

# NCTM Annual Conference - 2018

## Washington, DC

Additional Technology sessions (25)  
See [Original 74](#)

### 23 Mathematical Modeling Goes to College: An Approach Inspired by the #MTBoS.

Thu, 4/26: 9:30 AM - 10:30 AM  
CC 202 A

*Dev Sinha*, University of Oregon

**Description:** We share a mathematical modeling course piloted twice at college entry level. The course places an emphasis on student actions of analyzing data, naming and/or interpreting variables, setting up and interpreting equations, interpreting and using the results of technology (e.g., linear fitting), and reading and writing scientific reports.

### 52 Random Thoughts: Fun, Easy-to-Code, Math Models from Flipping Coins to Wandering Aliens

Thu, 4/26: 9:45 AM - 11:00 AM

Marriott Marquis - Marquis Ballroom Salon 1&2 (Level M2)

*Camille McCue*, Adelson Ed Campus; *Rachel Ziter*, Adelson Ed Campus

**Description:** Mathematical models in the form of student-created computer programs provide a fruitful framework for deep computational thinking and discussion. Focusing on random number generation, learn to coach your students in coding (via Scratch) easy, real-world, visual models addressing size, speed, heading, coordinates, frequency, and more! [Proposal](#)

### 84 Teaching Mathematics Online Using Inquiry Methods

Thu, 4/26: 11:00 AM - 12:00 PM

CC Salon G

*Brian Keith Ridpath*, Western Nevada College

**Description:** An increasing number of students are now receiving a significant portion of their math education online. There are both opportunities and challenges when teaching and learning mathematics in a virtual setting. Session participants will learn how Inquiry methods foster engagement and productive learning for students in an online environment. [Proposal](#)

### **120 Being Right and Wrong in Different, Interesting Ways**

Thu, 4/26: 1:30 PM - 2:30 PM

CC 154 AB

*Nolan Doyle*, Clover Hill High School

**Description:** Effective open-ended questions give students opportunities to be right and wrong in different, interesting ways. Desmos gives teachers the opportunity to easily collect and display student responses to these types of questions. This session explores how to use these types of questions in Desmos to drive instruction and improve feedback to students. [Proposal](#)

### **133 NCTM's Resources for the Secondary Classroom**

Thu, 4/26: 1:30 PM - 2:30 PM

Marriott Marquis Independence Ballroom F-H (Level M4)

*AnnMarie Varlotta*, Howard Pub Schools; *Brian Shay*, San Dieguito Union HS District

**Description:** 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 Resources collections for the secondary classroom.

### **158 Leveraging Technology into Modeling Tasks to Enhance Learning**

Thu, 4/26: 1:30 PM - 2:45 PM

Marriott Marquis Ballroom Salon 1&2 (Level M2)

*Connie Schrock*, Emporia State University/ NCSM President

**Description:** We'll explore modeling with great tasks. A great task engages students with an interesting modeling problem involving essential content. It seeks to build deep understanding of concepts, support rich discourse, and provide the opportunity for students to persevere. Technology alone does not solve the task--nor does technology replace thinking. [Proposal](#)

### **172 360 Degree Math: a Math Classroom Revolution**

Thu, 4/26: 3:00 PM - 4:00 PM

Marriott Marquis Ballroom Salon 5 (Level M2)

*Ed Campos*, Brown University

**Description:** Put your students thinking and learning center stage with 360 degree math. Get your students up, performing, solving, and persevering by livening up the environment with whiteboard surfaces, music cues, and visible random groupings. Untether yourself from the Doc Cam using Air Server and an iPad. [Proposal](#)

## 200.4 Modeling the Future Challenge

Thu, 4/26: 3:00 PM - 4:00 PM

Exhibitor Workshop

CC Room: 159 AB

*Debbie McCormac*, The Actuarial Foundation

**Description:** Josh Neubert, CEO at the Institute of Competition Sciences and co-developer of the Modeling the Future Challenge, will show how your students can compete for \$55,000 in scholarships by modeling how new technologies may change the future. Attend and be entered in a drawing for a \$500 grant to start a Modeling Team at your school. [Proposal](#)

## 271 Matrices Are Not Boring, They Are Transformative!

Fri, 4/27: 8:00 AM - 9:00 AM

CC Room: 151 A

W Gary Martin, Auburn University

**Description:** Using transformational geometry as a context for exploring matrices provides connections across multiple conceptual categories of the high school curriculum, including number and quantity, functions, geometry, and algebra. Moreover, using mathematical action technology such as dynamic geometry can bring these relationships to life! [Proposal](#)

## 283 Welcome to the Twitter-verse for the 21st-Century Math Educator

Fri, 4/27: 8:00 AM - 9:00 AM

Marriott Marquis Ballroom Salon 14 (Level M2)

*Brian Bussiere*, Epsom Central School

**Description:** In this session participants learn how to use Twitter to enhance their individual PD and how to build a strong PLN. Every day, thousands of educators will learn not only how to use Twitter and the language behind it but also how to find professional topics that will benefit them. [Proposal](#)

## 285 Zombie Apocalypses and Other Advances in Minecraft Math

Fri, 4/27: 8:00 AM - 9:00 AM

CC Room: 146 A

*David Neale Henson*, Grand Prairie ISD

**Description:** Ever wonder if a zombie apocalypse was exponential? This and other mathematical relationships will be explored in this session. Using a sandbox virtual environment, like Minecraft, as a BYOD support, this session will demonstrate its many uses as an Engage and Exploration tool. What can you do if students engaged for five more minutes each day? [Proposal](#)

### **362 Using Visual Representations: Engaging All Students with the Standards for Mathematical Practice**

Fri, 4/27: 9:45 AM - 11:00 AM

Marriott Marquis Room: Liberty Ballroom I-K (Level M4)

*Harriette S Stevens*, Mathematics Education Group

*Hee-Joon Kim*, Center for Technology in Learning, SRI International; *Teresa Lara-Meloy*, SRI Education

**Description:** Using diagrams, dynamic tools, and gestures engages students in mathematical practices. Students' visual representations of mathematical ideas are critical in clarifying their understanding, communicating their thoughts, and empowering them as learners. Come engage in middle grades activities that use and evoke multiple visual representations. BYOD. [Proposal](#)

### **443 The Force Field of Mathematics, NGSS, and Technology Instruction**

Fri, 4/27: 1:30 PM - 2:30 PM

CC Room: Salon C

*Danielle Moore*, Teaching One Moore

**Description:** Use the power of mathematics, the Next Generation Science Standards, and technology to empower all students. Each of these components is powerful on its own, but taught in conjunction they have the power to transform classroom instruction and lift the levels of all students' sense of wonder, discourse, critical thinking, and agency. [Proposal](#)

### **457 FUN with Polynomial FUNctions**

Fri, 4/27: 1:30 PM - 2:45 PM

CC Room: 207 A

*Christine Larson*, South Dakota State University; *Sharon Vestal*

**Description:** Come explore quadratic, cubic, and quartic functions using multiple representations including physical models, tables, graphs, and expressions. Teachers will actively participate in lessons using manipulatives and technology including color tiles, algebra tiles, and Desmos. Experience inquiry-based, learner-centered, collaborative activities. [Proposal](#)

### **467 Transformational Geometry: Facilitate Meaningful Discourse through Student Investigations**

Fri, 4/27: 1:30 PM - 2:45 PM

CC Room: 202 B

*Christine D. Darling Thomas*, Georgia State University

**Description:** Come join an interactive session on transformational geometry. Explore how to facilitate meaningful discourse while engaging students in hands-on activities used to transform figures and to predict the effect of a given rigid motion on a given figure while using manipulatives and handheld technology. [Proposal](#)

## **487 How Learning Progressions, Assessment, and Technology Can Support Students' Mathematical Sense Making**

Fri, 4/27: 3:00 PM - 4:00 PM

CC Room: Salon I

*Michael T. Battista*, The Ohio State University

**Description:** Keeping students successfully engaged in mathematical sense making requires us to understand students' mathematical reasoning deeply enough to continuously choose tasks that engage them in successful mathematical sense making. I will illustrate how learning progressions, assessment, and technology can support this basic pedagogical premise. [Proposal](#)

## **501.4 Geometry class + Technology: Real Talk**

Fri, 4/27: 4:30 PM - 5:30 PM

CC Room: 159 AB

*Natasha Desai*, CanFigureIt

**Description:** Technology is here to stay, but what does this mean for Geometry classes today? Join our panel featuring early adopters of digital products who have experienced the good, bad, and ugly... and still have their graphing calculator from high school. These teachers will share content resources they love, implementation strategies, and 'lessons learned'. [Proposal](#)

## **515 High-Yield Routines and Resources to Support Math Instruction**

Fri, 4/27: 3:15 PM - 4:30 PM

Marriott Marquis Room: Liberty Ballroom I-K (Level M4)

*Regina Kilday*, Exeter-West Greenwich Regional School District

**Description:** Explore effective routines like number talks, 3-Act Tasks, Data Day, KenKen and more to enhance content knowledge and implement the PtA instructional practices. Learn about a plethora of digital resources through NCTM and elsewhere to support instruction regardless of your core program. [Proposal](#)

## **590 Professionalism in a Digital Age**

Sat, 4/28: 8:00 AM - 9:15 AM

CC Room: 204 AB

*Amy Seylar, Angela Waltrup* Washington County Public Schools

**Description:** Participants will investigate one district's vetted digital resources and tools for growing math knowledge, analyzing and responding to students' mathematical ideas, fostering positive attitudes toward continued professional learning in math, and building professional networks to support and sustain continuous growth and learning. [Proposal](#)

### **593 "Who Wants To Be A Millionaire": A Contestant's Mathematical Perspective**

Sat, 4/28: 9:30 AM - 10:30 AM

CC Room: 151 A

*Mike Reiners, Christ's Household of Faith School*

**Description:** How does knowledge of expected value affect a game show contestant's "best choice"? How have differing prize values and rules changed the game over the years? Come use various dynamic technologies to explore, play, and simulate with a recent Millionaire contestant. [Proposal](#)

### **615 Beginning Bar Model Boot Camp: Getting Started with Model Drawing**

Sat, 4/28: 9:45 AM - 11:00 AM

CC Room: 144 ABC

*Cassandra Turner, Elizabeth Curran Math Champions Professional Development, LLC*

**Description:** Improving students' problem-solving abilities is a major objective of Common Core and state standards, and model drawing is a powerful tool that students can use to attack complex problems. Come investigate methods of teaching and assessing tape diagrams for those persnickety word problems, and explore interactive model drawing technology. [Proposal](#)

### **633 Flipped Learning Is What Today's Kids Do**

Sat, 4/28: 11:00 AM - 12:00 PM

CC Room: 102 AB

*Cody High School PCSD #6*

**Description:** "Google it." "Find it on YouTube." This is what this generation has grown up with. Everything that is known is available to them from their smartphones. So how should we teach them? Play on their field and make a video, but play by your rules and hold them accountable for it. A flipped class session for all from rookies to advanced.

[Proposal](#)

### **639 Learning Together: Collaboration on Mathematical Pedagogies in the Virtual and Global Community**

Sat, 4/28: 11:00 AM - 12:00 PM

CC Room: 204 C

*Richard Velasco, Pullman School District; Yujiro Fujiwara, Christian Academy in Japan*

**Description:** Collaboration among teachers promotes ongoing professional growth and learning, yet there is not much said about virtual collaborations that extend to our foreign counterparts. This presentation discusses an online collaborative experience between math teachers from Guam, Japan, and China, involving the bilateral sharing of mathematical pedagogies. [Proposal](#)

## **651 Computational Thinking Converts: Elementary Math Teachers Learning from Pioneer Peers and Students**

Sat, 4/28: 11:30 AM - 12:00 PM

CC Room: 201

*George Reese, Wendy Maa* University of Illinois at Urbana-Champaign

**Description:** Elementary school math and computer science teachers worked with researchers to create activities that integrate computational thinking with mathematics in K–5. Join us to see examples, including student artifacts in Scratch, and reflect on the surprising discoveries teachers made as they taught and learned from their colleagues and students. [Proposal](#)

## **655 Explore Mathematical Modeling: Estimating the Number of Fish in a Pond with Sampling**

Sat, 4/28: 11:30 AM - 12:00 PM

CC Room: 144 ABC

*S. Leigh Nataro*, Moravian Academy Upper School

**Description:** To understand mathematical modeling, you need to experience mathematical modeling. How can we estimate the number of fish in a pond with a sample? How can we test our model using hands-on simulation or technology? What assumptions does our model have? Come explore the capture-recapture method to estimate the total number of fish in our pond. [Proposal](#)

## **663 To Vote or Not to Vote? Modeling Current Events with Mathematics**

Sat, 4/28: 11:30 AM - 12:30 PM

CC Room: 103 A

*Aleksandra Kaplon-Schillis*, DOE New York City

**Description:** In this session, I will share how to incorporate current events in math class to support students' learning of ratio and proportion. Come to learn firsthand how to use Google Forms to model real-life scenarios. Explore how to engage students in math discussions that promote building their numeracy and increase their knowledge of political issues. [Proposal](#)