Teachers** **Level**
 Target Grades 6-10,
JSU/AMSTI

MS & HS math teachers now have a way to address and close the gaps in essential understandings about number and operations from K-5. Short, targeted, intentional and orchestrated discourse facilitated by the teacher allows the students to deepen their understanding of and flexibility with mathematical operations with whole numbers, decimals, and fractions. Participants will receive quick images as well as suggested problems and pacing for multiple strategies with addition, subtraction, multiplication, and division of numbers. This practice harms no one while absolutely assisting the "hidden figures" in our classrooms.

Presenter **We Choose to Go to the Moon: Doing what is** **Rushton**
Kori **best, not what is easy.** **Science Theatre**
Fulford **Audience-Teachers** **Mezzanine Level**
 Target Grades 6-8,
South Highlands Middle School

JFK announced to the world in 1962, "We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard; because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one we intend to win." In the classroom, teachers feel they are on an impossible mission. Because the task of teaching difficult students is rigorous, many choose to do what is easiest for students and themselves. Come hear how a first year teacher stepped into a 7th grade class with only 3% mathematically proficient students and chose to raise expectations rather than doing what had always been done.

<u>Presenter</u> Milea Kirby Childersburg Middle School	<u>Put the M in STEAM</u> Audience-Teachers Target Grades K-8,	Lunchroom A Lower Level
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In this session we will discover how to implement STEAM activities that not only connect to math standards, but help TEACH them. We will explore different grades' math standards and brainstorm ways to STEAM them up!

<u>Presenter</u> W. Gary Martin Auburn University	<u>Staying on Message: Effectively Communicating about Mathematics Education</u> Target Audience- Teachers, Coaches Target Grades K-12,13+	Room 301 Level 3
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Facebook and other social media sometimes seem overrun with “crazy talk” about mathematics education. Yet many of us struggle with how to effectively respond to parents, friends, and even administrators and colleagues, who may fall prey to the misconceptions being spread. The purpose of this session is to help participants identify particular challenges in communicating about mathematics education and to develop a simple but powerful communications strategy: “Stay on message!” The session will conclude with applications of this strategy in a variety of contexts.

<u>Presenter</u> Cynthia Stenger The University of North Alabama	<u>Using STEM Activities to Teach Generalization</u> Target Audience- Teachers Target Grades 6-12,13+	Banquet Hall Level 3
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Colleagues in math and CS developed a teaching strategy that uses computer programming, math reasoning, and engineering activities to push students to build mental frameworks for mathematical generalization. They share a proportional reasoning lesson where students explore the concept of scale writing computer programs, finding general expressions in their code, then making conjectures and writing convincing arguments about the math relationships. This is followed by an engineering activity where students are given an 8½ by 11 inch grid map of a search and rescue location. They find an optimal path to rescue two victims and program their Parallax S2 robot to navigate the small grid. Finally, they scale to the actual rescue location and perform 3 test runs on a large mission map.

Presenter **Solve it! Using a “Structured” Approach to** **Room 303**
Kristin **Problem Solving** **Level 3**
Harbour **Audience- Teachers**
Target Grades K-2

University of Alabama

Students who struggle in mathematics often struggle in the area of solving word problems. This session will focus on how to implement problem structures in teaching elementary students to solve addition and subtraction word problems through the use of schema-based instruction. Participants will engage in activities that can be incorporated into classroom and intervention instruction immediately.

Presenter **Modeling Makes Thinking Visible in Addition with** **Explore Lab**
Rudy **Regrouping, Fraction Multiplication and Partial** **Level 2**
Neufeld **Products**
Target Audience- Teachers, Coaches &
Administrators Target Grades 3-5

UMathX by Neufeld

This workshop will model blended learning within diverse learning environments through appropriate tools to Build it, Draw it, Talk it, Write it before OWNING IT!! Participants will explore 3 part lessons, discuss philosophical/pedagogical considerations, make connections to standards and choose appropriate tools, including – computer technology and manipulatives to make sense of and solve problems in Elementary Mathematics Topics .. Equivalent Fractions, Partial Products, Multiplication of Fractions, Cartesian plane, Algebraic Thinking.

Presenter **Number sense for success** **GENEius Lab**
Loria A. **Target Audience- Teachers, Coaches &** **Level 1**
Allen **Administrators**
Target Grades K-2

AMSTI, University of Alabama Huntsville

Participants will gain insight into the impact math talks, number sense routines, strategically crafted word situations, mathematical games, and lesson debriefs have on the development of students' mathematical reasoning and the development of number sense. Lesson design, the use of daily formative assessments to determine next step instruction, and the importance of instructional collaboration will be highlighted during this session. Video clips, student work samples, and teacher notes will be used to give participants a snapshot of how number sense develops over time in local classrooms. Handouts will be provided.

Presenter
Gary
Kubina
Retired Teacher, Independent Contractor

Hands-on, Minds-On Geometry
Target Audience- Teachers
Target Grades 9-12

Room 302
Level 3

Looking for some quick, new ideas to spice up your Geometry classes? This is the session for you. Learn and participate in ten engaging activities that will increase the interest of your students (and you). No lectures here. Come prepared to get your hands and mind on all the activities and have some fun while doing them.

Presenter
Tyrone
Holmes

Tools that Drive Mathematical Discourse
Target Audience- Coaches
Target Grades K-8

Science
Workshop
Mezzanine
Level

Curriculum Associates

This workshop-format session will focus on ways to facilitate & enhance mathematical discussions in the classroom. Simulated lesson components provide opportunities to practice questioning strategies, giving attendees tools & techniques they can immediately use to manage conversations, evaluate student responses & elevate the rigor of discourse to boost college & career readiness. Participants will learn new questioning strategies to help students make conjectures, talk, question, and agree or disagree about problems in order to discover important mathematical concepts. Explore strategies to support mathematical discourse, referencing the latest research. Practice questioning strategies and plan for math discourse in upcoming student lessons. Enhance discourse through a variety of tools.

NCTM President Matt Larson
will deliver our
Keynote Session
in the Banquet Hall, Level 3
from 1:00-2:15PM

Featured Keynote Address

1:00 PM - 2:15 PM Thursday
Banquet Hall, Level 3

*Title: Overcoming Obstacles to Make Mathematics
Work FOR Students*

In order to improve the mathematics learning of students and simultaneously close learning differentials, we must overcome the obstacles that have traditionally stood in the way of mathematics working for each and every student. This presentation will engage participants in examining principles of effective mathematics programs and look at action steps necessary to overcome these obstacles.

Matt Larson

President, National Council of Teachers of Mathematics

**All attendees are invited to the
ACTM Business Meeting
At 4:00 pm, November 2nd
In the Banquet Hall, Level 3**

**The ACTM Executive Board will hold its business meeting.
Candidates for offices will be presented and voted upon.
Nominations for positions will be accepted from the floor.**

******Executive Committee Members Required******

**Election of officers for 2017-2019
Announcement of Scholarship Winners
Announcement of Teacher Grant Winners**

2:30 PM Sessions, Thursday, November 2nd

Lead Speaker	TITLE OF PROPOSED SESSION THURSDAY, NOV 2	Grade Band Focus						Session length (mins)	Room
		K - 2	3 - 5	6 - 8	9 - 10	1 1 - 1 2	1 3 +		
Jamie Harbin	Cracking the Math Code With Ozobots	X	X					50	304 Level 3
Alicia Whitlock	From Students' Hands to Minds	CANCELLED SESSION – SORRY						50	303 Level 3
Shelia McGee Ingram.	Teaching Mathematics through Social Justice: Developing Mathematical Power	X	X	X	X	X	X	50	302 Level 3
Melissa A. Campbell	Paper Plates and Baggies and Manipulatives; Oh, My!	CANCELLED SESSION – SORRY						50	301 Level 3
Clint Vandiver	How can story situations help math strugglers with fluency and reasoning?	X	X					50	Science Workshop Mezzanine Level
Gerry Long	Strategies Used to Promote Discourse in Mathematics Classrooms			X	X	X		50	Rushton Science Theatre Level 1
									Regions Room Mezzanine Level
Paul Chika Emekwulu	Building a formula for converting Fibonacci numbers to triangular numbers	CANCELLED SESSION – SORRY						75	Lunchroom A Lower Level
Ashley Tilley	Unmask the Task: Effective Implementation of High-Level Tasks		X					75	Explore Lab Level 2
Milea Kirby	Khan Academy - utilizing individualized mastery based learning		X	X				75	GENEius Lab Level 1
Megan Burton	AMTEA Meeting	X	X	X	X	X	X		Banquet Hall Level 3

ACTM would like to thank
Johnathan Dills of Lakeshore Learning and
Julie Law of ETA hand2mind and
Beth Smith of Texas Instruments (TI)
for providing door prizes.

Thursday, Nov 2. 2:30—3:45 PM Session Descriptions

Presenter **Cracking the Math Code With Ozobots** **Room 304**
Jamie **Target Audience- Teachers** **Level 3**
Harbin **Target Grades K-5**
Talladega County Schools

Do your students love coding? Have you ever wondered how coding fits into your math curriculum? Join us for this hands-on learning session where you will discover how to crack the code and make the connection between math and coding using tiny robots called Ozobots.

Presenter **From Students' Hands to Minds** **Room 303**
Alicia **Target Audience- Teachers** **Level 3**
Whitlock **Target Grades K-5**
Airport Road Intermediate School

Teachers will briefly review research and the benefits of using hands on instruction in their math curriculum. Students must go through abstract examples before going to concrete. It is vital that students have a chance to explore, a teacher's job is to facilitate, not to "overly" teach. There is power in allowing them to discover answers and definitions on their own, before teachers step in. Last, teachers will take home examples of hands on math activities for K-5.

Presenter **Teaching Mathematics through Social Justice:** **Room 302**
Shelia **Developing Mathematical Power** **Level 3**
McGee **Target Audience- Teachers**
Ingram **Target Grades K-12, 13+**
Co-Speakers: Delphine Thirkill, Taajah Witherspoon

Teaching mathematics through social justice involves using mathematical thinking to help students become aware of the social injustices in the world and their own lives while also increasing their mathematical understanding. Participants in this session will develop and solve real world problems that focus on social justice and support students in developing a deep understanding of the Common Core Mathematics Standards. Resources and classroom examples will be shared on integrating mathematics and social justice.

**CANCELLED SESSION -
SORRY**

Presenter **Paper Plates and Baggies and Manipulatives; Oh, My!** **Room 301**
Melissa A. **Target Audience- Teachers** **Level 3**
Campbell **Target Grades K-5**
Williams Avenue Elementary

Through this session, the attendee will explore ways to use every day classroom staples to easily create manipulatives for student use. Teachers with students who need the concrete and pictorial will enjoy this make-and-take session!

Presenter **How can story situations help math strugglers with** **Science**
Clint **fluency and reasoning?** **Workshop**
Vandiver **Target Audience- Teachers, Coaches** **Mezzanine**
 Target Grades K-5 **Level**

AMSTI

Why do students not grasp basic facts in elementary school? Are these the same students who wind up failing Algebra class later in their math path? Discover a hidden connection that can be made in Elementary grades to promote basic fact fluency and algebraic thinking while simultaneously helping students become better problem solvers.

Presenter **Strategies Used to Promote Discourse in Mathematics** **Rushton**
Gerry Long **Classrooms** **Science**
 Audience- Teachers, Coaches **Theatre**
 & Administrators **Level 1**
 Target Grades 6-12

CPM Educational Program

Do you struggle with keeping students engaged in your lessons? In this interactive session, participants will learn about and practice many study team teaching strategies; participate in doing math problems that model these strategies; discuss the purpose of the strategies. These strategies will help you structure effective collaboration among your students.

Presenter
**Paul Chika
Emekwulu**

**Building a formula for converting Fibonacci
numbers to triangular numbers**

**Audience- Teachers, Coaches &
Administrators**

Target Grades 9-12, 13+

**Lunchroom A
Lower Level**

Individual

Is there a mathematical formula that converts Fibonacci numbers to triangular numbers? Award-winning & international best-selling author Paul Chika Emekwulu says, "Yes, there is." The author will also share from his fascinating dream journal which is divided into non-mathematical and mathematical dreams including one with numbers of the Fibonacci sequence. The presentation is based on the author's book titled, "Getting to Know Fibonacci numbers."

**CANCELLED SESSION
SORRY**

Presenter
**Ashley
Tilley**

**Unmask the Task: Effective Implementation of
High-Level Tasks**

**Audience- Teachers, Coaches &
Administrators**

Target Grades 3-5

**Explore Lab
Level 2**

AMSTI University of Montevallo

Would you like to implement high-level tasks more effectively to meet the needs of all students? Through collaboration with fellow educators we will utilize student data, analyze student strategies and explore teacher practices to guide high-level tasks in the 3-5 classroom.

Presenter
Milea Kirby

**Khan Academy - utilizing individualized mastery based
learning**

Target Audience- Teachers

Target Grades 3-8

**GENEius Lab
Level 1**

Childersburg Middle School

Perhaps you have used Khan Academy a time or two in your own classroom... maybe a helpful video here and there. Come hear from a classroom teacher and Khan Academy Ambassador about how you can utilize this tool in revolutionary ways. We will experience Khan Academy from a student's perspective, discuss best practice for classroom implementation, and contemplate the implications of mastery based, student-lead learning in the 21st Century classroom. ***BYOD**

Presenter

**Megan
Burton**

Auburn University

AMTEA Meeting

**Banquet Hall
Level 3**

The Association of Mathematics Teacher Educators of Alabama (AMTEA) is the state affiliate for the national Association of Mathematics Teacher Educators. Our purpose is to improve the preparation of mathematics teachers in Alabama. This organization is for stakeholders in mathematics teacher education at the undergraduate and graduate level. AMTEA facilitates communication and collaboration among mathematics teacher educators. AMTEA also seeks to encourage and organize programs that center on teacher preparation, certification, and professional development.

**ACTM would like to extend a
special thanks to**

National Geographic Learning/CENGAGE

Sadlier Math

Teachers 'N Tools

**for being Breakfast Sponsors
at the 2017 Fall Forum.**

8:30 Sessions, Friday, November 3rd

Lead Speaker	TITLE OF PROPOSED SESSION FRIDAY, NOV 3	Grade Band Focus						Room & Level
		K - 2	3 - 5	6 - 8	9 - 1 0	1 - 1 2	1 3 +	
Sharon Harris	What To Do With The Advanced Learner in Math		X					304 Level 3
Jennifer Davis	Millions, Billions and Double Trouble		X					303 Level 3
Melissa Walton	Building A Numeracy Foundation	X						302 Level 3
Carrie Plank	A Hop, Skip, and a Jump: Exploring Number Paths and Number Lines	X						Explore Lab Level 2
Lisa McDonough	RTI -Math Emergency!		X	X	X	X		301 Level 3
Roberta Ludwigsen-Hill	The Math in STEAM			X	X	X		Lunch Room A Lower Level LL
Keri Flowers	Mathematical Modeling in High School				X	X		Science Workshop Mezzanine Level
Denise Porch	Building Conceptual Understanding Using Base Ten Blocks		X					Regions Room Mezzanine Level
Andrew Wingard	Expectations vs. Reality in High School Math Classes				X	X		GENEius Lab Level 1
Sheila Holt	Empowering the Hidden Figures in Beginning Teachers: A Teacher Panel	X	X	X	X	X		Banquet Hall Level 3
Aundrea Walker	Foil Robot Project Involving Surface Area				X			Rushton Science Theatre Level 1

Does your work involve supervising or coaching teachers?
Go to www.mathleadership.org to learn about the National Council of Supervisors of Mathematics (NCSM)

ACTM would like to thank

**Lakeshore Learning
Origo Education**

**ETA hand2mind
ALEX**

Sadlier Math

for providing door prizes for the 2017 Fall Forum!

Friday, Nov. 3. 8:30—9:45 AM Session Descriptions

What To Do With The Advanced Learner in Math
Audience-Teachers Grades 3-5

Room 304
Level 3

Join us as we investigate the characteristics of an advanced learner and addressing their needs in the math classroom. Differentiation of the math curriculum, curriculum compacting and enrichment assignments will be discussed, as well as enrichment strategies and resources. Attendees will be given the opportunity to explore hands-on teacher and student resources.

Sharon Harris

Mill Creek Elementary, Gifted Specialist

Millions, Billions and Double Trouble
Audience--Teachers Grades 3-5

Room 303
Level 3

Discover innovative, hands-on activities to help students understand very large numbers and the effects of doubling using real-world examples from the environment and the global community. The presented activities build students' understanding and skills in numbers and operations (multiplication, division and fractions in particular), estimation, problem solving, modeling using simple manipulatives, creating bar graphs and linear measurement. These math skills are then applied to interdisciplinary content using real-world data and themes in science and social studies, and recommended children's literature. Receive electronic lesson plans matched to state standards.

Jennifer Davis

University of Montevallo

Building A Numeracy Foundation
Audience--Teachers Grades K-2

Room 302
Level 3

Research highlights the importance of mathematical experiences during the early childhood years. A vital component of these experiences include early numeracy. Participants will actively engage in activities highlighting early numeracy, such as counting and cardinality and how it supports the beginning of addition and subtraction during this make and take session. Participants will leave with resources that can be immediately implemented in the classroom.

Melissa Walton

University of Alabama

A Hop, Skip, and a Jump: Exploring Number Paths and Number Lines

**Explore Lab
Level 2**

Audience--Teachers & Coaches Grades K-2

As a K-2 teacher or coach, are you aware of the research that says number paths should be introduced before number lines to support number sense? How can they support the conceptual understanding of addition and subtraction? Participants will engage in hands on use of these tools and explore the progression of number paths to number lines in developmentally appropriate ways for all learners in K-2 classrooms.

Carrie PLank

AMSTI, University of Alabama in Huntsville

RTI - Math Emergency!

**Room 301
Level 3**

Audience--Teachers & Coaches Grades 3-12

Participants will understand the why behind RTI and why we do not wait until students fall so far behind they can never catch up. Through the use of school benchmark data and formative assessment teachers will learn how to close gaps and respond when some students don't learn.

Lisa McDonough

AMSTI, University of Alabama in Huntsville

The Math in STEAM

**Lunchroom A
Lower Level**

Audience--Teachers Grades 6-12

Teaching the math through STEAM projects.

Roberta Ludwigsen-Hill

AMSTI, University of Montevallo

Foil Robot Project Involving Surface Area

**Science Workshop
Mezzanine Level**

Audience--Teachers Grades 9-10

This session will show how to use surface area formulas to calculate the precise amount of tin foil need to entirely cover a student made robot.

Aundrea Walker

Faith Academy

Mathematical Modeling in High School
Audience--Teachers Grades 9-12

**Science
Workshop
Mezzanine Level**

Mathematical modeling allows students and teachers alike to use mathematics to solve real world situations and questions. Join us as we explore how mathematical modeling is used in the high school classroom. In this session we will discuss in depth the meaning of mathematical modeling, how to recognize modeling questions, and how to tailor questions to promote modeling in your classroom. Modeling can be used to highlight the relevance and importance of mathematics, answering the age old question of 'why do I need to learn this?'

Keri Flowers

AMSTI, Troy University

Building Conceptual Understanding Using Base Ten Blocks
Audience--Teachers & Coaches Grades 3-5

**Regions Room
Mezzanine Level**

Participants will use base ten blocks to interact, explore, and make mathematical connections to standards within the domain, Number & Operations in Base Ten. Base ten blocks will serve as a concrete model to establish the conceptual understanding of the four operations (+, -, x, /) with decimal values. The tools will help solidify understanding of the mathematical processes instructed through the NBT domain.

Denise Porch

AMSTI Math Specialist

Expectations vs. Reality in High School Math Classes
Audience--Teachers & Coaches Grades 9-12

**GENEius Lab
Level 1**

We as teachers often take our high expectations and lower them based on the reality of where our students are mathematically. How could our high school math classes be greatly improved if we looked at our reality and thought of ways to get to where we expect??? Engage in hands-on learning that tries to answer this question as well as hear from a high school math teacher that has tackled this question with successes to share.

Andrew Wingard

Barbour County High School

**Empowering the Hidden Figures in Beginning Teachers:
A Teacher Panel**
Audience--Teachers Grades K-12

**Banquet Hall
Level 3**

Katherine Goble Johnson in Hidden Figures said, "I cannot work on what I cannot see." Beginning teachers often experience similar frustrations as they are offered limited information while being thrust into a new school context where they must learn to juggle the roles and responsibilities of being a new math teacher. This session is designed to empower the hidden figures in beginning teachers and to offer them the information they have been craving from others who have been there and survived that! This question-answer session will include a panel of teachers and math specialists from all grade levels who are eager to share and talk about anything. Potential topics to discuss include: access and equity, classroom management, student engagement, teacher evaluation, and more!

Sheila Holt
UAH AMSTI

10:00AM Sessions, Friday, November 3rd

Lead Speaker	TITLE OF PROPOSED SESSION FRIDAY, NOV 3	Grade Band Focus						Room & Level
		K - 2	3 - 5	6 - 8	9 - 10	1 1 - 1 2	1 3 +	
Cathy Jones	Panel Discussion with Members of Strategic Planning Team for Mathematics	X	X	X	X	X	X	Banquet Hall Level 3
April Mitchell	ANIE (Assessment of Numeracy in Education)	X	X					304 Level 3
Laura Clemons	Coaching With 3-5 Teachers Meeting the Needs of ALL Students	CANCELLED SESSION - SORRY						303 Level 3
David Frongillo	One and Done...Now Teaching is Fun!		X	X	X	X		302 Level 3
Jeanne Simpson	There's More to Math Than Numbers - Teacher Talk, Word Problems & ELLs			X				Explore Lab Level 2
Sara LeCroy	Labs in Mathematics				X	X		301 Level 3
Janet St. Clair	Aesthetic Computing for Understanding Order of Operations and Structure			X	X			Science Workshop Mezzanine Level
Kimberly Cox	Computer Programming to Teach Math Concepts				X	X		Rushton Science Theatre Level 1
Eugene T. Glover, Jr.	Importance of Cultural Representation in Mathematics		X					Regions Room Mezzanine Level
Brian Huyvaert	Leveraging Failure to Engage Students	CANCELLED SESSION - SORRY						GENEius Lab Level 1
Melissa A. Campbell	Mathematizing Your Read Alouds	X	X					Lunchroom A Lower Level

Friday, Nov 3. 10:00—10:50 AM Session Descriptions

Panel Discussion with Members of Strategic Planning Team for Mathematics **Banquet Hall
Level 3**

Audience--Teachers, Coaches & Administration **Grades K-12,13+**

The Strategic Planning Team for Mathematics was a panel selected by the Alabama Department of Education to make recommendations for the improvement of mathematics in Alabama. A panel of members will share the processes the committee used to draft recommendations. A limited number of reports will be available for attendees of this session.

Cathy Jones

Alabama Department Of Education, AMSTI

ANIE (Assessment of Numeracy in Education)

Audience--Teachers, Coaches **Grades K-5**

Room 304

Level 3

The ANIE is an assessment of students' understanding of a single learning outcome or standard. It is unique because it is complex enough to assess conceptual and procedural understandings that align with performance standards and yet simple enough to use as a learning tool everyday. The ANIE helps teachers identify and then plan intervention to support students' gaps in learning with 15 minutes or less to clarify the missing piece of a concept.

April Mitchell

AMSTI, UAB

Coaching With 3-5 Teachers Meeting the Needs of ALL Students **Room 303**

Audience--Teachers, Coaches **Grades 3-5**

Level 3

The session includes work in 3-5 classrooms targeting differentiated instruction. We will look at planning, co-teaching, debriefing a lesson, analyzing student work and next step planning.

Laura Clemmons

UAH AMSTI, Math Specialists, Grades 3-5

**CANCELLED SESSION
SORRY**

One and Done...Now Teaching is Fun!
Audience-- Teachers & Administrators Grades 3-12

Room 302
Level 3

20% of your students take up 80% of your time. Often disruptive classroom behavior dominates that 80%. Imagine speaking to your troublesome student(s) just once, and it ends there. It can happen and it does. One and done, now teaching is fun! Veteran teacher or not, this is the session you need to attend.

David Frongillo
Retired Teacher

There's More to Math Than Numbers - Teacher Talk, Word Problems & ELLs
Audience--Teachers Grades 6-8

Explore Lab
Level 2

When students enter a classroom, they are surrounded by language. Teacher talk (instruction in content and procedures) can be a barrier to any students' learning, but it is especially challenging for ELs to decode. Following the newly developed DIAL Model (Differentiating Instructional and Academic Language), teachers will learn to analyze their own language of instruction, reduce the "noise" in their messaging, and present content in clear language that is accessible for struggling learners and even lower level ELs.

Jeanne Simpson
AMSTI, UAH

Labs in Mathematics
Audience--Teachers Grades 9-12

Room 301
Level 3

Labs are a necessity in biology and chemistry, but what do labs in mathematics look like? Take your hands-on activities to the next level by challenging students to analyze data and make projections. Algebra, Geometry, Trigonometry and Calculus labs will be introduced in this session.

Sara LeCroy
Faith Academy

Are you an ACTM member? Are you a K-12 Teacher?
Apply for an ACTM Teacher Grant

Go to the ACTM website, www.actm.education, for information on how to apply for teacher grants for Spring, and for the application.

Aesthetic Computing for Understanding Order of Operations and Structure

Audience--Teachers

Grades 6-10

Science Workshop

Mezzanine Level

The presentation centers around Paul Fishwick's aesthetic computing for high school algebra to help students understand order of operations and structure of algebraic expressions. It involves changing an algebraic expression from implicit notation seen in mathematics textbooks ultimately to an expression tree with words. One expands the tree by writing a story, creating a structure (e.g., configuration of objects in a room), or creating a space (layout of rooms in a dormitory). The presenter will discuss her experience in using aesthetic computing to help two college students better understand order of operations and algebraic expression structure. She will engage participants in doing an aesthetic computing activity.

Janet St. Clair

Alabama State University

Computer Programming to Teach Math Concepts

Audience--Teachers & Administrators

Grades 9-12

Rushton Science

Theatre

Level 1

These high school mathematics teachers have worked collaboratively with university faculty over the past five years on the CPR2 Math/Science Partnership grant. They share their experiences as participants, teacher mentors, and co-leaders in the program. They will discuss the challenges of learning to write computer programs to explore a math concept, making conjectures then writing general arguments using formal mathematics symbology, and other associated engineering activities. They will share the impact in their classrooms and in their teaching assignments.

Kimberly Cox

Bob Jones High School

The Importance of Cultural Representation in Mathematics

Audience--Teachers

Grades 3-5

Regions Room

Mezzanine Level

Teachers are aware of the importance culture plays in student success in the classroom. However, this cultural representation is typically limited to subjects other than mathematics. The presenter will provide research proven data and results that demonstrate how student success improves through the usage of cultural mathematics. Participants in this session will be shown how to effectively implement cultural teaching strategies into their everyday mathematical practices while participating in hands-on problem solving activities. The presenter will also engage participants in lively discussion centered on how they have and can implement cultural mathematics in their classrooms

Eugene T. Glover, Jr.

University of Alabama

Leveraging Failure to Engage Students
Audience--Teachers

Grades K-8

GENEius Lab
Level 1

CANCELLED SESSION - SORRY

Few tools are as useful to a mathematician as being wrong. Facilitating productive failure cultivates resilient learners who are prepared for the dynamic challenges in STEM. By removing the stigmas of what it means to "be wrong," our students engage in imaginative problem solving. In this session, we will touch on historical context, reference related research, and even work through a few math problems in order to evaluate our own responses to making mistakes.

Brian Huyvaert
University of Portland

Mathematizing Your Read Alouds
Audience--Teachers

Grades K-5

Lunchroom A
Lower Level

During this session, the attendee will learn the importance of including fiction books during their math instruction. Book lists will be shared, as well as ways reading to self or reading to someone can be a beneficial every day math station.

Melissa A. Campbell
Williams Avenue Elementary

Are you an ACTM member? Are you a K-12 Teacher?
Apply for an ACTM Teacher Grant

Go to the ACTM website, www.actm.education, for information on how to apply for teacher grants for Spring, and for the application.

11:00 Sessions, Friday, November 3rd

Lead Speaker	TITLE OF PROPOSED SESSION FRIDAY, NOV 3	Grade Band Focus						Room & Level
		K - 2	3 - 5	6 - 8	9 - 10	1 1 - 1 2	1 3 +	
Patty Low	SWAG – Students with a Goal	X	X	X				Lunchroom A Lower Level
Nicholas Fink	The Collaborative Administrator - building a culture of learning	X	X	X	X	X		Regions Room Mezzanine Level
Melanie Martin	Middle and High School Number Talks to Close the Gaps			X	X			303 Level 3
								302 Level 3
W. Gary Martin	Making High School Math Meaningful: Panel of "Meaningful Math" Users				X	X		Explore Lab Level 2
Megan Burton	Making Mathematics Accessible When Students Struggle with Fractions		X					301 Level 3
Stacie Pace	"I Cannot Work on What I Cannot See"- Equipping Leader to Use Local Data	X	X	X	X	X		304 Level 3
Suzanne Culbreth	The One Talking is the One Learning – Encouraging Mathematical Discourse			X	X	X		Rushton Science Theatre Level 1
Paige Brown	Hyperdocs... What's all the Hype?				X	X		Science Classroom Mezzanine Level
Derrick Ward	Beyond The I.E.P. Using Numerology to Understand Students		X	X	X	X		GENEius Lab Level 1

Please join us for a wonderful lunch
11:30AM-1:00PM
Banquet Hall Level 3
Included with your Friday registration!

*****Vendor Exhibits will close at 3:45 PM*****

Friday, Nov 3. 11:00—11:50 AM Session Descriptions

SWAG – Students with a Goal

Audience--Teachers

Grades K-8

Lunchroom A

Lower Level

Growth mindset starts with believing in all students by providing quality instruction. Math fact fluency goal setting supports math standards while developing automaticity which is effortless recall of arithmetic facts. Goal setting with students identifies the how and why math fact fluency is needed while developing perseverance in meeting goals. Reflex Math provides the high-quality resource that is adaptive and individualized instruction for supporting student growth at all levels.

Patty Low

Explore Learnin

The Collaborative Administrator - Building a culture of learning

Audience--Coaches & Administrators

Grades K-12

Regions Room

Mezzanine Level

How do I become a collaborative administrator who builds a culture of learning in my school? In this session, participants will engage in learning of proven practices that enhance culture within the school. Content will include Professional Learning Communities (PLCs), growing teacher leadership, building professional trust, moving teachers from compliance to commitment, promoting professional practice, finding time, building a pyramid of interventions, digging deep into data, and other administrative goals. The experience will include a look into the PLC partnership of Iola Roberts Elementary School of Pell City Schools and AMSTI of Jacksonville State University.

Nicholas Fink

AMSTI Jacksonville State University

Middle and High School Number Talks to Close the Gaps

Audience--Teachers

Grades 6-10

Room 303

Level 3

MS & HS math teachers now have a way to address and close the gaps in essential understandings about number and operations from K-5. Short, targeted, intentional and orchestrated discourse facilitated by the teacher allows the students to deepen their understanding of and flexibility with mathematical operations with whole numbers, decimals, and fractions. Participants will receive quick images as well as suggested problems and pacing for multiple strategies with addition, subtraction, multiplication, & division of numbers. This practice harms no one while absolutely assisting the "hidden figures" in our classrooms.

Melanie Martin

AMSTI Jacksonville State University

Making High School Math Meaningful: Panel of "Meaningful Math" Users
Audience--TEachers, Coaches & Administrators
Grades 9-12

Explore Lab
Level 2

High school mathematics teachers frequently struggle to find instructional materials that effectively incorporate the Standards for Mathematical Practice into the high school mathematics curriculum. Over the past year, teachers throughout the state of Alabama have been piloting the Meaningful Math Program, a curriculum based on the exemplary Interactive Mathematics Program (IMP) that is designed to promote student engagement with rich mathematical tasks, thus supporting deep conceptual learning as well as development of the mathematical practices. In this session, a panel of teachers who have used the curriculum will share their experiences, including its impact on student learning and issues related to successfully implementing the program, as well as address your questions.

Gary Martin
Auburn University

Making Mathematics Accessible When Students Struggle with Fractions
Audience--Teachers **Grades 3-5**

Room 301
Level 3

This session shares some ideas for working with students who are struggling with specific fractional concepts. It shares ways to utilize various representations, guided discoveries, and scaffolding questions to support conceptual development and address misconceptions students may have.

Megan Burton
Auburn University

**"I Cannot Work on What I Cannot See"-
Equipping Leaders to Use Local Data**
Audience--Coaches, Administrators **Grades K-12**

Room 304
Level 3

This session will equip leaders with ideas for how to make data meaningful in their schools and to discuss ways administrators have supported teachers to use formative assessment and benchmark assessments to drive mathematics instruction. Let me share first hand, how school leaders have made profound impacts on student achievement by practicing specific leadership skills, changing school structures, and creating a focus on the "hidden figures."

Stacie Pace
Arab City Schools Assistant Superintendent

**The One Talking is the One Learning – Encouraging
Mathematical Discourse**
Audience--Teachers & Coaches

Grades 6-12

**Rushton Science
Theatre**
Level 1

Are you doing all the talking in your class? Are your students encouraging each other? Are they excited about practice? If not, or if you want to increase student engagement, this is the session for you! We will focus on multiple cooperative learning structures and activities that will encourage every student to participate equally and freely. Learn how to ask and not tell!

Suzanne Culbreath
UAB Teach

Hyperdocs... What's all the Hype?
Audience--Teachers

Grades 9-12

**Science
Workshop**
Mezzanine Level

If you have heard about HyperDocs and wondered what all the hype is about, this is the session for you! HyperDocs are an innovative way to package the content of your lesson that will shift your classroom to a student centered learning environment. Hyperdocs are for teachers who are already utilizing Google Apps, and are ready to take their tech integration to another level. Learn what a HyperDoc is, how to create HyperDocs, and see how teachers have implemented different styles of HyperDocs to transform teaching and student learning. Leave inspired with examples and resources to explore to help you begin your own journey of teaching with HyperDocs.

Paige Brown
Childersburg High School

Beyond The I.E.P. Using Numerology to Understand Students
Audience--Teachers, Coaches, Administrators
Grades 3-12

GENEius Lab
Level 1

In this fun filled session, you will learn how the science of Numerology (developed by Pythagoras) can assist educators in teaching students with all levels of ability and behavior. Using my book Numerology for Teachers, we will learn how to identify distinct personality types to meet the needs of each individual student. We will also learn about ourselves as educators, family members, and colleagues.

Derrick Ward
Conyers Middle School

Are you an ACTM member? Are you a K-12 Teacher?
Apply for an ACTM Teacher Grant

Go to the ACTM website, www.actm.education, for information on how to apply for teacher grants for Spring, and for the application.

**Please join us for a wonderful lunch
11:30AM-1:00PM in the
Banquet Hall, Level 3
Included with your Friday registration!**

**ACTM would like to thank
Lakeshore Learning
ETA hand2mind
Origo Education
ALEX &
Sadlier Math
for providing door prizes for the 2017 Fall Forum!**

**Closing session and door prizes
4:00-4:30PM
Banquet Hall Level 3
You must be present to win!**

1:15 Sessions, Friday, November 3rd

Lead Speaker	TITLE OF PROPOSED SESSION FRIDAY, NOV 3	Grade Band Focus						Room & Level
		K - 2	3 - 5	6 - 8	9 - 10	1 1 - 1 2	1 3 +	
Jamie Harbin	Cracking the Math Code With Ozobots	X	X					Room 304 Level 3
Nicolette Nalu	Exploring the division of fractions through the lens of the SMPs.		X	X				Room 303 Level 3
Gerry Long	Strategies Used to Promote Discourse in Mathematics Classrooms			X	X	X		Regions Room Mezzanine Level
Patty Low	Not a Traditional Math Assignment		X	X				301 Level 3
Amber Trantham	The Struggle Makes us Strong	X	X					Explore Lab Level 2
Melinda Odom Staubs	Connections for Life		X					302 Level 3
Marilyn Strutchens	Revealing Hidden Mathematical Thinking Via Equitable Teaching Practices			X				Science Workshop Mezzanine Level
Justin Boyle	Generalization and Justification that Supports Argumentation			X	X			GENEius Lab Level 1
Allan Bellman	Helping Teachers Become Reflective, Continuous, Formative Assessments Users	CANCELLED SESSION – SORRY						Lunchroom A Lower Level
Jeremy Zelkowski	Administrators & Millennials, mindsets about the teaching profession	x	X	X	X	X		Rushton Science Theatre Level 1

Fall Forum Closing Session

Friday, November 3rd, 4:00 – 4:30

Banquet Hall – Level 3

Get a ticket when entering the room!

Door Prizes!

Must be present to WIN!!!

Friday, Nov 3. 1:15—2:45 PM Session Descriptions

Cracking the Math Code With Ozobots
Audience--Teachers
Grades K-5

Room 304
Level 3

Do your students love coding? Have you ever wondered how coding fits into your math curriculum? Join us for this hands-on learning session where you will discover how to crack the code and make the connection between math and coding using tiny robots called Ozobots.

Jamie Harbin
Talladega County Schools

Exploring the division of fractions through the lens of the SMPs.
Audience--Teachers & Coaches
Grades 3-8

Room 303
Level 3

Participants will explore fraction division through hands-on investigations. A variety of tasks, visual models, work samples, and videos will be analyzed to connect conceptual understanding to the procedural fluency of dividing fractions from grades 3-7. Handouts will be provided and door prizes will be drawn for some resources used in the session.

Nicolette Nalu
AMSTI, The University of Alabama

Strategies Used to Promote Discourse in Mathematics
Classrooms
Audience--Teachers, Coaches & Administration **Grades 6-12**

Regions Room
Mezzanine Level

Do you struggle with keeping students engaged in your lessons? In this interactive session, participants will learn about and practice many study team teaching strategies; participate in doing math problems that model these strategies; discuss the purpose of the strategies. These strategies will help you structure effective collaboration among your students.

Gerry Long
CPM Educational Program

Not a Traditional Math Assignment
Audience--Teachers & Coaches
Grades 3-8

Room 301
Level 3

Combine technology tools to develop depth of knowledge focused on fractions. Explore ways to allow students to illustrate math standards using technology productivity tools and online simulations. Explore Learning Gizmos help teachers take advantage of research-proven instructional strategies and let students of all ability levels develop deep conceptual understanding. Discover ways to supplement and enhance instruction with powerful interactive visualizations of mathematics concepts.

Patty Low
Explore Learning

The Struggle Makes Us Strong
Audience--Teachers
Grades K-5

Explore Lab
Level 2

Rather than viewing students by their deficits, use their cultural backgrounds and heritage to build upon the strong mathematical understandings they have already. Considering the backgrounds of the students they impact, educators will participate in tasks designed to capitalize on the math culture of students. Participants will also discuss their own cultures and how those backgrounds can be utilized to engage students in meaningful math experiences and discourse.

Amber Trantham
Jacksonville State University

Connections for Life
Audience--Teachers
Grades 3-5

Room 302
Level 3

Are your elementary math lessons connecting with your students? Hands-on activities strengthen elementary math skills and tap into the natural creativity of your students. Free curriculum will be provided to participants that includes fun, hands-on activities that will have your students computing costs, building kites, and making brownies (and choices), all with the end result of sharpening math skills. With Mathematics and Economics, Grades 3-5, you'll have 12 NCTM standards-based lessons that apply mathematical problem solving in the context of economics. Presentation participants will take part in modeled interdisciplinary lessons from the curriculum dealing with budgeting, line graphs, and fractions. Lessons are designed for grades 3-5 but can be adapted for other grades.

Melinda Odom Staubs
Jacksonville State University

Revealing Hidden Mathematical Thinking Via Equitable Teaching Practices
Audience--Teachers Grades 6-8

Science Workshop
Mezzanine Level

In this session, participants will learn about different strategies that have been used to cultivate middle school students' mathematical reasoning and sense making. Strategies will include implementing social justice lessons, using multiple-entry-level tasks, and enacting the mathematics teaching practices from NCTM's Principles to Actions

Marilyn Strutchens
Auburn University

Generalization and Justification that Supports Argumentation
Audience--Teachers Grades 6-10

GENEius Lab
Level 1

During the session, the participants will be provided time to solve two mathematics tasks that promote argumentation. After solving one task, we will discuss how participants reached a generalization and consider the relationship between the development of the generalization and opportunities for argumentation. Then we will follow a similar sequence with the second task. The aim is to consider (or reconsider) how to foster students' thinking to reason quantitatively as they generalize so that they are prepared to construct viable arguments.

Justin Boyle
The University of Alabama

Helping Teachers Become Reflective, Continuous, Formative Assessments Users
Audience--Teachers, Coaches & Administrators Grades 9-10

Lunchroom A
Lower Level

Come look at and discuss a successful year-long program used to develop a teacher's use of timely formative information to make effective instructional decisions. Discuss a progression of activities that support teachers with setting instructional goals and then assessing student progression toward those goals. Various forms of lesson monitoring; flexible, dynamic, collaborative grouping practices; and differentiation will be discussed. These ideas can be applied to any teacher, experienced as well as pre-service and novice.

Allan Bellman
The University of Mississippi

CANCELLED SESSION
SORRY

Administrators & Millennials, mindsets about the teaching profession
Audience-- Administrators Grades K-12

Rushton Science Theatre
Level 1

This session will share information about the millennial mindset regarding new teachers. The session will highlight what both administrators and millennials need to understand about the relations regarding hiring new teachers and mentoring their early years. Understanding the background of the millennial mindset can help administrators and schools work millennials into their faculty.

Jeremy Zelkowski
The University of Alabama

2:45 Sessions, Friday, November 3rd

Lead Speaker	TITLE OF PROPOSED SESSION FRIDAY, NOV 3	Grade Band Focus						Room & Level
		K - 2	3 - 5	6 - 8	9 - 10	1 1 1 2	1 3 +	
W. Gary Martin	Staying on Message: Effectively Communicating about Mathematics Education	X	X	X	X	X	X	Banquet Hall Level 3
Carolyn Townsend	Presidential Awards for Excellence in Mathematics and Science Teaching	X	X	X	X	X		304 Level 3
Le Shell Smith	Where Do We Go From Here? Closing the Learning Gaps		X	X	X	X		302 Level 3
Shelia McGee Ingram.	Teaching Mathematics through Social Justice: Developing Mathematical Power	X	X	X	X	X	X	301 Level 3
Loria A. Allen	Number Sense for Success	X						Science Workshop Mezzanine Level
David Frongillo	One and Donenow teaching is fun!		X	X	X	X		Regions Room Mezzanine Level
John Abby Khalilian	Student's ability to think and reason proportionally!			X	X			303 Level 3
Kori Fulford	We Choose to Go to the Moon: Doing what is best, not what is easy.			X				GENEius Lab Level 1
Melissa A. Campbell	Paper Plates and Baggies and Manipulatives; Oh, My!	X	X					Lunchroom A Lower Level
Danielle Stocks	STEM in the Middle School Mathematics Classroom for Beginners			X				Rushton Science Theatre Level 1

Friday, Nov 3. 2:45—4:00 PM Session Descriptions

Staying on Message: Effectively Communicating about Mathematics Education

Audience-- Teachers & Coaches Grades K-12, 13+

**Banquet Hall
Level 3**

Facebook and other social media sometimes seem overrun with “crazy talk” about mathematics education. Yet many of us struggle with how to effectively respond to parents, friends, and even administrators and colleagues, who may fall prey to the misconceptions being spread. The purpose of this session is to help participants identify particular challenges in communicating about mathematics education and to develop a simple but powerful communications strategy: “Stay on message!” The session will conclude with applications of this strategy in a variety of contexts.

Gary Martin

Auburn University

Presidential Awards for Excellence in Mathematics and Science Teaching

Audience-- Teachers Grades K-12

**304
Level 3**

The PAEMST are the highest honors given by the US government to math, science, and computer science teachers. The award recognizes teachers who develop and implement high quality instructional programs that is informed by content knowledge and enhances student learning. This session will focus on teacher eligibility and an overview of the award process.

Carolyn Townsend

Alabama State Department of Education

Where Do We Go From Here? Closing the Learning Gaps

Audience-- Teachers, Coaches & Administrators Grades 3-12

**302
Level 3**

Participants will discuss RTI and how to properly implement it in the classroom/school/district. Participants will see how benchmark tests and data help to drive instruction towards closing the achievement gaps of students. Research and actual data will be provided to support all ideas.

Le Shell Smith

UAH/AMSTI Secondary Math Specialist

**Teaching Mathematics through Social Justice: Developing
Mathematical Power**
Audience-- Teachers Grades K-12, 13+

**Room 301
Level 3**

Teaching mathematics through social justice involves using mathematical thinking to help students become aware of the social injustices in the world and their own lives while also increasing their mathematical understanding. Participants in this session will develop and solve real world problems that focus on social justice and support students in developing a deep understanding of the Common Core Mathematics Standards. Resources and classroom examples will be shared on integrating mathematics and social justice.

Sheila McGee Ingram
CATCM/District IV

Number Sense for Success
Audience-- Teachers, Coaches & Administrators
Grades K-2

Science Workshop
Mezzanine Level

Participants will gain insight into the impact math talks, number sense routines, strategically crafted word situations, mathematical games, and lesson debriefs have on the development of students' mathematical reasoning and the development of number sense. Lesson design, the use of daily formative assessments to determine next step instruction, and the importance of instructional collaboration will be highlighted during this session. Video clips, student work samples, and teacher notes will be used to give participants a snapshot of how number sense develops over time in local classrooms. Handouts will be provided.

Loria A Allen
AMSTI University of Alabama Huntsville

One and Done...Now Teaching is Fun!
Audience-- Teachers & Administrators Grades 3-12

Regions Room
Mezzanine Level

20% of your students take up 80% of your time. Often disruptive classroom behavior dominates that 80%. Imagine speaking to your troublesome student(s) just once, and it ends there. It can happen and it does. One and done, now teaching is fun! Veteran teacher or not, this is the session you need to attend.

David Frongillo
Retired Teacher

Student's Ability to think and reason proportionally!
Audience-- Teachers & Coaches
Grades 6-10

Room 303
Level 3

Student's ability to think and reason proportionally!

This session focuses on developing understanding and applying proportional relationships. The presenter will share several lessons, a sorting card activity, and strategies to help your students learn how to reason with proportionality through the use of tables, verbal descriptions, equations, and graphs. Attendees will receive all lessons and activities ready to use in their classroom.

John Abby Khalilian
AMSTI UWA/UA

We Choose to Go to the Moon: Doing what is best, not what is easy.
Audience-- Teachers
Grades 6-8

GENEius Lab
Level 1

JFK announced to the world in 1962, "We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard; because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one we intend to win."

In the classroom, teachers feel they are on an impossible mission. Because the task of teaching difficult students is rigorous, many choose to do what is easiest for students and themselves. Come hear how a first year teacher stepped into a 7th grade class with only 3% mathematically proficient students and chose to raise expectations rather than doing what had always been done.

Kori Fulford
South Highlands Middle School

Paper Plates and Baggies and Manipulatives; Oh, My!
Audience-- Teachers
Grades K-5

Lunchroom A
Lower Level

Through this session, the attendee will explore ways to use every day classroom staples to easily create manipulatives for student use. Teachers with students who need the concrete and pictorial will enjoy this make-and-take session!

Melissa A. Campbell
Williams Avenue Elementary School

STEM in the Middle School Mathematics Classroom for Beginners
Audience-- Teachers

Grades 6-8

**Rushton
Theatre
Level 1**

What is STEM? STEM stands for science, technology, engineering, and mathematics. STEM education creates critical thinkers, increases science literacy, and enables the next generation of innovators. STEM activities provide real-life, hands-on learning activities for the student. Making math both fun and interesting helps the student to do much more than just learn. Come learn about the engineering design process. Examples will be given of STEM projects and cross-curricular projects.

Danielle Stocks
Winfield City Schools

**ACTM would like to thank
Lakeshore Learning
ETA hand2mind
Origo Education
ALEX &
Sadlier Math
for providing door prizes for the 2017 Fall Forum!**

**Closing session and door prizes
4:00-4:30PM
Banquet Hall Level 3
You must be present to win!**

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On level C in the parking garage, the **EVENTS CENTER** entrance is located about 20 yards from the elevator bank. Look for signs on level C in the parking garage for guidance!

Level 3:
Banquet Hall
Classroom 301
Classroom 302
Classroom 303
Classroom 304

Level 2:
Explore Lab

Mezzanine Level:
Regions Room
Science Workshop

Level 1:
Ruston Science Theatre
GENEius Lab

Lower Level:
AquaSpace Theatre
Lunch Room A

