

Technology Sessions
2017 NCTM Annual Meeting

(CC is a shortcut for Henry B. Gonzalez Convention Center)

Thursday

8:00-9:00am

10 TECH

Classroom Dessert: Putting Assessment into Students' Hands

General interest

A fine meal is topped off by a carefully crafted dessert; in the classroom, it's called "assessment," and it often lacks flavor. The authors of the Classroom Chef rethink how we assess our students, empowering them by tapping into their voice. Leave with ready-to-use resources for authentic assessment in your class.

John Stevens

@jstevens009

Chaffey Joint Union High School District, Ontario, California

Matt Vaudrey

Bonita United School District, San Dimas, California

CC 217D

8:00-9:00

11 TECH

Coding Computer Games to Motivate Middle School Math Class

6-8 Session

We will share how we have used the free computer programming software Scratch from MIT to reinforce math concepts. By utilizing paired programming techniques, students create games that help them channel creative energy while coding games that use coordinates, quadrants, comparing, ordering, and logical thinking skills.

Joanne Barrett

@jbarrettsrq

The Out-of-Door Academy, Sarasota, Florida

Joanna Johnson

The Out-of-Door Academy, Sarasota, Florida

CC 301

8:00-9:00

20 TECH

Harnessing the Power of 1:1 Classrooms: Integrating Devices to Support Conceptual Understanding Coaches/Leaders/Teacher Educators' Session

Participants will be engaged in a discussion on how to support teachers in developing lessons that use **technology** to support conceptual understanding. This will include an activity in which leaders develop strategies for supporting teachers in this work by examining and providing feedback on lesson plans.

Lorraine Males

@drmalesmathed

University of Nebraska-Lincoln

Joshua Males

Lincoln Public School District, Nebraska

CC 214C

8:00-9:00

38 BUILD

Making Connections between Proportional Reasoning and Algebraic Thinking

6–8 Workshop

Understanding multiplicative relationships and reasoning proportionally is essential to student success in algebra. Participants will engage in hands- on activities designed to develop proportionality at concrete levels and make explicit connections to algebraic thinking. **TI-Nspire® technology** will be used to explore and develop these connections.

Gloria Beswick

@grbeswick

Teachers Teaching with Technology, Louisville, Kentucky

CC 304A

8:00-9:00

50 A&E

Technology + Choice = Success

6–8 Workshop

Do you long to hear your students say these three little words, “I love math”? Come discover how the use of UDL via choice, movie clips, and TI-Technologies can increase conceptual understanding and create a fun, dynamic, student-centered classroom. Participants will leave with many resources that can be easily implemented on Monday morning.

Melissa Jackson

@luvmath2

New Jersey Department of Education, Clarksboro

9:30 A.M.–10:30 A.M.

59 PROF

The Crafting and Use of Technology for Professional Learning

General Interest Session

A variety of digital formats for professional learning such as MOOCS, blogs, forums, and online courses with both synchronous and asynchronous designs have been tried in the past with varied success. This session will present research results and potential new possibilities for the future that allow teachers more control over their own learning.

Maarten Dolk

New Perspectives Online, Utrecht, the Netherlands

Cathy Fosnot

New Perspectives Online, New London, Connecticut

CC 214A

9:30-10:30

68 TECH

Making Math in Scratch

10–12 Session

See how topics in algebra, geometry, and statistics can be easily developed in Scratch, the free, web-based programming environment from MIT. Give your students another entry point to mathematics, and get them integrating math and computing to model with mathematics and use appropriate tools strategically! No prior programming knowledge necessary.

Patrick Honner

@MrHonner

New York City Department of Education, Brooklyn

CC 217D

9:30-10:30

71 ASSESS

Mathematics Assessment in a Digital World

General Interest Session

For the first time, the 2017 Nation's Report Card's fourth- and eighth-grade math assessments are digitally based. This enables students to demonstrate important skills in problem solving and analytical thinking that are not as easily measured by paper-and-pencil. What are the implications of this groundbreaking shift? What is already known about DBA?

Linda Rosen

Change the Equation, Washington, D.C.

Grand Hyatt San Antonio, Lonestar Ballroom D

9:30-10:30

72 PROF

MOOC-Eds: Free Online Professional Development on Your Schedule

General Interest Session

Are you in need of content-focused PD that your school district doesn't offer? Tired of missing class time for PD? Come learn about the free online PD called MOOC-Eds that focuses on the foundations of fractions, teaching statistics through data investigations, teaching mathematics with technology, and more!

Jennifer Lovett

Middle Tennessee State University, Murfreesboro

Theresa Gibson

North Carolina State University, Raleigh

CC 205

9:30-10:30

75 TECH

Teaching Geometry to Girls through Powerful Computer Programs

3-5 Session

Girls tend to show lower performance and participation, as well as less favorable dispositions, than boys in geometry and computer use. This session will share ideas for using powerful software, especially Geometer's SketchPad and Terrapin Logo, to support girls' geometry skills. A handout with instructional tasks and resources will be provided.

Heather Crawford-Ferre

State of Nevada Department of Education, Carson City, Nevada

Lynda Wiest

University of Nevada, Reno

Julie Henjum

Washoe County School District, Reno, Nevada

9:30-10:30

79 TECH

You CAN Do Blended Learning

6-8 Session

Blended learning can happen in your classroom with a few clicks of your mouse! Using tools that are readily available, this session will show you how to successfully implement blended learning in your classroom with minimal planning time. Teachers will leave this session ready to tackle the idea of blended learning in their own classrooms.

Kelly Barr

Gilmer County Schools, Glenville, West Virginia

Traci DeWall

Gilmer County Schools, Glenville, West Virginia

CC 207b

9:30-10:30

80.1 EW

Unleash the Power of Game-Based Learning with Mangahigh

Coaches/Leaders/Teacher Educators' Exhibitor Workshop

Discover how Mangahigh helps you build a true 21st-century classroom with interactive games and adaptive quizzes aligned to curriculum for K–10. In this session, you'll learn ways to differentiate instruction and create an environment where each student is motivated to work at the best of their ability.

Mangahigh

London, United Kingdom

CC 206A

9:30-10:30

80.6 EW

Meeting Individual Student Needs and Informing Classroom Practice with i-Ready

Adaptive Technology

3–5 Exhibitor Workshop

Engage all math students and provide each with necessary opportunities to learn! Identify misconceptions and gaps and provide personalized learning. This session will share adaptive technology that assesses, delivers customized learning, and informs classroom instruction. Experience a technology that helps teachers ensure success for all learners.

Curriculum Associates

North Billerica, Massachusetts

CC Exhibitor Workshop Theater in Exhibit Hall 3/4

9:30-10:30

9:45A.M.-11:00P.M.

86 TECH

Embrace the Digital Age: Using Apps with Children's Literature in Math

Pre-K–2 Workshop

Children's literature can build great connections for mathematical concepts for elementary children. In this session, the presenters will share apps that can be used with popular children's literature to help children make connections with important mathematics concepts.

Sandi Cooper

@drcoopermath

Baylor University, Waco, Texas

Kylie Terry

Baylor University, Waco, Texas

Kaitlin Welsh

Baylor University, Waco, Texas

CC 304A

9:45A.M.-11:00P.M.

88 BUILD

Giving Meaning to Scatter Plots & Regression Lines

8–10 Workshop

Participants will actively use manipulatives and graphing calculators to explore activities through which students can enhance their skill in creating and interpreting scatter plots and regression lines, determining the appropriateness of multiple types of regression models, and identifying limitations on the use of such models in forecasting.

Michael Hardy

Saint Xavier University, Chicago, Illinois

CC 217A

9:45A.M.-11:00P.M.

90 TECH

How Many Elephants Fit on the Moon? Using Technology to Address Ill- Structured Problems

8–10 Workshop

Learn to pose your own ill-structured problems for use in your own classroom, and discover how to address these problems using two freely available mathematics technologies (Wolfram|Alpha and Desmos). You will also learn how lesson development parallels the process of technology development and will be introduced to a platform for lesson study and sharing.

Christina Watts

Utah State University, Logan

CC 304B

9:45A.M.-11:00P.M.

101 TECH

Touching Screens or Touching Objects: Which Is Better and When?

3–5 Workshop

Concrete manipulatives have been used in classrooms for many years. Recently, digital manipulatives have become much more common. When is it important to use physical manipulatives, and when do digital manipulatives offer advantages? Come and discuss the affordances and costs of physical objects versus digital models and tools.

Carla Strickland

UChicago CEMSE, Chicago, Illinois

Catherine Donaldson

McGraw-Hill Education, Chicago, Illinois

CC 006D

9:45A.M.-11:00P.M.

11:00 A.M.–12:00 P.M.

108 TECH

Bringing Chrome Home—1:1, A New Ratio For Your Classroom

8–10 Session

You're Invited! Come join in sharing my experiences with 1:1 devices as a facilitator for deeper understanding and active engagement in the math classroom. Attendees will leave the session with an array of best practices, anticipated challenges as well as solutions, and bountiful resources not only for students, but for you as a teacher as well.

Kelley Gould

Hyde Park Central School District, Hyde Park, New York

Grand Hyatt San Antonio, Crockett AB

11:00-12:00

114 "M"

Did That Really Happen?

10–12 Session

We often see amazing scenes in viral videos and movies then ask ourselves is that really possible. Participants will receive class-ready modules based on online videos. The modules will contain class-ready worksheets, suggestions, and other materials required to successfully develop, analyze, and evaluate individual models in the classroom.

Charles Emenaker

University of Cincinnati Blue Ash College, Ohio

Gene Kramer

University of Cincinnati Blue Ash College, Ohio

CC 207B

11:00-12:00

120 TECH

Introduce Function Concepts and Linear Functions Geometrically(!) with Web Sketchpad

8–10 Session

CCSSM expects students to understand transformations as functions. With Web Sketchpad, our algebra students exploited this edict: they used geometric transformations to vary variables; experience domain, range, and rate of change; and to connect their learning back to algebra. Bring a tablet or laptop. Leave with student-ready activities.

Scott Steketee

21st Century Partnership for STEM Education, Philadelphia, Pennsylvania

Daniel Scher

KCP Technologies, New York, New York

CC 008AB

11:00-12:00

121 ASSESS

Learning from the Crowd, Teaching One Student at a Time

3–5 Session

When adding $\frac{1}{3}$ and $\frac{1}{4}$, how often do students say it's $\frac{1}{7}$, $\frac{3}{4}$, or something else entirely, and how are they thinking about it? With open-ended, digital assessments, a wider distribution of student understanding can be explored. More importantly, this data can be leveraged to scalably test various interventional approaches for different students.

Zachary Wissner-Gross

@xaqwg

Amplify Education, Brooklyn, New York

Drew Corley

Amplify Education, Raleigh, North Carolina

Lauren Whitley

Amplify Education, Raleigh, North Carolina

CC 214A

11:00-12:00

127 TECH

Strategic Use of Technology Tools for Statistics in High School Math Courses

8–10 Session

Experience activities that you can do with students, both with and without technology, involving statistical representations, measures of spread and variability, scatterplots, regression, sampling, and simulations. We will feature a variety of apps, software, and websites that provide visual and dynamic representations of statistics concepts.

Andres Marti

SFUSD, San Francisco, California

Elizabeth DeCarli

SFUSD, San Francisco, California

CC 214C

11:00-12:00

133 TECH

Classroom Resources for NCTM Members

General Interest Session

As busy teachers, it can be hard to find the best resources for your classroom. NCTM offers members a wealth of high-quality resources from apps and online games to lesson plans and complete lesson arcs. Come learn about NCTM's online classroom resource collections.

Derek Pipkorn

Mequon-Thiensville School District, Mequon, Wisconsin

AnnMarie Varlotta

Howard County Public School System, Ellicott City, Maryland

Max Ray-Riek

The Math Forum at NCTM, Reston, Virginia

CC 225

11:00-12:00

135.3

Personalizing Learning in the Math Classroom

General Interest Exhibitor Workshop

Janet Pittock, VP of Curriculum at McGraw-Hill Education, discusses the role of adaptive technology in personalizing learning in the math classroom. Using Stanford University research and best practices, she will provide tools for selecting the right mix of materials and software, as well as tips for implementation and classroom management.

McGraw Hill Education

A&E

Columbus, Ohio

Access and Equity

CC 207A

11:00-12:00

135.6

What We Can Learn (and Use) from Video Game Designers to Make Math Irresistible

General Interest Exhibitor Workshop

Learn simple strategies to help change student mindsets, spark curiosity, and create a culture where students persevere. Many students are inhibited by the fear of getting wrong answers and low grades. Using video game design psychology and concepts, teachers can increase student interest and decrease anxiety for successful math content mastery.

McGraw-Hill Education

Columbus, Ohio

Henry B. Gonzalez Convention Center Exhibitor Workshop Theater in Exhibit Hall 3/4

11:00-12:00

11:30A.M.-12:00P.M.

140 TECH

Google Maps and Desmos for Solving Systems of Linear Inequalities

8-10 Burst

This session will highlight a 5E lesson implemented using Google Maps for solving systems of linear inequalities. We will incorporate Desmos to support student understanding, and we will demonstrate how to embed images generated by Google Maps into Desmos. Methods for distributing and collecting student work will also be presented.

Colleen Eddy

University of North Texas, Denton

Cheyenne Green

Sherman Independent School District, Texas

Sarah Pratt

University of North Texas, Denton

CC 007B

11:30A.M.-12:00P.M.

144 PROF

Math Buddies: A Multigrade Co-Teaching Experience to Promote Student Mentorship

6–8 Burst

Math Buddies unites teachers and students from multiple grades. Experienced problem solvers teach novices about Polya's 4 phases and the importance of explaining your thinking verbally using Cue ink's problem-solving platform. The use of technology, cross-grade teacher collaboration, and peer tutoring strengthened students' conceptual understanding.

Sarita Spillert

@sspillert

CueThink, North Reading, Massachusetts

Adrienne Norris

Natick Public Schools, Massachusetts

CC 006A

11:30A.M.-12:00P.M.

145 PROF

Math Journal Club for Teachers: Developing Professional Learning Network

Burst

How can you create professional networks for teachers in rural areas? We started an online Math Journal Club to discuss NCTM journal articles on teaching strategies and key topics in junior high school math. At this session, we'll share teacher feedback, discuss video clips from the online meetings, and analyze what worked and what didn't!

Megan Snow

@MeganMSnow

Tri-County Regional School Board, Yarmouth, Nova Scotia

Irina Lyublinskaya

College of Staten Island, New York

CC 304C

11:30A.M.-12:00P.M.

150 TECH

Technology Tools to Enhance Your Math Class

3–5 Burst

Having the technology is not enough. For the technology to be effective in math class, there has to be quality content. Learn about online resources that are effective for student instruction; conceptual understanding and problem-solving strategies; and assessment. Tools and resources that support everyday instruction and assessment will be shared.

Christopher Coyne

@ctcoyne

Marshall Cavendish Education, Tarrytown, New York

CC 304A

11:30A.M.-12:00P.M.

12:30 P.M.–1:00 P.M.

162 TECH

Designing GeoGebra Applets to Maximize Student Engagement

10–12 Burst

GeoGebra is a free and powerful tool teachers and students can use to explore various mathematical ideas. In this presentation, we highlight how GeoGebra files can be created and shared to minimize distractions and maximize engagement with mathematical ideas. We describe the general pedagogical principles behind specific applets.

Teo Paoletti

Montclair State University, New Jersey

Ceire Monahan

Montclair State University, New Jersey

Madhavi Vishnubhotla

Montclair State University, New Jersey

CC 304A

12:30 P.M.–1:00 P.M.

166 TECH

Increase Your Students' Mathematical Communication with a Writing Checklist and Google Classroom

6–8 Burst

Learn how to create online writing activities and use peer-to-peer and instructor feedback to improve conceptual understanding through a student-centered writing checklist. Free writing components are stressed: correct answer, correct mathematical reasoning, and complete explanation. Sample work from a unit on solving equations will be shared.

Andrea Lohse

Cherry Creek School District, Aurora, Colorado

CC 007B

12:30 P.M.–1:00 P.M.

176 TECH

Seven Ways ROCKSTAR Math Teachers Use YouTube

10–12 Burst

This session will demonstrate how to use and create videos to enhance mathematics instruction through a series of YouTube videos created by the presenter and additional YouTube channels and videos. The session will also consider a variety of effective strategies for integrating web-based video clips into the secondary mathematics curriculum.

Tinashe Blanchet

@learnlabnola

The Learning Laboratory New Orleans, Inc., Louisiana

Yvelyne Germain-McCarthy

University of New Orleans, Louisiana

CC 304B

12:30 P.M.–1:00 P.M.

179 “M”

The Architecture of Thomas Jefferson: Integrating Math, Science, and History

8–10 Burst

We use Jefferson’s drawings as a springboard into our interdisciplinary curriculum that combines geometry, environmental science, and U.S. history. The lessons ask students to analyze the geometry present in classic architecture, relate it to familiar structures, and take a Google Earth tour of some of the first buildings to dot the colonial landscape.

Beverly Heigre

Notre Dame High School, San Jose, California

Lee Pruett

Notre Dame High School, San Jose, California

CC 007A

12:30P.M.-1:30P.M.

184 ASSESS

Does Technology Help with Any of This?

General Interest Session

Laptops, iPads, Chromebooks, BYOD. As our school’s technology has evolved, so has our process for determining where, when, what technology we use. Find out what our process looks like now; what tech, apps, and more we use or don’t use and why; and how we do all of this to meet our daily goals of collaboration, teamwork, and problem solving.

Shawn Trotter

@307Trot

PCSD #6, Cody, Wyoming

Kelly Phelan

PCSD #6, Cody, Wyoming

12:30-1:30

186 A&E

ELLs Using Linguistic Capital to Create Equitable Learning Opportunities in an Online Math Course

Research Session

In this study, ELLs discuss how making meaning of mathematical vocabulary and explanations are aided by their bi-cultural capital. We show how effective online environments allow ELLs to utilize their bi-cultural assets to enhance math understanding and to provide equitable access to math instruction. Authentic digital practices will be discussed.

Julian Viera

University of Texas at El Paso

Olga Kosheleva

University of Texas at El Paso

217D

12:30-1:30

189 TECH

Enhancing Calculus with Modeling and Technology

10–12 Session

Modeling problems help engage students in learning and reinforcing important calculus concepts. Technology such as GeoGebra and spreadsheets provide students with the power to understand these problems, develop models, and see calculus in action. Classroom- tested problems and solutions will be shared.

Cheryl Gann

North Carolina School of Science and Mathematics, Durham

CC 214C

12:30-1:30

199 PROF

More Than Resources: The Internet and Deliberate Practice

General Interest Session

Social media has made it easier than ever to share high- quality resources; Visual Patterns, Estimation 180, and three-act tasks are just a few examples. While sharing resources is useful, this session will focus on using free Internet-based resources to foster deliberate, reflective practice and develop skills that make us better teachers.

Dylan Kane

@math8_teacher

High Mountain Institute, Leadville, Colorado

CC 008AB

12:30-1:30

202 TECH REFLECTION COVE

Principles for Building and Using Effective Digital Tasks

General Interest Session

What do the most powerful digital math tasks have in common? What teacher moves allow students to get the most out of any lesson? In this session, we'll consider answers to these questions and use the Desmos Activity Builder as a lens for exploring the intersection of computers, teaching, and math.

Michael Fenton

@mjfenton

Desmos, San Francisco, California

CC 301

12:30-1:30

1:30P.M.-2:45P.M.

229 BUILD

The Calculus of Corvettes Workshop

10–12 Workshop

A non-routine calculus task using data from a drag racing facility will be the focus of this problem-solving workshop. Participants will explore how this task provides flexible learning opportunities through mathematical modeling with technology to deepen students' understanding of calculus.

Bring Desmos, Excel, and/or a graphing calculator.

Jaclyn Murawska

Saint Xavier University, Chicago, Illinois

Keith NBA

University of Wisconsin-River Falls

CC 304B

1:30-2:45

232 TECH

Visualizing the Area Formula Dynamically: Why Length Times Width?

3–5 Workshop

We introduce an innovative way of teaching and learning measurement, one that we call Dynamic Measurement (DYME), which focuses on the relation between area measurement and multiplication. We present tasks designed for engaging students in DYME experiences and discuss how DYME can be used for assisting students in thinking about area multiplicatively.

Debasmita Basu

Nicole Panorkou, Montclair, New Jersey

Madhavi Vishnubhotla

Nicole Panorkou, Montclair, New Jersey

Nicole Panorkou

Montclair State University, New Jersey

CC 304A

1:30-2:45

236 TLC

Bit by Bit, Putting It Together: Composite Area Activity and Coherent Standards

6–8 Session

Put your knowledge of composite area together, bit by bit. Participate in this action-packed activity to solve the cost of planting seed in a field. Be motivated to encourage student participation through looking up prices on-line and using a virtual GeoBoard. Learning progressions and standard will be emphasized. Come see our portable IWB.

Deana Deichert

Montgomery County Community College, Pottstown, Pennsylvania

Tashana Howse

Daytona State College, Florida

Mercedes Turner

Full Sail University, Orlando, Florida

CC 214C

1:30-2:45

2:00P.M.-3:00P.M.

237 PROF

Building Teacher Leadership: A Collaborative Approach

Coaches/Leaders/Teacher Educators' Session

Creating a culture of learning is an essential component that empowers teachers to examine their instructional practice. Using a data collection tool as a key talking point, this session highlights how a math team **transformed** their classrooms into a learning environment that created a core shift in daily instruction to include effective strategies.

Sadie Estrella

@wahedahbug

Illustrative Mathematics, Hana, Hawaii

Judy Keeney

Central District, Rancho Cucamonga, California

Grand Hyatt San Antonio, Lonestar Ballroom D

241 "M"

Fostering Computational Thinking Skills through Coding and Digital Making

6-8 Session

By fostering computational thinking skills, we can help our students to become effective thinkers and problem solvers. Join me as we investigate how coding and digital making can help nurture computational thinking skills in our students to enhance their understanding of math ideas.

Lisa Floyd

@lisaannefloyd

Western University, Thames Valley District School Board, London, Ontario, Canada

CC 214A

2:00-3:00

242 ASSESS

Got GAFE? Using Free Google Apps

for Education to Increase Students' Understanding

10-12 Session

If your school is, or is going to be, a GAFE school, unleash the power of Google to increase students' understanding every day! Discover how to give every student a voice in the classroom without increasing your workload. Create a formative assessment that grades itself and provides useful, detailed feedback to both the teacher and student.

Sara Edwards

@sara_sedwards

Webb City R-7 High School, Missouri

CC 207B

2:00-3:00

257 TECH

The Role of Digital Technology in Classrooms across the World: What Can We Learn?

10–12 Session

Math educators from around the world are using digital technology to innovate mathematics instruction. Attendees at the quadrennial International Congress on Mathematics Education (ICME) in Germany highlight a few of these uses, with special emphasis on the use of mathematics technology internationally and its promise for mathematics teaching.

M. Kathleen Heid

Penn State University, University Park, Pennsylvania

Woong Lim

University of New Mexico, Albuquerque

Tinashe Blanchet

The Learning Laboratory Inc., New Orleans, Louisiana

CC 008AB

2:00-3:00

263.4

HP Prime: Mathematics Education Technology on All Platforms!

10–12 Exhibitor Workshop

Get acquainted with HP Prime: the app-based, full-color graphing calculator. HP Prime is also available as software on Mac and PC as well as Android/iOS/Win10 phones/tablets. All versions have multi-touch, gesture-driven user interfaces (for example, pinch to zoom on a graph) and more. You'll receive a free copy of the software after the workshop.

HP Inc.

San Diego, California

CC 212AB

2:00-3:00

263.2

10 Minutes of Code

General Interest Exhibitor Workshop

Want to get your students interested in coding? This hands-on session introduces you to the basics of coding on your TI graphing calculator in just 10 minutes — no experience needed! Learn how coding in the math classroom can strengthen students' reasoning and problem-solving skills. Get free resources that you can use in class right away.

Texas Instruments

CC 206B

2:00-3:00

3:15-4:30

272 TECH

Incorporating Multiple Tools in Geometric Constructions

8–10 Workshop

Geometric constructions can be created with a variety of tools and methods to provide a visual representation of geometric concepts. Participants will use a Mira, patty paper, and GeoGebra to construct triangle centers. The incorporation of multiple tools emphasizes the relations among ideas and helps learners understand the concepts.

Ewelina McBroom

Southeast Missouri State University, Cape Girardeau, Maryland

CC 304B

3:15-4:30

275 TECH

Mathematical Action Technologies: Moving beyond the Hype of Flipping, Clickers, and IWBs

10–12 Workshop

As described in Principles to Actions, mathematical action technologies engage students in “doing” mathematics, building mathematical practices. Participants will explore their potential for **transforming** the high school mathematics classroom in contexts from algebra, geometry, and statistics. Participants are encouraged to bring their own devices!

W. Gary Martin

@wgarym

Auburn University, Alabama

CC 007C

3:15-4:30

280 TECH

Paper Airplane Meets Technology

6–8 Workshop

After constructing a paper airplane, participants will estimate the distance flown and time aloft their planes will achieve. They will then fly their planes, recording distance and time aloft, and then use the TI-Nspire navigator system to evaluate their data. Finally, participants will learn how when this lesson is used in the classroom setting learning comes alive.

William Luke

Central Texas College, Fort Hood, Texas

Gregory Luke

Temple High School, Texas

CC 006D

3:15-4:30

287 TECH

Virtual Cookies: Free Virtual Resources to Increase Participation, Discussion, and Collaboration

6–8 Workshop

Learn how to use virtual tools that increase participation, discussion, and collaboration in any classroom type or grade level. Virtual Cookies explored include: Poll Everywhere, Kahoot, Quizizz, Socrative, Plickers, Padlet, Wikispaces, Bubbl.us, Desmos, and Google Drive. Bring an electronic device.

Kristy Litster

Utah State University, Logan

Christina Watts

Utah State University, Logan

CC 304A

3:15-4:30

3:30-4:30

289.1

Use Technology to Support Observational Assessments in K–Grade 5

Coaches/Leaders/Teacher Educators' Exhibitor Workshop

Have you seen SCOUT? This new observational assessment app lets you Capture! Tag! Find! in real time. Learn how to use this new app to capture performance, make notes, and access assessments to support Ongoing Assessments and Assessment Checklists in Investigations 3.

Pearson Learning Services

Chandler, Arizona

CC 206B

3:30-4:30

Friday

8:00-9:00

305 TECH

Linear Equations: New Insights Gained through Dynamic Technology

10–12 Session

While simple in structure, linear equations have incredibly diverse and powerful uses and interpretations, from pattern description to regression to transformations. Dynamic technology provides “hot” links between representations (graphic, symbolic, tabular) of a linear equation and its defining parameters through sliders can reveal new insights.

Thomas Dick

Oregon State University, Corvallis

Wade Ellis

Retired, West Valley College, San Jose, California

CC 205

8:00-9:00

317.2

A Blueprint for Early Learning Success in Math!

Pre-K–2 Exhibitor Workshop

Discover a true “Blueprint” for early learning success in math. Experience the most engaging online mathematics program ever designed using state-of-the-art technology, research-based instructional methodologies, and captivating songs and animations. Bring your own tablet device, and you too can experience Blueprint’s online world.

CC 207A

8:00-9:00

8:00A.M.-9:15P.M.

318 “M”

A Monumental Task: Connecting Washington, D.C., across the Curriculum 6–8 Workshop

Imagine your students have been contracted by Washington, D.C., officials to design and create a new monument. They will draw on their knowledge of American figures and events to create a proposal that details their vision, rationale, and LEED Certified design drawn using SketchUp, culminating in a narrated Google Earth tour and a constructed scale model.

Kimberly Brandt

@KimB720

Hawken School, Lyndhurst, Ohio

Anna Delia

Hawken School, Lyndhurst, Ohio

CC 007B

8:00A.M.-9:15P.M.

341 TECH

Transformational Geometry via GeoGebra: Animated Explorations

10–12 Workshop

Make transformations come alive with GeoGebra; learn to use sliders, matrices, and complex numbers to demonstrate the concepts of similarity and congruence using animation. Presenters will share premade files and projects to illustrate these ideas in the classroom. Bring your device with GeoGebra to follow the activities.

Roberto Soto

California State University, Fullerton

Armando Martinez-Cruz

California State University, Fullerton

CC 007C

8:00A.M.-9:15P.M.

9:30-10:30

350 TECH

Personalized Learning in Your Blended Tech Mathematics Classroom

3–5 Session

Many talented teachers, both new and experienced, are finding themselves empowered by—and excited to use—technology-driven instruction in their classrooms. In this informative session, strategies will be shared with teachers and instructional leaders on how to effectively implement personalized lessons with blended tech in their math classrooms.

Kara Granger

Educational Consultant, Chicago, Illinois

CC 303

9:30-10:30

358 BUILD

FUNdamentals of Inverse FUNctions 10–12 Session

Come explore inverse functions. Develop the concept of inverses through hands-on activities and Desmos Activity Builder. Teachers will actively participate in lessons on inverse functions while focusing on using the Standards for Mathematical Practice. Experience inquiry-based, learner-centered, collaborative activities.

Christine Larson

@CLL2718

South Dakota State University, Brookings

Sharon Vestal

South Dakota State University, Brookings

CC 008AB

9:30-10:30

363 TECH

Pixar in a Box: Theory and Practice

Pixar in a Box (pixarinabox.org) is a collaboration between Pixar Animation Studios and Khan Academy. It is a free online resource intended to show students how concepts they are learning in school play a crucial role in the creation of Pixar movies. Each Pixar in a Box lesson focuses on a creative challenge faced by Pixar artists and then shows how math, science, art, and humanities concepts are used to address that challenge. In this talk, we will demonstrate how PIAB is structured to engage middle to high school students using interactive lessons that they can do in or outside of the classroom. We will also discuss our partnership with Khan Academy and the development principles we used to inspire students to discover their creative potential. Educator William Gowsell will share his experience of using PIAB in the classroom and the feedback he has received from his students.

Tony DeRose

Senior Scientist, Pixar Animation Studios

William Gowsell

Teacher and Math Lead, Catholic District School Board of Eastern Ontario

CC Hemisfair 1

9:30A.M.-10:30A.M.

366 TECH

Reimagining Curriculum-Based Mathematics Tasks with Technology

8–10 Session

Technology can transform mathematics teaching and learning. But where do you find tasks to fit your mathematical goals, or the time to add them to your lesson? One option is to start with the tasks you are already using! Bring your digital devices and join along as we use technology to re-envision tasks from printed curriculum materials.

Amanda Thomas

University of Nebraska–Lincoln

Alden Edson

Michigan State University, East Lansing

CC 217D

9:30A.M.-10:30A.M.

369 “M”

Think, Sketch, Print: 3D Printing in Algebra and Geometry

8–10 Session

Capture the excitement of algebra and geometry and make connections by using 3D printing in the classroom. Engage students in problem-based challenges that develop an in-depth understanding of geometric relationships while building STEM interest. Project ideas and software options will be presented.

Tiffany Sakaguchi

@hinksktchprint

TenMarks, Burlingame, California

CC 007D

9:30A.M.-10:30A.M.

9:45-11:00

376 “M”

Investigating Pre-Geometry Skills through Art and Shapes Using Processing.org

6–8 Workshop

In this session, you will be introduced to Processing, a free and intuitive programming language, used to build basic geometric diagrams in less than twelve commands. To make the most of the workshop download the software at processing.org. Our six-class-period middle school pre-geometry unit will be shared as will recent student work.

Susan Fisher

Meadowbrook School of Weston, Massachusetts

Sarah Albertyn

Meadowbrook School of Weston, Massachusetts

CC 007B

9:45-11:00

391 TECH

Using GeoGebra to Support Student Learning During Problem-Solving Tasks

10–12 Workshop

Did you know you can create GeoGebra applets on your smartphone? Come learn how to design problem-solving tasks that use GeoGebra to scaffold student learning! Workshop participants will design their own task and create a dynamic GeoGebra applet they can use with students. Bring your own smartphone, tablet, or laptop.

Amdeberhan Tessema

Middle Tennessee State University, Murfreesboro

Jeremy Strayer

Middle Tennessee State University, Murfreesboro

Lucy Watson

Middle Tennessee State University, Murfreesboro

CC 007C

9:45-11:00

392 TECH

Using Technology to Engage in Whole-Class Mathematical Inquiry

10–12 Workshop

Together we will explore strategies for using a variety of technologies to facilitate whole-class mathematics discussions-discussions in which students are motivated and positioned to engage in making sense of mathematics. Bring your laptop, tablet, calculator, smartphone, or just yourself and join in the fun.

Keith Leatham

Brigham Young University, Provo, Utah

CC 304A

9:45-11:00

11:00 A.M.–12:00 P.M.

395 TECH

Animate, Illustrate, Captivate: Create Mathematics Concept Videos with Digital Tools

3–5 Session

Digital animations bring math concepts to life! Capture concrete and pictorial models of numeracy, algebraic thinking, measurement, and more for students to see processes in math! Participants will access sample animations, including measuring with a protractor and creating patterns for algebraic rules. I will share how to create and animate.

Mary Kemper

@MrsKemper

Coppell ISD, Coppell, Texas

CC 008AB

11:00-12:00

400 “M”

Creating Communities of Learners: Math in Art, Technology, and History

10–12 Session

We will discuss a math in art, technology, and history class designed for students who desire something other than the typical math path. The class explores mathematics through units such as the Golden Ratio, music, tessellations, architecture, fractals, origami, and the history of numbers and counting, the Rubik’s Cube—the fun things you’ve always wanted to teach!

David Peabody

@davidmpeabody

University Prep Academy, Seattle, Washington

Grand Hyatt San Antonio, Crockett AB

11:00-12:00

409 TECH

Principles to Actions with Dynamic Math Tech

Coaches/Leaders/Teacher Educators’ Session

“Mathematical action technology influences not only how we teach but also what we are able to teach.” With this statement from NCTM, we now must dig into what features of the technology specifically influence teaching and learning. Come to learn how and why to use tech for specific learning goals.

Scott Farrar

@farrarscott

GeoGebra Institute, Oakland, California

CC Hemisfair 1

11:00-12:00

422 TECH REFLECTION COVE

Technology to Visualize Senior Mathematics Concepts: Tools to Transform Learning

10–12 Session

Mathematical action technologies, as referenced in Principles to Actions, offer us rich opportunities for reasoning and sense making to develop conceptual understanding through visualization and making connections. Bring a device and let’s explore what this can look like in the classroom, and also consider the implications for assessment.

Marc Garneau

@314Piman

Surrey School District, Surrey, British Columbia, Canada

CC 217D

11:00-12:00

11:30-12:45

434 TLC

Mathematical Practices Go to the Movies: High-Level Box Office Activities

8–10 Workshop

A movie's box office performance over time and the relative performances of different genres of movies provide engaging contexts for mathematical practices. Using real data, but doing more than just statistics, this session presents examples of modeling, problem solving, and arguing and critiquing reasoning. Digital tools welcome.

Samuel Otten

@ottensam

University of Missouri, Columbia

CC 007B

11:30-12:45

12:30-1:30

458 TECH

Looking Forward: What'll Be Possible in Math Ed in a Decade?

8–10 Session

Technology is evolving rapidly. Every year, devices get cheaper and better. Every year, wifi access improves. What do these trends imply for the future? What will be possible in a decade that isn't possible today? We'll look at the best tech, from pencils on up to the Internet, and see how future possibilities can inform our classrooms today.

Eli Luberoff

@eluberoff

Desmos Inc, San Francisco, California

CC 301

12:30-1:30

462 TECH

Number Sense Fun with Game-Based Early Childhood Apps

Pre-K–2 Session

Game-based apps provide enriching opportunities for children to learn number sense. Research suggests that developing a good foundation of number sense skills in children promotes successful math achievement in future mathematics courses. The importance of number instruction for pre-K students and a collection of apps will be shared and discussed.

Amy Adkins

University of Nevada, Las Vegas

Dawn Lockett

Clark County School District, Las Vegas, Nevada

Lina DeVaul

University of Nevada, Las Vegas

CC 207B

12:30-1:30

470 TECH

Technology Makeovers: Finding Digital Approaches to Your Favorite Lessons

10–12 Session

A precalculus and calculus session that will demonstrate how to utilize technology tools, like Desmos, that offer new opportunities for your favorite classroom activities. Come experience how small digital additions can be quickly implemented into your lesson, helping you expand the bridge of what students know to what you want them to learn.

Luke Walsh

@lukeselfwalker

Catawba Valley Community College, Hickory, North Carolina

James Martin

Wake Technical CC, Raleigh, North Carolina

CC 205

12:30-1:30

474 TECH

Using the Desmos Calculator to Analyze Student Photographs and Pictures

6–8 Session

Most students enjoy taking photographs of their friends and the world around them. Additionally, many are budding artists. But, how often do they analyze the mathematics behind their images? Participants will learn how to use the Desmos calculator to analyze the underlying equations and geometric figures.

Stephanie Cooperman

School District of the Chathams, Chatham, New Jersey

Neil Cooperman

Millburn High School, New Jersey

CC 217D

12:30-1:30

1:30-2:45

480 TECH

AP Calculus Framework: Discovering Integral Defined Functions and FTC Using Technology

10–12 Workshop

Analysis of functions defined by integrals is a learning objective of the calculus framework. The connections between these functions and their derivatives will be explored using paper and pencil and technology activities. Hands-on investigations designed to help students improve their conceptual understanding of AP problems involving FTC will be included.

Mike Koehler

Blue Valley North High School, Kansas City, Missouri

Grand Hyatt San Antonio, Lonestar Ballroom A

1:30-2:45

486 BUILD

Engaging Students with Great Questions, Fun Simulations, and Free Technology

10–12 Workshop

Is it possible to smell Parkinson's disease? Is flipping a coin really a fair way to decide which team gets to be on offense first? Participants will answer these questions with simulations that allow students to make sense of statistical inference. Hands-on physical simulations are introduced first, followed by simulations with (free!) technology.

Douglas Tyson

@tyson_doug

Central York School District, York, Pennsylvania

Jason Molesky

Lakeville Area Public Schools, Lakeville, Minnesota

007A

1:30-2:45

487 TECH

Evaluating Students' Digital Work: Same as Print?

3–5 Workshop

Educators have spent decades learning how to evaluate student work in a print environment with physical manipulatives. As classrooms turn more to digital environments, teachers must learn how to interpret and evaluate students' digital artifacts. BYOD and join us to examine how student work changes in response to their use of digital manipulatives.

Mary Dairyko

University of Chicago, Illinois

Catherine Donaldson

McGraw-Hill Education, Chicago, Illinois

Carla Strickland

@CisforCarla

UChicago CEMSE, Chicago, Illinois

CC 304A

1:30-2:45

497 TECH

Rethinking Expressions & Equations: Implications for Our Classrooms

6–8 Workshop

How are one- and two-variable expressions, one- and two-variable equations, and the standard form of a line connected in a powerful way? How might this progression support student learning of these “tough-to-teach/tough-to-learn” ideas? Explore the underlying theme that unites these seemingly disparate topics using a technology-leveraged approach.

Michelle Rinehart

@HowWeTeach

Region 18 Education Service Center, Midland, Texas

Gail Burrill

Michigan State University, East Lansing

CC 007B

1:30-2:45

2:00P.M.-3:00P.M.

519 TECH

Self-Paced Flipped Model: A Twist on Flipped Mastery

10–12 Session

This presentation encourages people to amend the usual method for a flipped classroom. We will explain why our self-paced twist on flipped mastery is changing how students learn and provide information for this method. Our units consist of target dates, stations, and applications that are done within our classroom, and we will provide an example unit.

Kyle Wilhelm

Lake Forest High School, Illinois

Shelly Lindsey

Lake Forest High School, Illinois

CC 214A

2:00-3:00

529 TECH REFLECTION COVE

Using Digital Tools to Give Every Student a Voice

6–8 Workshop

Simply put, we value student thinking. Technology tools that help us gather, examine, and share students’ mathematical thinking inform our instruction and help create a growth-mindset classroom culture. Bring a tablet or laptop, and be ready to wear your “teacher hat” and “student hat” as you experience strategies to try in your own classroom.

Cathy Yenca

@mathycathy

Eanes Independent School District, Austin, Texas

CC 301

2:00-3:00

529.1

Mathspace—Why You’ll Never Grade Math Assignments Again. Seriously. (BYOD!)

General Interest Exhibitor Workshop

Meet Mathspace. You’ve seen it all, right? Adaptive learning? Yep. Handwriting recognition? Hmm. Every math question graded line-by-line? Whoa, that’s new! Students can finally show their work and get feedback at every step, all auto-graded for you. Bye-bye, multiple-choice! BYOD to try award-winning Mathspace live, and ask about a free trial!

Mathspace

New York, New York

CC 206A

2:00-3:00

3:15-4:30

535 BUILD

Experimental Design and Simulation-Based Inference

10–12 Workshop

Does caffeine affect pulse rate? Can you visualize success? In this session, we will discuss the principles of experimental design and when we can make inferences about cause and effect. Then, using hands-on simulations and technology, we will determine if the results of an experiment are significant—and how these topics connect to the Common Core.

Josh Tabor

Canyon del Oro High School, Oro Valley, Arizona

Daren Starnes

The Lawrenceville School, Lawrenceville, New Jersey

CC 217C

3:15-4:30

537 TECH

Intro to Coding: Learn Scratch Coding with Activities for Algebra, Geometry, & Precalculus Classes

8–10 Workshop

This workshop offers an introductory block-based coding experience for math using Scratch. Attendees will work through lessons in algebra, geometry, and precalculus, which can later be used as with students. Bring your own device (laptop, tablet, iPad, etc.) and either download Scratch or code online from <https://scratch.mit.edu>.

Martin Funk

New Trier High School, Winnetka, Illinois

CC 007B

3:15-4:30

554 BUILD

“Crowdsourced Algebra”: Achieve Generalization through Crowdsourcing

8–10 Workshop

Encourage students to be active participants with these algebra activities. We’ll explore both no-tech and high-tech methods for “class-sourcing”—take part in the human inequality number line, be a piece in the binomial theorem jigsaw, explore visual approaches to exponential growth and see how Desmos Activity Builder can invite class discussions.

Steve Fuguet

@mrfuguet

Hatboro-Horsham High School, Pennsylvania

Bob Lochel

@bobloch

Hatboro-Horsham High School, Pennsylvania

CC 007C

3:15-4:30

3:30-4:30

557 TECH

Engaging Formative Assessment Techniques with Technology

8–10 Session

This session will have teachers engaging in several formative assessment tasks using free technology from Desmos to Nearpod. The tasks will demonstrate that we can engage students in their learning and assess their understanding in real time using such technology.

Eric Milou

@drMi

Rowan University, Glassboro, New Jersey

CC 301

3:30-4:30

558 TECH

Five Steps to Flip Your Math Classroom

General Interest Session

With the popularity of Khan Academy, a flipped classroom has become a popular practice. Flipping the classroom gives teachers valuable class time for student practice, while putting students in the driver’s seat of their learning. Learn five steps to flip a lesson, and get recommendations on great edtech tools to support you.

Steve Garton

@sgarton121

Common Sense Education, San Francisco, California

CC 205

3:30-4:30

566 “M”

Pi, Phi, Polynomials, and Python: Integrating Mathematics and Computer Science

8–10 Session

This session will explore how mathematical topics and relationships can be seen through the lens of computer science and coding in the Python programming language. Explorations involving Xenon's Paradox, the Golden Ratio, polynomial arithmetic, and elementary cryptography will connect algorithmic thinking to deep mathematical understanding.

Thomas Ward

@TWardGH

Greenhills School, Ann Arbor, Michigan

CC 214C

3:30-4:30

579.2

enVision A|G|A powered by Desmos for High School Mathematics

10–12 Exhibitor Workshop

Interested in a seamless and integrated digital experience for high school mathematics teaching and learning? Come see how the unique integration of Desmos into Pearson Realize offers a groundbreaking interactive experience designed to foster conceptual understanding through highly visual interactives that bring mathematical concepts to life.

Pearson Learning Services

Chandler, Arizona

CC 206B

3:30-4:30

579.3

HP Prime: Mathematics Education Technology on All Platforms!

10–12 Exhibitor Workshop

Get acquainted with HP Prime: the app-based, full-color graphing calculator. HP Prime is also available as software on Mac and PC as well as Android/iOS/Win10 phones/tablets. All versions have multi-touch, gesture-driven user interfaces (for example, pinch to zoom on a graph) and more. You'll receive a free copy of the software after the workshop.

HP Inc.

San Diego, California

CC 210AB

3:30-4:30

579.4

Math + ORIGO Digital Tools = Learning at Its Best

Pre-K–2 Exhibitor Workshop

Today's students are plugged in most of the day. Let's use that to our advantage when teaching math. Come see how ORIGO's digital resources can ignite and enliven any math lesson. This engaging workshop will highlight a variety of technology-enhanced tools and how they can be used to enrich teaching and learning mathematics in K–5 classrooms.

ORIGO Education

Earth City, Missouri

CC 212A

SATURDAY

8:00-9:00

586 A&E

Free Online Tools for Guiding Discourse in Rich Math Tasks

3–5 Session

Use free, online tools to kick-start rich tasks in your classroom. Give yourself a personal navigation system to move from notice and wonder, to making estimations, to facilitating multistep problem solving where students pursue their own solutions. Use video, online discussion guides, and virtual manipulatives, all available online for free.

Julie McNamara

Cal State East Bay, Hayward, California

Arjan Khalsa

@arjankhalsa

Conceptua Math, San Rafael, California

Henry B. Gonzalez Convention Center 301

8:00-9:00

603 TECH

Upgrade Your Card Sorts

10–12 Session

Card sorts help students compare, contrast, and group mathematical structures. In this session, we'll discuss various ways in which card sorts promote conceptual understanding, and we'll learn how to use a free digital card sort to promote discussion and give feedback in ways that are impossible with paper card sorts.

Shelley Carranza

@stcarranza

Desmos, Inc., Mountain View, California

CC 207B

8:00-9:00

609 ASSESS

Do Not Become Un-"Hinged"—Learn to Diagnose!

8–10 Workshop

Are you looking for tech-y formative assessment tools that will guide teacher and student moves during a lesson? Join us in an examination of hinge questions as a formative assessment strategy. You will learn some digital tools that will support its implementation. Participants should bring a device and/or laptop.

Debra Mintz

@debimintz

Retired, Pleasanton Uni ed School District, California

Celine Liu

Alameda County Of ce of Education, Hayward, California

CC 304B

8:00-9:00

8:00-9:15

612 TECH

Hands-On Activities + Technology = Mathematical Understanding through Authentic Modeling

8–10 Workshop

Inquiry-based learning coupled with handheld technology empowers students to apply linear, quadratic, and exponential functions to real-world situations. Participants are provided with classroom-ready lessons that use and connect multiple mathematical representations and synthesize the Statistics, Functions, and Modeling strands of CCSSM.

Tom Beatini

Union City Public Schools, New Jersey

CC 006D

8:00-9:15

618 TECH

Take Some Random Walks—on a Hexagonal Island with Dice, on a Number Line with a Calculator, & More!

6–8 Workshop

We will take random walks on a hexagonal board with dice, and we'll take simulated walks on a number line and on circular boards using graphing calculators. We'll learn about and see the huge variety of outcomes of such walks, from short to very long. Take these classroom-tested hands-on activities back to your students!

Patricia Baggett

New Mexico State University, Las Cruces

Andrzej Ehrenfeucht

University of Colorado Boulder

CC 007C

8:00-9:15

623 TECH

Transformational Geometry In 15 Seconds or Fewer: Immediate Interactive Investigations for Grades 8–11

8–10 Workshop

Get hands-on experience and Play-Investigate-Explore-Discover the geometric properties in 15 seconds! Using a handheld, iPad, or software, students will become engaged quickly. And deeply. Get all 30 free activities and student/teacher materials and see how to implement. Integrate creative exploration and pedagogy via technology and collaboration.

Tom Reardon

@tomreardon3

Fitch High School/Youngstown State University, Ohio

Grand Hyatt San Antonio, Lonestar Ballroom A

8:00-9:15

626 TECH

Using Simulations to Make Inferences: Come Learn How!

10–12 Workshop

In this workshop, participants will increase their understanding of using simulations to make inferences through engaging in hands-on, classroom-ready tasks. Participants will also learn about appropriate teaching strategies, students' misconceptions while using simulations, and technology resources. Bring a laptop if you can!

Jeremy Strayer

Middle Tennessee State University, Murfreesboro

Jennifer Lovett

Middle Tennessee State University, Murfreesboro

Amber Matuszewski

Rutherford County, Murfreesboro, Tennessee

CC 304A

8:00-9:15

9:30-10:30

629 TECH

Actively Engage Students in Content and Practices with Interactive Simulations

6–8 Session

Interactive simulations are flexible tools for teaching content while also fostering engagement, reasoning, modeling, and sense making. Learn how to incorporate simulations into your classroom, facilitate inquiry-based activities, and engage students in mathematical practices. Take home new ideas and lessons you can implement immediately.

Amanda McGarry

@mcgarrymath

University of Colorado Boulder

CC 214B

9:30-10:30

630 TECH

Algebraic Functions, Computer Programming, and the Challenge of Transfer

8–10 Session

Programming is just like math . . . or is it? It turns out they differ in significant ways, and prior efforts to teach algebra through programming have been disappointing at best. This session will explore the reasons for this, and describe the research behind an evidence-based intervention that uses a unique approach to address these differences.

Emmanuel Schanzer

@bootstrapworld

Bootstrap, Alexandria, Virginia

CC 008AB

9:30-10:30

632 TECH

Challenging Precalculus Alternative Assessments Using the Free Online Desmos Calculator

10–12 Session

Learn about two major precalculus projects that will transform your students and help them to learn and to understand what they are doing. There is a “huge” difference between “doing” mathematics and “understanding” mathematics. Come learn how to make that happen. If possible, bring your laptop or smart device to begin to experience this yourself.

Neil Cooperman

Millburn High School, Millburn, New Jersey

Stephanie Cooperman

School District of the Chathams, New Jersey

CC 217D

9:30-10:30

633 TECH

Designing Online Playgrounds for Learning Mathematics

8–10 Session

We share how teachers’ experiences with “online playgrounds” in a university course led to their use of online technology to broaden opportunities for student participation and to engage in formative assessment. We demonstrate how teachers can infuse video conferencing, social media, and online interactive tools to support students’ math learning.

Heather Johnson

@dr_heatherlynn

University of Colorado Denver

Peter Hornbein

University of Colorado Denver

Dana Bryson

Evergreen Country Day School, Colorado

CC 214C

9:30-10:30

9:45-11:00

662 TECH

Old School Geometry

8–10 Workshop

Using straightedge and compass, both physically and electronically, we will “do” geometry. Euclidean geometry is frequently taught by textbook and by example. However, putting theorems and postulates into action by constructing, investigating, and theorizing place us in Euclid’s classroom.

John Ashurst

@kiltedcyclist

Harlan Independent Schools, Kentucky

Lindsay Gold

University of Dayton, Ohio

Derek Sturgill

Ohio University, Athens

CC 007C

9:45-11:00

668 TECH

Using NCTM’s Core Math Tools to deepen Mathematical Connections in Statistics and Functions

10–12 Workshop

NCTM’s Core Math Tools will be used to deepen and connect content knowledge between the CCSSM’s conceptual categories statistics and functions. Activities will focus around the use of simulation in statistics and model fitting with functions. Participants will explore three tasks, common misconceptions, and questions used to develop CCSSM standards.

Basil Conway

Jacksonville State University, Alabama

CC 006D

9:45-11:00

11:00-12:00

676 A&E

Empowering Digital Collaboration in 3 Acts

General Interest Session

How do we foster collaboration where all voices are heard? Can the most unlikely contributors supply ideas, while the brightest seek those insights? Technology is useful in ensuring all students routinely contribute equitably and improve their own capacity to problem solve. We will explore digital tools for collaboration on complex 3-act problems.

Cory Henwood

@coryhenwood

Diamond Ranch Academy, Hurricane, Utah

CC 008AB

11:00-12:00

683 TECH

Projecting Student Success: Making Project-Based Learning Work in a Math Classroom

6–8 Session

While project-based learning is becoming more and more popular in schools across the country, many math teachers are being told “math is just different” and not given many resources or ideas on how to successfully implement project-based learning. This session will focus on one math teacher’s pursuit to bring PBLs to life in her math classroom.

Maida Russell

@MaidaRussell1

Springfield Public Schools, Missouri

CC 217D

11:00-12:00

688 TECH

Turn Up the Feedback

General Interest Session

It’s not surprising that rich, focused, and timely feedback is a key component in student learning. We see that in research, in brain science, and especially in our classrooms. We’ll look at four applications—Google Forms, Classkick, Kahoot, and Evernote—but more importantly at four moments in the learning process that are enhanced by feedback.

Bill Doherty

Campolindo High School, Moraga, California

CC 205

11:00-12:00

11:30-12:00

691 TECH

Computational Thinking in School Mathematics: It’s Elementary!

3–5 Burst

We will share three activities that connect computational thinking with elementary school mathematics, including the geometry of polygons, fractions, and number stories. We will show how using Scratch programming and “unplugged” activities will help engage students to work collaboratively and productively.

George Reese

@mstegeorge

MSTE at University of Illinois, Champaign

Carla Strickland

UChicago CEMSE, Chicago, Illinois

Wendy Maa

Kenwood Elementary School, Champaign, Illinois

CC 006D

11:30-12:00

693 ASSESS

Desmos + Algebra 1 = Deep Understanding x Fun

8–10 Burst

Learn how we used the online graphing calculator Desmos to make our algebra 1 students look more deeply into linear equations and linear inequalities. Students were able to dive deeper into understanding the “why” behind the concepts. We will provide the projects, samples, and rubrics we used.

Stacy Remphrey

@StacyRMath

Unionville-Chadds Ford School District, Kennett Square, Pennsylvania

Glen Lewis

Unionville-Chadds Ford School District, Kennett Square, Pennsylvania

CC 007B

11:30-12:00

699 TECH

Online Technology Training for K–16

Math Teachers Burst

Coaches/Leaders/Teacher Educators' Burst

Discover how a learning-by-design approach with self-selected technologies (GeoGebra, TinkerPlots, Virtual Manipulatives, Applets, Calculators, SketchUp, Scratch, etc.) supports teachers as they create, peer review, implement, and reflect on technology-integrated lessons. Learn about which technology frameworks teachers prefer.

Kathryn Shafer

Ball State University, Muncie, Indiana

CC 007C

11:30-12:00