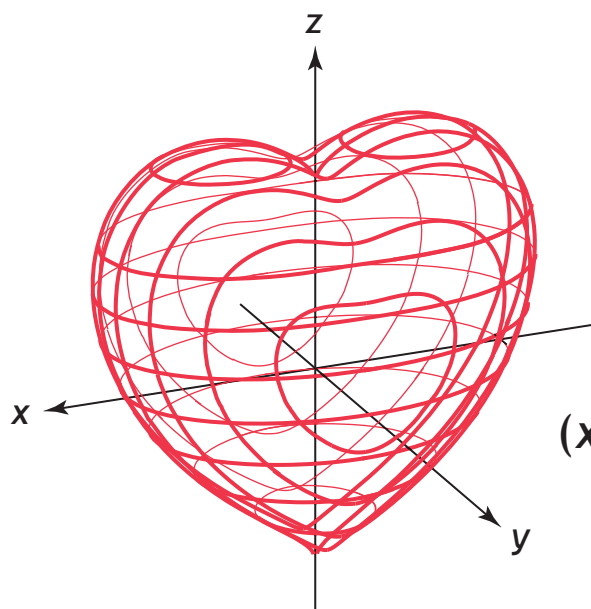


# ASILOMAR

Mathematics Conference 2016

www.cmc-math.org



$$(x^2 + \frac{9}{4}y^2 + z^2 - 1)^3 - x^2z^3 - \frac{9}{80}y^2z^3 = 0$$
$$-2 \leq x, y, z \leq 2$$

# Math

*"This year's logo was designed by Paul Giganti and John Martin, with special thanks to Michelle Clark for the concept."*

## "The Mathematical Practices: A Reality in Every Classroom"

Friday, December 2 - Sunday, December 4, 2016

Asilomar Conference Grounds • Pacific Grove Middle School  
Pacific Grove, CA

Check out  
this year's  
app!

CMC North Conference 2016 Going Mobile with EduPlus

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Connect Conferences in Education

Go to App Store or Google Play Market and search "eduplus" or simply scan the QR Code:

Available on the App Store

ANDROID APP ON Google play



## Welcome to Asilomar

Take time to explore mathematical ideas and teaching for understanding. Whether you're a first-timer or a veteran of many Asilomar conferences, we hope this brochure will help you find the exciting opportunities that await you at this year's conference!

### A PLACE TO GET NEW IDEAS...

Asilomar is a place to get lots of new lessons and ideas to use in your classroom. Attend sessions led by teachers and educators from all levels, and all over California, the United States, and beyond. Experience hands-on workshops and fun-filled activities you will want to share with your colleagues and students. The Asilomar conference provides nearly 200 sessions in a three-day program that offers a rich variety of experiences to suit every grade level and to cover all strands of mathematics.

### A PLACE TO LEARN WHAT IS NEW IN MATHEMATICS EDUCATION...

Come to Asilomar to learn about and discuss the latest mathematics education news, information and issues. We are proud to have an outstanding group of presenters—people at the forefront of change in mathematics instruction. Discover how changes in state and national policy, teaching techniques, materials, texts and assessment will affect your classroom, your students and your teaching.

### A PLACE TO NETWORK...

Several hundred teachers from all levels attend Asilomar each year. Take this opportunity to enlarge your network of colleagues who can assist you in building your math program. Become part of the CMC network that supports math teachers throughout California. Meet new friends who share your interests and love of teaching.

### A WONDERFUL PLACE TO BE...

Asilomar is a beautiful State Park. You will encounter many species of wildlife as you meander through the grounds or take the boardwalks to the dunes. Join us!

*Thank you!*

Rebecca Lewis – Conference Coordinator  
 Ana England – Program Chair  
 Julie Crozier – Registration  
 Heather Roman – Pacific Grove MS Coordinator  
 Grayson Fong – Pacific Grove MS Tech Coordinator

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### CMC North Mathematics Conference 2016 goes mobile with EduPlus



Download EduPlus from the App Store, Google Play, or at <http://e.confplusapp.com/>. And be sure to visit <http://event.confplusapp.com/cmcn16/> to get a preview of the EduPlus features. Search sessions, create your own schedule, get notifications and evaluate sessions. (More information on page 9.)

Evaluate the conference by December 31, 2016 and you will be entered in a drawing for FREE conference registration and on grounds housing for next year. The winners for this year's free registration and housing are Jordan Johnson and Debra Hughes.

# MINI CONFERENCE AT ASILOMAR

FRIDAY | 1:30-4:30pm

Speaker	Topic	Grade Level	Room
Asturias, Harold	Diagnostic Teaching Lesson Design—Access, Content, Identity, and Academic Language	Equity	Toyon
Champagne, Zachary	From One to Infinity: Learning to Count, When it Counts	PK-3	Oak Shelter
Douglas, Lew and Picciotto, Henri	A Deep Dive Into Transformational Proof in HS Geometry	8-12	Acacia
Fenton, Michael	Principles for Building and Using Effective Digital Tasks	6-12	Evergreen
Kelemanik, Grace	Routines for Reasoning Fostering SMPs in All Students	5-9	Nautilus East
Ray-Riek, Max	Students' Methods: Linking Concept and Procedure in Fraction, Division and Beyond	4-6	Heather
Taylor, Megan	Hey Math Teachers, It's OK to Cry in Your Car	Ldrshp	Nautilus West

(Session descriptions on page 4.)

## PROGRAM

	Time	Event	Location
Friday	3:00-7:00pm	Registration and bag pick up (Mini Conference participants can pick-up their bags at 12:30pm)	Surf & Sand, Asilomar
	4:00-6:00pm	Newcomers' Session (20 minute repeating presentations)	Triton, Asilomar
	6:00-7:00pm	Dinner	Dining Hall, Asilomar
	6:00-7:30pm	Exhibits (materials for purchase and bag pick-up)	Gym, Pacific Grove MS
	6:00-7:30pm	Bag Pick-up	Pacific Grove MS
	7:30-9:00pm	<b>KEYNOTE SESSION: (information on page 5)</b> <b>Dan Meyer, with Shira Helft, Juana de Anda and Fawn Nguyen — Practice Problems</b>	Auditorium, Pacific Grove MS
Saturday	7:00-8:15am	Breakfast	Dining Hall, Asilomar
	7:30am-12:00pm	Registration and bag pick-up (Bag pick-up only at PGMS until 11:30am)	Surf & Sand, Asilomar
	7:45-9:00am	Newcomers' Session (20 minute repeating presentations)	Triton, Asilomar Pacific Grove MS, Rm 6
	7:30am-5:30pm	Exhibits (materials for purchase)	Gym, Pacific Grove MS
	8:00am-12:00pm	Sessions (matrix begins on page 11, speaker section begins on page 14)	
	12:00-1:30pm	Lunch (refer to page 6)	Dining Hall, Asilomar
	1:30-5:00pm	Sessions (matrix begins on page 11, speaker section begins on page 14)	
	5:00-6:00pm	CMC-N Affiliate Gathering	Sea Galaxy
6:00-7:00pm	Dinner	Dining Hall, Asilomar	
7:30-10:00pm	<b>Ignite! and President's Party</b> Everyone Welcome!	Merrill Hall, Asilomar	
Sunday	7:30-9:00am	Breakfast (pick-up box lunch)	Dining Hall, Asilomar
	8:00-8:45am	CMC-N Membership Meeting	Surf & Sand
	9:00-10:15am	<b>MORNING KEYNOTE SESSION:</b> <b>Zachary Champagne — Informing Practice Through Research: Ten Lessons</b>	Merrill Hall, Asilomar
	10:15-10:45am	Coffee Break	
	10:45am - Noon	<b>MID-MORNING KEYNOTE SESSION:</b> <b>Megan Franke — No More Mastery: Leveraging Partial Understanding</b>	Merrill Hall, Asilomar

# KICK-OFF MINI-CONFERENCE

Pre-registration required.

FRIDAY — ASILOMAR

1:30 - 4:30

**Asturias, Harold — Honorable Past President CMC**

## **Diagnostic Teaching Lesson Design—Access, Content, Identity, and Academic Language**

Diagnostic teaching makes differences visible; what are the differences in the mathematics that different students bring to the problem. They focus the class on the three or four ways of thinking that students bring to the problem. Then converge on grade level mathematics. In the process students develop a positive mathematical identity and the academic language to communicate about important mathematics. We will discuss five different types of lessons and experience a diagnostic lesson design. Equity | INT | Toyon

**Champagne, Zachary — Assistant in Research, FCR-STEM**

## **From One to Infinity: Learning to Count, When it Counts**

During this interactive presentation we'll focus on the research and teaching ideas related to how children come to understand counting and cardinality. Along the way we'll investigate the standards and expectations of students in kindergarten, view a variety of video clips of students at varying levels along the path as they learn to count, and investigate the future ideas that are impacted by a student's understanding of counting and cardinality. PK-3 | INT | Oak Shelter

**Douglas, Lew — Consultant, Stanford Online HS; and Henri Picciotto — Author and Consultant**

## **A Deep Dive Into Transformational Proof in HS Geometry**

In this mini-session, we will provide a detailed framework for transformational proof, including a set of clearly specified assumptions. We will use these assumptions to prove basic transformational theorems. With these in hand, you can prove triangle congruence and similarity conditions (formerly taken as postulates) and proceed traditionally, or prove the customary theorems without using congruent or similar triangles. It is also possible to combine transformational and traditional proofs. This session is for you as a teacher-learner. We will not focus on activities for students. That said, we will include interactive components and whole-group discussion. 8-12 | INT | Acacia

**Fenton, Michael — DESMOS**

## **Principles for Building and Using Effective Digital Tasks**

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. 6-12 | INT | Evergreen

**Kelemanik, Grace — Math Education Consultant, Boston Teacher Residency**

## **Routines for Reasoning Fostering SMPs in All Students**

Math practices are habits and habits are developed through routine. Contemplate then Calculate is a robust instructional routine designed to develop structural thinking (MP7) in all students. Participants will engage in the routine as math learners, unpack the routine, and discuss how it develops structural thinking and provides access to a wide range of learners. We will also discuss the types of tasks to sit inside the routine as well as strategies for weaving it into the math curriculum. 5-9 | INT | Nautilus East

**Ray-Riek, Max — Project Manager, The Math Forum at NCTM**

## **Students' Methods: Linking Concept and Procedure in Fraction, Division and Beyond**

NCTM's Principles to Actions emphasizes "Build Procedural Fluency from Conceptual Understanding," and provides a framework: give students contextual problems to elicit informal thinking, compare and generalize strategies, challenge students with problems suited to specific strategies, and when students can explain their reasoning on problems, offer ongoing practice to promote fluent use of efficient algorithms. We will experience this using fraction division and then practice sequencing problems in other topics to elicit informal strategies followed by efficient generalizations. The ideal participants in this session are teams of teachers and coaches who collaborate to plan math instruction together or can bring these ideas back to a team. 4-6 | INT | Heather

**Taylor, Megan — CEO & Founder, Trellis Education**

## **Hey Math Teachers, It's OK to Cry in Your Car**

We are all leaders. Teaching mathematics makes us leaders because of the importance our society places on achievement in school mathematics and on high-stakes mathematics tests. As Rochelle Gutierrez says, "Mathematics, like whiteness, operates with unearned privilege in society." So what does it mean to ensure the way we lead from the classroom ensures our students have the best chance of having academic success in math and, more importantly, becoming powerful mathematical thinkers? What would we do for our students if we had no bounds? What excuses are holding us back? What's the first, next step? Ldrshp | INT | Nautilus West



# KEYNOTE SESSIONS

FRIDAY EVENING — PACIFIC GROVE MIDDLE SCHOOL, AUDITORIUM

7:30 - 9:00



**Dan Meyer**, taught high school math to students who didn't like high school math. He has advocated for better math instruction on CNN, Good Morning America, Everyday With Rachel Ray, and TED.com. He earned his doctorate from Stanford University in math education and is the Chief Academic Officer at Desmos where he explores the future of math, technology, and learning. He speaks internationally and was named one of Tech & Learning's 30 Leaders of the Future. He lives in Oakland, CA.

*Panel: Shira Helft, Juana de Anda, Fawn Nguyen*

### Practice Problems

I am energized by practice problems – the problems of the teaching practice. Teaching offers the curious teacher enough problems and questions to sustain a lengthy career.

So I have invited curious classroom teachers from different stages of their teaching careers to share the questions about teaching that have sustained them. Come for a glimpse of your future or a reminder of your past.

SUNDAY MORNING — ASILOMAR, MERRILL HALL

9:00 - 10:15



**Zachary Champagne** is an Assistant in Research at the Florida Center for Research in Science, Technology, Engineering, and Mathematics (FCR-STEM) at Florida State University. He previously taught for thirteen years as an elementary school teacher with a

specialization in math and science. During this time, he received many state and national awards for excellence in teaching, including the Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST), Duval County Teacher of the Year, and Finalist for Macy's Florida Teacher of the Year. Zachary also serves on the Editorial Board of Teaching Children Mathematics (NCTM). He is currently interested in learning how young students think about mathematics and how to help them understand that mathematics makes sense. He tweets at @zakchamp

### Informing Practice Through Research: Ten Lessons

Come explore ten lessons I learned through my transition from a thirteen year elementary mathematics classroom teacher to working for a research organization. We'll cover topics spanning a variety of mathematics content areas from Pre-K through 8th grade. We'll also explore research based pedagogical ideas and instructional implications.

10:45 - Noon



**Megan Franke**, is a Professor of Education at UCLA. Dr. Franke, along with her colleagues, supports and studies teachers as they make use of research based information about the development of children's mathematical thinking (Cognitively Guided Instruction, CGI) in ways that create opportunities for low-income students of color to learn mathematics with understanding.

### No More Mastery: Leveraging Partial Understanding

How do we notice and use what students DO know to support them to make progress in their thinking. Partial understandings provide great opportunities. This session will support teachers in seeing how they can use partial understandings to support students' mathematical learning and thus challenges our common notions of mastery.

## CMC-North would like to express its sincere gratitude to:

**The Asilomar Program Committee** – for preparing an enriching program with speakers who are experts in their field, a variety of presentations to energize and expand the skills and talents of each mathematics educator, and a feeling of renewed enthusiasm for teaching.

**The Speakers** – for providing stimulating presentations and sharing new ideas, teaching methods, and tools. We acknowledge the many hours of preparation they have spent to provide you with valuable handouts and with this opportunity for growth and networking.

**The Asilomar Committee Chairs and Volunteers** – for providing you with the best support to help make your experience at this year's conference go smoothly through their help with equipment, signs, logistics, and more.

**The Presiders and Pre-Service Teacher Volunteers** – for providing speakers with a warm welcome, an introduction, and a hearty thank you at the end of each session. Presiders are the ones that keep speakers coming back to Asilomar.

**The Exhibitors** – for contributing to your conference experience by bringing new curriculum materials, teaching ideas, technology, products, and free demonstrations to you and your fellow conference goers.

**The Staffs of Pacific Grove Middle School and the Asilomar Conference Grounds**—for welcoming conference participants to your sites and for your support in making our conference a great success.

*Thank you*

### Ignite! (Steve Weimer, emcee), and President's Party

We're very excited for our President's Party sponsored by Texas Instruments (appetizers and no-host bar) and to offer an Ignite session sponsored by Math Forum at NCTM. What is Ignite? This fast-paced, fun, thought-provoking, high-energy series of 5-minute talks with 20 self-advancing slides by people with the guts to get onstage and talk about something they are passionate about!

*Co-presenters: Christine Roberts, Ed Campos Jr., Gretchen Muller, Monica Rock, Henri Picciotto, Jon Southam, Lizzie Hull Barnes, Masha Albrecht, Rick Barlow and Zachary Champagne*

Saturday, 7:30 - 10:00 | Asilomar, Merrill Hall

### Lunch Options

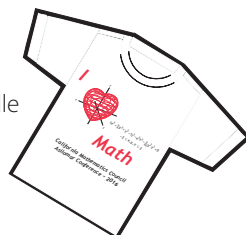
There will be food available for purchase at the Middle School! From 8:00am till about 2:00pm, student organizations will be selling various snacks and refreshments. Coffee, sodas and water will be available, as well as sandwiches and pastries. Please support these local school groups. A limited number of meal tickets are available for purchase at the Asilomar front desk and light snacks can be purchased in the Asilomar Social Hall.

### First Time at Asilomar

Come to Triton, Friday between 4:00 and 6:00pm, or Triton and PGMS Room 6, Saturday between 7:45 and 9:00am for a 20-minute orientation session on how to navigate your first conference at Asilomar. We will show you all you need to know.

### T-shirts and Sweatshirts

Displaying this year's Asilomar Mathematics Conference logo will be available for purchase in Surf and Sand on Friday and Pacific Grove Middle School Gym on Saturday. Don't miss your opportunity to bring home a memento of your conference participation.



**CMC-North affiliates** will be having a social gathering Saturday in Sea Galaxy from 5:00-6:00pm with appetizers and beverages. Come find out more about each affiliate in our section and how to stay connected with other math educators in your local area!

#### CMC-North Local Affiliate Groups

- Math Council of California's Far North, CMCFN
- Mt Lassen Math Council, MLMC
- Northern Nevada Math Council, NNMC
- Sonoma County Math Council, SCMC
- Sacramento Area Math Educators, SAME
- Math Educators of Solano County, MESC
- San Francisco Math Teachers Association, SFMTA
- Alameda Contra Costa County Math Educators, AC3ME
- Santa Clara Valley Math Association, SCVMA
- Monterey Bay Counties Math Educators, MBMC
- Council of Math & Science Educators of San Mateo County, CMSSEMC

### Social Gatherings

What's a better way to get to know more about local CMC Affiliates than to mingle and network with other people from the affiliate groups?

**CMC-Central** is hosting a social gathering from Saturday, from 5:00-7:00pm in Evergreen. Heavy hors d'oeuvres will be served.



# SATURDAY HIGHLIGHTED SESSIONS

Time	Speaker	Session	Grade Level and Type	Room
8:00 - 9:00	Eli Luberoff	Knocking Down Barriers with Technology	GI   INT	Heather
	Michael Fenton	Principles for Building and Using Effective Digital Tasks	8-12   PRS	Merrill Hall
	Marcy Cook	Problems Worth Puzzling for Primary Pupils	PK-2   PRS	PGMS Auditorium
9:30 - 10:30	Megan Taylor	Teaching as a Lab for Learning	8-12   INT	Heather
	Dan Meyer	Math Is Power Not Punishment	GI   PRS	Merrill Hall
	Marcy Cook	Engage All Students in a Thinking Mathematics Classroom	3-8   PRS	PGMS Auditorium
11:00 - 12:00	Patrick Callahan	Algebra: Why It Is Destroying America	GI   PRS	Heather
	Steven Leinwand	Rich Tasks + Just the Right Questions = Classroom Magic	GI   PRS	Merrill Hall
	Annie Fetter	Sense-Making: Is It at the Core of Your Classroom?	GI   PRS	PGMS Auditorium
1:30 - 3:00	Ivan Cheng	Guiding Students to Those Aha! Moments Without the Ughh!	6-8   INT	Heather
	Grace Kelemanik	Meet the Needs of All Student Thru Instructional Routines	6-8   INT	Merrill Hall
	Andrew Stadel	Boost Conceptual and Procedural Fluency with Rich Tasks	6-8   INT	PGMS Auditorium
3:30 - 5:00	Christine Roberts	Structuring Tasks to Engage Students in Productive Struggle	3-5   INT	Heather
	Max Ray-Riek	3 People + 10 Stools + 12 Beads + Thinking & Learning	GI   INT	Merrill Hall
	Linda Gojak	So You Think You Have (Math) Problems!	PK-5   INT	PGMS Auditorium

## CALL FOR SPEAKERS

### CMC-North 59<sup>th</sup> Annual Conference

Asilomar and Pacific Grove Middle School, Pacific Grove

### **Diamond Jubilee: Celebrating 60 Years of Community, Leadership and Innovation in Mathematics**

December 1-3, 2017

Proposals will be accepted online at [www.cmc-math.org/activities/north\\_speakers.html](http://www.cmc-math.org/activities/north_speakers.html) from January 30 to May 1, 2017. We welcome new and returning speakers to submit proposals. Speaking at a conference is a great way to share your ideas and expertise with your colleagues.

For further information, please contact: Ana England at [northprogram@cmc-math.org](mailto:northprogram@cmc-math.org).

## CMC STUDENT ACTIVITIES TRUST

### Tax Deductible Contribution

Remember your year-end tax deductible contribution to the CMC Student Activities Trust Fund. So far we've spent \$200,000 to support student activities throughout California since 1983. All contributions should be mailed to:

Chris Tsuji  
CMC Student Activities Trust Fund  
670 Choctaw Drive, San Jose, CA 95123

### Applications

Many of the past activities supported have been math fairs and various math contests, however funds are not limited to these two type of events. For information on how to apply for these funds to support student activities in mathematics, visit [www.cmc-math.org/awards](http://www.cmc-math.org/awards), or contact your local affiliate president or Natalie Mejia at the SATF Chair, at [nmejia62@yahoo.com](mailto:nmejia62@yahoo.com).

## CMC-NORTH OFFICERS

**President** .....Rebecca Lewis  
**Past-President** .....April Goodman-Orcutt  
**President Elect** .....Rita Nutsch  
**Vice President** .....Ana England  
**Treasurer** .....Brian Lim  
**Secretary** .....Alison Nash

## CONFERENCE VOLUNTEERS

### Program Chair

Ana England

### Program Committee

Stephanie Biagetti, Hope Bjerke  
Krista McAtee, Monica Rock  
J. Orellana, Johnnie Wilson

### Evaluations

Linda Flood, Rebecca Hubbell

### Registration

Julie Crozier

### Housing

John Martin, liaison

### Exhibits

Chris Tsuji and Mark Mosheim

### NCTM Sales

Mary Ann Sheridan

### NCTM Representative

Erik Moll

### Awards

FaraLee Wright

### Pre-Service Volunteer Coordinator

Sarah Ives

### Asilomar Presiders

Robert Preston

### Conference Signs

Julia Stephens

### Information Booth

Christine Robles

### Equipment

Chris Dell

### Newcomers' Orientation

Sherry Rodgers, Linda Shumate

### Program Logo and T-shirt Design

John Martin

### Conference Program

Connie Anderson

### Social Media Chair

Brandon Dorman

### Middle School Coordinator

Heather Roman

### Middle School Tech Coordinator

Grayson Fong

### Technical Support

Kate Reed, Jean Simutis

## CONFERENCE INFORMATION

### Sessions

You will find three session types: Presentations, Interactive and Make-It, Take-It sessions.

#### Presentations (PRS)

Will be speaker-focused, but you may expect discussion, explorations and/or some activity.

#### Interactive Sessions (INT)

Provide for discussion and exploration. Participants will be involved in activities and interaction with others.

#### Make-It, Take-It (MITI)

Make your own models for classroom projects and activities. Please join one of our scheduled sessions. Participation is limited to twenty-five. Advanced registration is not required.

### Session Capacity/Seating

We have made every attempt to provide adequate seating for participants at the conference. However, to ensure your safety and adhere to fire regulations, the number of participants allowed in each meeting room will be limited to the number of seats approved by the Fire Marshall. Anyone sitting on the floor or standing will be asked to leave the room. Please check the Program Matrix (pages 11-13) for the seating capacity of each room. All seats are available on a first-come, first-served basis.

### First Time at Asilomar?

Come to Triton, Friday between 5:30 and 7:00pm or Saturday between 7:30am and 5:30pm for a 20-minute orientation session on how to navigate your first conference at Asilomar. We will show you all you need to know.

### Exhibits

Some speakers have products as an integral part of their presentation. Also see the latest materials and textbooks from other companies.

Friday, PGMS, 6:00 - 7:30pm

Saturday, PGMS, 7:30am - 5:30pm

### Parking

Since parking space is very limited, on-grounds parking is reserved for registrants housed on grounds. Others must park outside the main entrance to Asilomar or at the Middle School.

### Disabled Services

Jitney service and white courtesy phones are available on Asilomar Grounds. Disabled access is available on the Asilomar grounds and at the Middle School.

### Bus Service

Bus service will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 4:30-9:30pm and on Saturday from 7:15am - 6:00pm.

### Electronic devices

Out of respect for presenters and other participants, please turn off electronic devices during sessions.

### Program Changes

Although this book contains the latest information available as of the printing deadline, some last-minute changes are inevitable. We apologize for any inconvenience that may result, and we appreciate your understanding.

### Refreshments

Coffee and tea are available during the conference at Surf and Sand, Merrill Hall, Evergreen and Acacia on Friday and Saturday. Water will be in all the rooms on the grounds.

### Lunch Options

There will be food available for purchase at the Middle School. From 8:00am till about 2:00pm, student organizations will be selling various snacks and refreshments. Coffee, sodas and water will be available, as well as sandwiches and pastries. Please support these local school groups.

### Meal Tickets

Participants staying on-grounds receive a meal ticket with their housing, covering Friday dinner through Sunday lunch. For participants staying off-grounds a limited number of meal tickets will be available for purchase at the Asilomar front desk.

### T-shirt and Sweatshirt Sales

T-shirts and sweatshirts displaying this year's Asilomar Mathematics Conference logo will be available for purchase in Surf and Sand on Friday and Pacific Grove Middle School Gym on Saturday. Don't miss your opportunity to bring home a memento of your conference participation.

### Walking

It is one mile from Asilomar to Pacific Grove Middle School. A map of this area of Pacific Grove is provided on page 47.

### Help Protect the Vegetation

Please stay on the paved paths that meander through the grounds or the boardwalks that take you on a delightful journey through the dunes. By keeping people off the vegetation, Asilomar is able to preserve the natural landscape for all to enjoy for many years to come. You might see some paths that look like walking trails, but if they are not paved, they are simple animal trails created by many hooves walking the same route through the grounds. Thank you very much for your cooperation.



Stay connected with CMC



www.facebook.com/CAMathCouncil

Hashtag **CMCMATH**

@CAMathCouncil



# CMC North Conference 2016 has gone mobile!

We have created a **conference app** that will allow you to use your smartphone or tablet onsite to easily:

Access session details – and create a personal schedule; rate and take notes on sessions; view speaker bios; see other attendees at the event who are using the app (and connect with them via email); access sponsor and exhibitor details; receive new alerts; view map of the exhibit hall layout; post tweets via Twitter – @CAMathCouncil #cmcmath; and visit the CMC – California Mathematics Council's Facebook page directly!

**Download the EduPlus app!  
Refer to easy to follow screenshots.**

CMC North Conference 2016 Going Mobile with EduPlus

# E+eduplus

Connect Conferences in Education

Go to App Store or Google Play Market and search "eduplus" or simply scan the QR Code:

Available on the App Store

ANDROID APP ON Google play

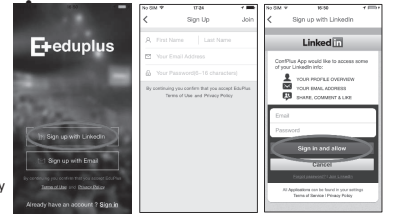
ConfPlus © 2016 | All Rights Reserved

Download the app now and plan your own personal schedule and set alerts prior to coming to the event.  
Download the 'EduPlus' App from [App Store](#) or [Android Market](#), or simply scan the QR code to the right.



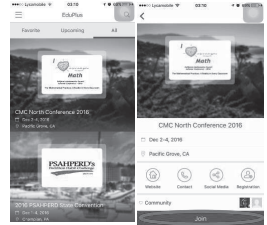
### LOGGING IN IS EASY

- Once you have loaded the app, you will be prompted to 'Sign in' or 'Sign up'. As a new user please select the 'Sign up' option.
- You can join the conference community either by entering your demographic details, or logging in using your LinkedIn profile.
- By logging in using your LinkedIn profile it means that other attendees who are using the app can connect with you via your LinkedIn profile, and your LinkedIn profile summary will be viewable by other attendees.



### ONCE YOU ARE LOGGED IN

- You will see a list of conferences on the home page of the EduPlus app.
- CMC North Conference 2016 should be near the top of the upcoming list. You can then enter to view the details and join.
- Whenever updates become available, you will be prompted automatically to update when you access the conference again.



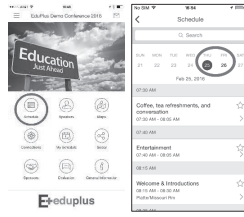
### YOUR PROFILE

You can enhance your profile on the app by going to the EduPlus app main menu and tapping on the top left corner for a menu to appear on the left side of the screen. Your picture with name, title and company can be seen on the top of the menu. Tap on 'Your profile picture' to edit your email address and demographic details. Make sure you select 'Done' once you have made changes.



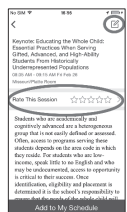
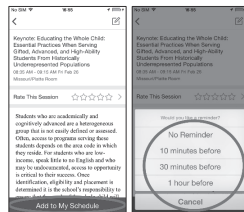
### VIEW THE PROGRAM

- Click on the 'Schedule' module.
- Scroll up and down the screen to view session titles for each day.
- At the top of the screen you'll see a calendar. Select the day of the program you want to view from the calendar.
- For more information on each session, click on the session you are interested in for a session summary and list of speakers.
- In each session you can take notes, rate the session, and add it to your personal schedule.



### CREATE A SCHEDULE

- Select a session you want to add to your profile.
- Click on the BLUE 'Add to schedule' button
- You can also set a phone reminder for the session here.



### TAKING NOTES

You can use the app to take notes by going into the session you are attending in the 'Schedule' or 'My Schedule' module, selecting the session, then click on the pencil icon on the top right of the screen. Keep a record of interesting points or areas you would like to follow up on then email your notes to yourself by selecting the 'Send to' button.

### RATE THIS SESSION

You will be able to rate the session out of five stars with comments. Simply select the session you want to rate from the 'Schedule' or 'My Schedule' modules, and click on button 'Rate This Session' then select how many stars you give the session and click 'Submit'.

### Social Media VIA THE APP

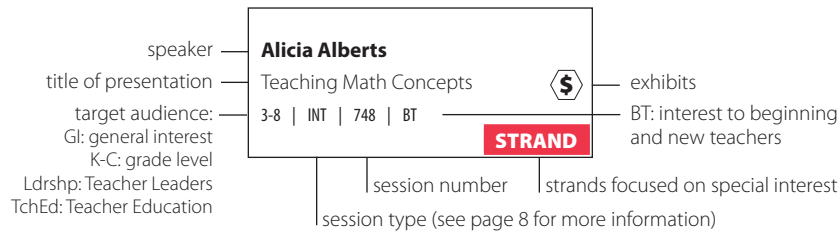
Select the 'Social' module on the homepage of the conference app and you can follow the @CAMathCouncil #cmcmath or visit the CMC - California Mathematics Council's Facebook page directly.



**~ Name badges ~**  
**Name badges must be worn at all times while attending the conference. Badges are required for entry into the sessions and the exhibit hall.**

## HOW TO READ THE MATRIX

The matrix also reflects site, room, day and time of session. Refer to the alpha section for more information about each session. Site map on back of program.



## SPECIAL INTEREST STRANDS

Special interest strands this year are **MITI** (Make-It, Take-It), **TODOS** (In collaboration with TODOS: Mathematics for All, an affiliate of NCTM, the sessions in this strand focus on issues related to equity and providing all students with high quality mathematics learning opportunities.), **CUE Rock Stars!** (Join the CUE Rock Star Math teachers for a great hands-on, make-and-take style of PD), **CAMTE** (California Association of Mathematics Teacher Educators), **GAMES** (Each hour during the day different elementary, middle, and high school teachers will share games they have been using with their students. There are games for practice, strategy games from the ComMuniCator, and hand games.), and **Technology**.

### REFRESHMENTS

Coffee and tea are available during the conference at Surf and Sand, Merrill Hall, Evergreen and Acacia on Friday and Saturday. Water will be in all the rooms on the grounds.

### BUS SERVICE

Bus service will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 4:30-9:30pm and on Saturday from 7:15am-6:00pm.



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## ASILOMAR CONFERENCE GROUNDS—SATURDAY SESSIONS

Facility		8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
<b>FIRESIDE</b>	<b>Oak Shelter</b> Seats 32	<b>Gail Burrill</b> Mathematical Practices for Calculus 8-12   INT   104   BT	<b>Gail Burrill</b> So You Have to Teach Statistics: Some Strategies to Help 6-8   INT   204   BT	<b>Ethan Weker</b> Get Your Students Talking: Introducing Debate to Math Class 8-12   PRS   304   BT	<b>Janice Carr</b> Real-World Math for Earth's Sake 6-8   INT   404   BT	<b>Christine Roberts</b> Structuring Tasks to Engage Students in Productive Struggle 3-5   INT   503   BT
	<b>Evergreen</b> Seats 32	<b>Eric Frandsen</b> Designing Experiences for Effective Student Communication Ldrshp   PRS   105	<b>Mardi Gale</b> Coaching/Being Coached for the SMPs: Essential Elements GI   PRS   205   BT	<b>Emma Druitt</b> Finally! Giving Students the Voice in Mathematics Classrooms Ldrshp   PRS   305	<b>Elizabeth Hull Barnes</b> What Do the Students Think Discourse is For? Ldrshp   INT   405   BT	<b>Dan Goldfield</b> The Math of Nature 8-12   INT   504   BT
<b>NORTH WOODS</b>	<b>Heather</b> Seats 60	<b>Eli Luberoff</b> Knocking Down Barriers with Technology GI   INT   103 <b>TECH</b>	<b>Megan Taylor</b> Teaching as a Lab for Learning 8-12   INT   203   BT	<b>Patrick Callahan</b> Algebra: Why It Is Destroying America? GI   PRS   303   BT	<b>Ivan Cheng</b> Guiding Students to Those Aha Moments Without the Ughh! 6-8   INT   403   BT	<b>Emma Trevino</b> Analysis and Reasoning GI   PRS   505
	<b>Scripps</b> Seats 33	<b>Lindsey Blass</b> Rock Star Blended Learning in Math 3-8   INT   106   BT <b>ROCK STAR!</b>	<b>Edward Campos</b> 360 Degree Math: Classroom rEVOLUTION GI   INT   206 <b>ROCK STAR!</b>	<b>Fawn Nguyen</b> Computational Thinking as a Problem-Solving Strategy 6-8   INT   306 <b>ROCK STAR!</b>	<b>Jeremiah Ruesch</b> Wonder Dots PK-5   INT   406 <b>ROCK STAR!</b>	<b>Lew Douglas</b> A Transformational Approach to Proof in High School Geometry 8-12   PRS   506 <b>ROCK STAR!</b>
	<b>Acacia</b> Seats 24	<b>Arjan Khalsa</b> Digital Tools + Three-Act Tasks: Marriages Made in the Cloud 3-5   INT   107   BT	<b>Chuck Biehl</b> Discrete Math Modeling: Learn and Live to Serve! 8-12   PRS   207   BT	<b>Gail Standiford</b> Transforming with Desmos 8-12   INT   307   BT <b>TECH</b>	<b>Tammy Schultz</b> Making Sense of Fractions 3-5   INT   407   BT	<b>Danielle Moore</b> Practices to Support Independent Problem Solving PK-5   INT   507   BT
	<b>Toyon</b> Seats 24	<b>Shalek Chappill-Nichols</b> Expressing Creativity Using Math PK-2   INT   108   BT	<b>Julie Yu</b> Geometry of Nature: Exploring Patterns, Shapes and Symmetry 8-12   INT   208   BT	<b>Janet Bales</b> Growth Mindset in a Blended Learning Environment 6-8   PRS   308   BT 	<b>Robyn Stone</b> Mathematize This! PK-2   INT   408   BT	<b>David Lau</b> Calculus Applied to Business, Economics, and Finance 8-12   PRS   508   BT
	<b>Marlin</b> Seats 34	<b>Megan Sulsberger</b> Pre-Service Teachers: Math Identity Matters Tchr Ed   PRS   109 <b>CAMTE</b>	<b>Rajee Amarasinghe</b> Essential Math Concepts for Preservice Teachers PreK-6 Tchr Ed   PRS   209 <b>CAMTE</b>	<b>Julie McNamara</b> For Your Eyes Only: Video as a Tool for Personal Reflection Tchr Ed   PRS   309 <b>CAMTE</b>	<b>Carol Fry Bohlin</b> Math Courses and Programs for Prospective Gr. 6-9 Teachers Tchr Ed   PRS   409 <b>CAMTE</b>	<b>Brandon Dorman</b> Managing Technology for MP3 GI   MITI   509   BT <b>CAMTE</b>
<b>VIEW CRESCENT</b>	<b>Curlwe</b> Seats 34	<b>Elizabeth DeCarli</b> Strategic Use of Technology Tools in High School Statistics 8-12   PRS   110   BT	<b>Modesto Tamez</b> Mathematics of Sound and Hearing 3-8   MITI   210   BT	<b>Mary Elizabeth Matthews</b> Developing Teacher Argumentation Using Technology Tchr Ed   PRS   310 <b>TECH</b>	<b>Daren Starnes</b> Statistics for Common Core and SAT: Understanding Inference 8-12   INT   410   BT	<b>Katie Salguero</b> Effective Teaching Practices that Support Students with SMPs 3-8   INT   510   BT
<b>SEA GALAXY</b>	<b>Triton</b> Seats 24	<b>Sherry Rodgers</b> Newcomers' Session GI   PRS   115   BT	<b>Philip Magner</b> Finding PI While Regressing 8-12   INT   215 	<b>Stephanie Biagetti</b> Using Math Conversations to Target the ELD Standards PK-5   INT   315   BT	<b>Jon Southam</b> Making Sense of Statistics 8-12   INT   415   BT	<b>Jeanne Lazzarini</b> Let's Link Mathematical Practices with Financial Literacy! 6-8   INT   515   BT
	<b>Nautilus E</b> Seats 24	<b>Tanisha Fitzgerald</b> Logarithmic Earthquake Project: Algebra 2 Project with Real 8-12   INT   116   BT	<b>Beverly Heigre</b> The Architecture of Tom Jefferson: Integrating Math, Science 8-12   PRS   216   BT	<b>Tony Lecheler</b> Geometry City Project: STEAM Geometry Project with Real App 8-12   PRS   316   BT	<b>Kyle Myers</b> Robot! Do You? PK-5   INT   416   BT <b>TECH</b>	<b>Lorie Reichel-Howe</b> How Does a Math Teacher Handle That? Ldrshp   INT   516   BT
	<b>Nautilus W</b> Seats 24	<b>Mary Trinkle</b> Inquiry-Based, Student-Centered Mathematics: How to Do It? PK-5   INT   117   BT	<b>Dennis Mulhearn</b> Use Cubes as a Setting for Your Problem Solving 3-8   INT   217   BT	<b>Danielle Garrison</b> Inquiry, Investigations and Explorations 3-8   INT   317   BT	<b>Peg Cagle</b> Rich Tasks = Landmarks for Student Navigation of Math Learning 8-12   INT   417   BT	<b>Stephen Weimar</b> How Does One Get Better at Mathematical Thinking? 6-8   INT   517   BT
<b>MERRILL H.</b>	<b>Merrill Hall</b> Seats 500	<b>Michael Fenton</b> Principles for Building and Using Effective Digital Tasks 8-12   PRS   118   BT <b>TECH</b>	<b>Dan Meyer</b> Math is Power Not Punishment GI   PRS   218   BT	<b>Steven Leinwand</b> Rich Tasks + Just the Right Questions = Classroom Magic GI   PRS   318   BT	<b>Grace Kelemanik</b> Meet the Needs of All Students Thru Instructional Routines 6-8   INT   418	<b>Max Ray-Riek</b> 3 People + 10 Stools + 12 Beads = Thinking and Learning GI   INT   518   BT

**PACIFIC GROVE MIDDLE SCHOOL—SATURDAY SESSIONS**

Room	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
Room 1 Seats 30	<b>Howard Alcosser</b> I Love My AP Calculus Class! 8-12   PRS   131	<b>Shelley Krieger</b> Proportional Reasoning: Three Strategies to Spark Engagement 6-8   INT   231   BT	<b>Cory Henwood</b> Empowering Collaboration in 3 Acts GI   INT   331   BT	<b>Tracy Zager</b> Gut Instincts: Developing All Students' Math Intuitions GI   INT   431   BT	<b>Nicholas Restivo</b> Understand the Mysteries of Geometry by Constructing a Box 6-8   INT   531   BT
Room 4 Seats 30	<b>Laura Manion</b> Equity and Social Justice Projects and Middle School Math 6-8   PRS   133   BT	<b>Elizabeth Gamino</b> Productive Struggle in Proportional Reasoning PK-2   INT   233 <b>CANCELLED</b>	<b>Eric Muller</b> Feeling Pressured: The Amazing Math of Air Pressure GI   INT   333   BT	<b>Chris Paulus</b> Mathematics Practices? Interactive Mathematics Program 8-12   INT   433	<b>Jody Silver</b> Children's Lit Is Not Just for the Primary Crowd 3-5   MITI   533   BT
Room 5 Seats 30	<b>Mani Allen</b> Students with Possibilities Can Show Their Thinking PK-5   PRS   134   BT	<b>Patty Morrison</b> Integrating Math and Literature in the PK-1 Classroom PK-2   PRS   234   BT	<b>Judy Kysh</b> Teach Problem Solving Strategies So All Succeed in Algebra 8-12   PRS   334   BT	<b>Julie McNamara</b> Beyond Invert and Multiply: Understanding Fraction Computation 3-5   INT   434   BT	<b>Avery Pickford</b> Cafe Patternea: A Project-Based Introduction to Algebra 8-12   INT   534
Room 6 Seats 30	<b>Linda Shumate</b> Newcomers' Session GI   W   135   BT	<b>Henri Picciotto</b> Computing Transformations Using Complex Numbers and Matrices 8-12   PRS   235   BT	<b>Matt Wallace</b> Using Tests to Promote a Growth Mindset GI   PRS   335   BT	<b>Masha Albrecht</b> Summative Assessment Without Testing: Successful Examples 8-12   INT   435   BT	<b>Patricia Dickenson</b> Exploring the Mathematics Practice Standards with Web-Tools GI   INT   535   BT
Room 7 Seats 30	<b>Christi Wilkins</b> From Virtual to Visual: Weaving Art into Applied Mathematics 3-5   INT   136   BT	<b>Monica Rock</b> Modular Origami 3-8   MITI   236   BT	<b>Michael Jarry-Shore</b> An Exploration of the Cartesian Plane Through Beading 3-8   MITI   336   BT	<b>Donna Goldenstein</b> Enriching the Geometry/ Measurement CCMS Content Through Art 3-8   MITI   436   BT	<b>Marin Rodriguez</b> Building Number Sense with Math Games 6-8   MITI   536   BT
Room 13 Seats 30	<b>Cherie Ichinose</b> Survey Said! Playing Family Feud to Spark Engagement 8-12   INT   140   BT	<b>Karl Schaffer</b> Rhythm and Dance Math GI   INT   240   BT	<b>Chris Dell</b> STEM in the Math Classroom 8-12   INT   340   BT	<b>Lara Kassab</b> Justifying Reasoning: What Are Our Students Missing? 8-12   INT   440   BT	<b>Tim Erickson</b> Connect Functions and Geometry with Data and Modeling 8-12   INT   540
Room 22 Seats 30	<b>Elizabeth Schleth</b> Come Play Some High School Classroom Games With Us! 8-12   INT   142   BT	<b>Juana De Anda</b> Come Play Some (grade level) Classroom Games with Us! PK-2   W   242   BT	<b>Christine Wedel</b> Come Play Some Games With Us! PK-5   INT   342   BT	<b>Alma Conde</b> Come Play Some Strategy Games With Us! 3-8   INT   442   BT	<b>Lynn Duri</b> Come Play Some Math Games With Us! PK-5   INT   542   BT
Room 23 Seats 30	<b>Jennifer Hein deMause</b> After the Bell: The Math Practices in After-School Programs Ldrshp   PRS   158	<b>Christine Newell</b> This Math Was Made for Talking: Targeting Math Discussions PK-5   PRS   258   BT	<b>Keith Smith</b> Fraction Operation Resources in the Digital Library 3-5   INT   358   BT	<b>Mike Blaschke</b> Screencasting and Story Boarding for Argument Construction 6-8   INT   458   BT	<b>Ann Carlyle</b> Ten Frames, Number Lines and Rekenreks PK-2   INT   558   BT
Room 24 Seats 30	<b>Tierra Fender</b> Supporting Learning Communities 6-8   PRS   143   BT	<b>Greisy Winicki Landman</b> At the Intersection of Not Very Traveled Roads 8-12   INT   243   BT	<b>Rick Barlow</b> Building Understanding Through Discourse 8-12   INT   343   BT	<b>Jennifer Hagman</b> The Power of Feedback 3-8   INT   443   BT	<b>Deborah Tucker</b> Connect Math With Next Generation Science Standards (NGSS) 3-5   INT   543   BT
Room 25 Seats 30	<b>Stuart Moskowitz</b> 64=65 and Fibonacci, as Studied by Lewis Carroll 8-12   INT   144   BT	<b>Elizabeth Baker</b> Group Work Strategies 3-8   INT   244	<b>Christopher Brownell</b> Sparking Engagement in Multiplicative Thinking Via Doubling 3-8   PRS   344   BT	<b>James Short</b> Intuition to Formal Math: Engaging Contexts Math Practices 8-12   INT   444   BT	<b>Marc Roth</b> Completing the Square Backwards 8-12   MITI   544   BT
Room 26 Seats 30	<b>Noirin Foy</b> Co-Teaching: Mathematical Practices For All Students 6-8   PRS   145   BT	<b>Ho Nguyen</b> Detracking: The Ongoing Work to Support Heterogeneous Classes Ldrshp   PRS   245	<b>Brian Burns</b> Picking Out the Mathematical Practices GI   PRS   345   BT	<b>Lori Lambertson</b> Exploring Math and Science w/Exploratorium "Snack" Activities 8-12   INT   445   BT	<b>Steve Pauls</b> Using Graphical Analysis to Make Sense of Real Data 6-8   INT   545   BT
Room 27 Seats 30	<b>Breedeem Pickford-Murray</b> Beyond Sudoku: Using Logic Puzzles to Develop Math Reasoning 8-12   INT   146	<b>Sean Nank</b> Speed Kills...Student Achievement: What's the Alternative? PK-5   INT   246   BT	<b>James Schierer</b> Pushing Up Polynomials 8-12   INT   346   BT		<b>Tom Beatini</b> Making Connections and Building Bridges with Algebra Tiles 6-8   INT   546   BT

## PACIFIC GROVE MIDDLE SCHOOL—SATURDAY SESSIONS

Room	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
Room 28 Seats 30	<b>Elmano Costa</b> English Learners and Math Practices: Challenging But Possible! GI   INT   147   BT <b>TODOS</b>	<b>Nora Ramirez</b> Using Problem Solving to Engage ELs in the Math Practices 3-8   W   247   BT <b>TODOS</b>	<b>Angela Thompson</b> All Students Learn through Reflective Writing...On Exams 8-12   PRS   347   BT <b>TODOS</b>	<b>Jeanne Ramos</b> Developing Algebraic Thinking and Academic Language 6-8   INT   447   BT <b>TODOS</b>	<b>Joanne Rossi Becker</b> SMPs 7 and 8: Seeing Structure and Generalizing in Geometry 6-8   INT   547   BT
Room 29 Seats 30	<b>Noam Szoke</b> Access and Equity in Elementary Mathematics PK-5   INT   148   BT	<b>Anna Weltman</b> Inspire Inquiry, Bridge Math and Art: Seeing Stars in GCD 3-8   MITI   248   BT	<b>Jody Anderson</b> Spring into Common Core Concept Lessons Using Math and Reading PK-2   PRS   348   BT	<b>Cathy Humphreys</b> Cultivating Agency and Authority Through Number Talks 8-12   INT   448	<b>Celine Liu</b> Math AND Science, Not Math OR Science! 3-5   INT   548   BT
Room 32 Seats 30	<b>Brian Waldman</b> Promoting Discourse for ELLs in Heterogeneous Small Groups 6-8   PRS   150   BT	<b>Kyndall Brown</b> Multiple Representations to Support Modeling 6-8   INT   250   BT	<b>Kimberly Knight</b> Integrated STEM Lessons as Model Eliciting Activities 3-8   INT   350   BT	<b>Karen Arth</b> Understanding the Tangent Ratio and its Connection to Slope 8-12   INT   450   BT <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">\$</span>	<b>Karen Arth</b> Mathematical Fun with Bubbles, Wind-up Trains and Blocks 6-8   INT   550   BT <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">\$</span>
Room 33 Seats 30	<b>Jamie Garner</b> Number Talks: Making the Math Visible with Models PK-5   INT   151   BT	<b>Kathy Morris</b> Fractions: Improving Understanding by Seeing Them as Numbers 3-5   INT   251   BT	<b>Matthew Lane</b> The Mathematics of Voting GI   INT   351   BT	<b>Sara Moore</b> Operations to Algorithms: Building from Repeated Reasoning 3-8   INT   451   BT	<b>Brent Jackson</b> Make the Way: Student Agency, Authority and Identity Tchr Ed   PRS   551
Room 36 Seats 30	<b>David Pugalee</b> Writing and Thinking in Math Class to Support Mathematical Practices 3-8   PRS   154   BT	<b>Andy Kotko</b> Math Talks and Other Routines that Foster Number Sense PK-2   INT   254   BT	<b>Jesus Diaz Bonilla</b> Taking the Lesson Out of the Classroom 8-12   PRS   354   BT	<b>Miriam Sommer</b> Balancing Assessment for Understanding, Knowledge and Skills GI   INT   454   BT	<b>Victor Selby</b> Integrating Six Great Scientific Models into Common Core 8-12   PRS   554   BT
Room 37 Seats 30	<b>Bruce Grip</b> Mathematical Modeling in the Classroom and Life 8-12   PRS   155   BT	<b>Diane Resek</b> Measuring in the Round: A Concrete Introduction to Radians 8-12   INT   255   BT	<b>Kelly Ann Sassone</b> Building Mathematical Literacy with Subitizing Games PK-2   MITI   355   BT	<b>Emiliano Gomez</b> Transformational Geometry and Dynamic Software 8-12   PRS   455   BT <b>TECH</b>	<b>Angela Torres</b> Launching Math Tasks to Engage All Students GI   INT   555   BT
Room 38 Seats 30	<b>Jessica Balli</b> Smarter Balanced: Lessons from Writing Performance Tasks GI   PRS   156   BT	<b>Krista McAtee</b> Teachers Multiply Our Power to Maximum Learning! GI   INT   256	<b>Laura LaBelle</b> Building Measurement Lessons While Moving Full STEAM Ahead 3-8   INT   356   BT	<b>Susie Hakansson</b> Fractions On the Number Line for All Students 3-5   INT   456   BT	<b>Robert Preston</b> Division: Let's Help Students Make Sense of It 3-5   INT   556   BT
Room 39 Seats 30	<b>Paul Giganti</b> Discovering Area Formulas 3-8   INT   157   BT	<b>Chris Anspach</b> Developing Problem Solving and Conceptual Understanding 8-12   INT   257   BT	<b>Federico Chialvo</b> Young Mathematicians and the Thrill of Mathematical Discovery PK-5   INT   357   BT	<b>Vicki Vierra</b> Fluency Founded on Number Sense 3-8   INT   457   BT	<b>Rob Nickerson</b> Empowering Mathematical Thinking PK-5   INT   557   BT <b>TODOS</b>
Auditorium 700	<b>Marcy Cook</b> Problems Worth Puzzling for Primary Pupils PK-2   PRS   153   BT	<b>Marcy Cook</b> Engage All Students in a Thinking Mathematics Classroom 3-8   PRS   253   BT	<b>Annie Fetter</b> Sense-Making: Is It at the Core of Your Classroom? GI   PRS   353   BT	<b>Andrew Stadel</b> Boost Conceptual and Procedural Fluency with Rich Tasks 6-8   INT   453   BT	<b>Linda Gojak</b> So You Think You Have (Math) Problems! PK-5   INT   553   BT
Library Seats 49	<b>Cathy Carroll</b> Fluency, Discourse, and Standards for Mathematical Practice 3-5   INT   160   BT	<b>Scott Farrand</b> Setting Up Surprises in Calculus 8-12   PRS   260   BT	<b>Brad Fulton</b> S.T.E.M. on a Shoestring 3-8   PRS   360   BT	<b>Deepti Khare</b> Text Access Through Active Reading Strategies 8-12   INT   460	<b>Chris Shore</b> The Clothesline: Algebra, Geometry, Statistics on the Line 8-12   INT   560   BT

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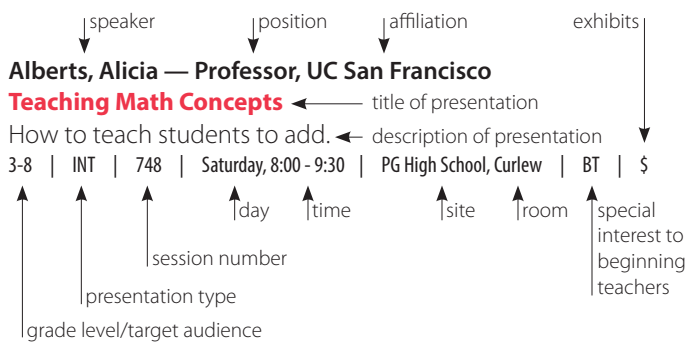
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## HOW TO READ SPEAKER LIST & SPEAKER EVALUATION



### Albrecht, Masha — Berkeley HS

#### Summative Assessment Without Testing: Successful Examples

The presenter shares group tasks and projects used with her students in Math 1, Geometry, Pre-Calculus and Calculus classes. Each assessment covers the important content of the semester, using deep and challenging problems not found on a narrow individual test. Examples include Roman archway building and design, fractal analysis, maximizing the volume of a cone, finding the rate of change of a shadow, and analysis of experimental data. Participants will receive classroom ready handouts.

8-12 | INT | 435 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 6 | BT

### Alcosser, Howard — AP Calculus Consultant

#### I Love My AP Calculus Class!

Participants get motivational strategies for success in AP Calculus and in every classroom, review tips and tricks on building a successful AP Calculus program, explore ways to make their program and class exciting, and learn strategies to help ensure a deeper student engagement and success on the AP Calculus exam.

8-12 | PRS | 131 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 1

### Allen, Mani — New Haven USD

#### Students with Possibilities Can Show Their Thinking

Participants will learn what to look or listen for from non-verbal students when communicating their thinking and understanding. Presenters will share several tools and methods that have been used successfully with children on the autism spectrum. Presenters will include other learning modalities besides verbal for how their students may receive math instruction.

PK-5 | PRS | 134 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 5 | BT

Co-presenter: Jody Silver — Math Coach, New Haven USD

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### Amarasinghe, Rajee — Professor/Chair, California State Univ, Fresno

#### Essential Math Concepts for Preservice Teachers PreK-6

The CTC will eliminate the CSET exam for pre-service elementary teachers. Our courses will have major responsibility to prepare future teachers to teach the CaCCSS, including the mathematical practices. How should these courses prepare teachers to have a deeper understanding of mathematics and implement mathematical practices? Speakers will share ideas and spark discussion.

Tchr Ed | PRS | 209 | Saturday, 9:30 - 10:30 | Asilomar | Marlin

Co-presenter: Joanne Becker — Professor, San Jose State Univ

### Anderson, Jody — Sargeant ES

#### Spring into Common Core Concept Lessons Using Math and Reading

What child doesn't love to be read to and what teacher doesn't love to read to children? If this describes you – see how reading Deck the Walls, The Relatives Came, and The Tortoise and the Hare (plus many more titles) can lead into your next concept lesson and ignite the love of literature and reading in your students. See how to use interactive writing to write math equations and story problems using the Language of Mathematics.

PK-2 | PRS | 348 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 29 | BT

### Anspach, Chris — Sonoma Valley HS

#### Developing Problem Solving and Conceptual Understanding

Each student comes to us with differing abilities concerning their skills, problem solving abilities, and conceptual understandings. How can we best utilize the MP standards to help each student achieve their maximum potential? To answer this question, I have changed my grading system from one based on selection to one based on development. This session will show how I use designed problem sets, quizzes, problems plus, and exams to assess my students based on development and not on selection.

8-12 | INT | 257 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 39 | BT

### Arth, Karen — CPM Educational Program

#### Mathematical Fun with Bubbles, Wind-up Trains and Blocks

Participate in Middle School hands-on activities that students will enjoy and remember. This includes investigating a logic problem by making conjectures, doing an experiment and then being surprised by the results; using a wind-up train to explore the proportional relationship,  $d=rt$ ; blowing bubbles to determine the relationship between a circle's circumference and its diameter; and using blocks to understand volume and nets for surface area.

6-8 | INT | 550 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 32 | BT

#### Understanding the Tangent Ratio and its Connection to Slope

Participants will investigate the relationship between the slope of a line and the slope angle. Connections will be made between specific slope ratios and their related angles to find missing sides or angles of right triangles with  $11^\circ$ ,  $22^\circ$ ,  $18^\circ$ , or  $45^\circ$  angles. Once the conceptual geometric relationship is established, a calculator will be used to find missing measurements of other right triangles, solve real world problems and extend to the sine and cosine ratios.

8-12 | INT | 450 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 32 | BT



**Baker, Elizabeth — Eureka City Schools**

**Group Work Strategies**

Anyone can put four students in a group, but how do we get them to stay on task? Come and experience a structured group work lesson and learn a 7 step process to develop high order thinking, productive team work and student accountability.

3-8 | INT | 254 | Saturday, 9:30 - 10:30 | PG Middle School | Room 25

**Bales, Janet — Regional Director of Math, Scholastic.com**

**Growth Mindset in a Blended Learning Environment**

Rigorous standards require rigorous effort and perseverance. Students persevere when they care about the result and believe they can succeed. Learn how to establish the beliefs of an academic mindset, fuel grit and instill resilience. When coupled with math specific knowledge, skills, and strategies, these beliefs are the intervention that can lead to academic success!

6-8 | PRS | 308 | Saturday, 11:00 - 12:00 | Asilomar | Toyon | BT

**Balli, Jessica — Consultant, Callahan Consulting**

**Smarter Balanced: Lessons from Writing Performance Tasks**

As a classroom teacher, nothing informed my assessment writing more than developing items for Smarter Balanced. Come hear about the lessons I learned regarding rigor, expectations, and instructional implications. Whether you're a classroom teacher or a supporter of teachers, you'll be able to help students better understand Performance Tasks!

GI | PRS | 156 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 38 | BT

*Co-presenter: Solana Lee — Callahan Consulting*

**Barlow, Rick — Fremont HS**

**Building Understanding Through Discourse**

Do the same students raise their hand when you ask a question? After a math task, have you expected a class discussion to follow, yet faced a room of silent students? Do your students know the answer, but can't construct a viable argument? We will share participation structures that address these situations through student discourse. Using these participation structures as a scaffold, teachers can support equitable participation and give students a space to talk about content with precision.

8-12 | INT | 343 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 24 | BT

*Co-presenter: Madison Miller — Math Teacher*

**Beatini, Tom — Consultant, Union City Public Schools**

**Making Connections and Building Bridges with Algebra Tiles**

A visual and kinesthetic approach to learning algebraic concepts allows students to construct their own learning and develop confidence in their abilities. Algebra Tiles can help them create their own conceptual understanding and procedural knowledge by connecting concrete and representational models to abstract algebraic concepts. Hands-on lessons and pedagogical suggestions that enable students to cross the bridge from arithmetic thinking to algebraic thinking will be shared.

6-8 | INT | 546 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 27 | BT

**Biagetti, Stephanie — Department Chair, Sacramento State Univ**  
**Using Math Conversations to Target the ELD Standards**

In this interactive presentation, we will discuss math conversations in a third grade classroom to explore how to target various aspects of the ELD standards. Ideas will be applicable across all elementary grade levels. We will discuss critical ELD principles, such as Interacting in Meaningful Ways, and show how students at differing levels along the ELD continuum can productively participate in math conversations to both enhance language skills and deepen content understanding.

PK-5 | INT | 315 | Saturday, 11:00 - 12:00 | Asilomar | Triton | BT

**Biehl, Chuck — Secondary Math Specialist**

**Discrete Math Modeling: Learn and Live to Serve!**

Modeling can be scary. Rich problems are rare. Here are some ideas for very real problems and projects from discrete math. Most topics can be easily self-taught, some of the problems are scary-good, and they even meet CCSSM-C! A great field leveler. Every single MP is strongly evidenced by virtually every problem, ranging from driving efficiently to fighting in the Middle East. This is a brand new presentation, recently debuted at Rutgers University.

8-12 | PRS | 207 | Saturday, 9:30 - 10:30 | Asilomar | Acacia | BT

**Blaschke, Mike — Paradise Charter MS**

**Screencasting and Story Boarding for Argument Construction**

Constructing viable arguments is an essential mathematical practice, but many of our students struggle with finding main ideas, attending to precision in language, and sequencing argument development. In this session, we will work through a lesson on solving equations with algebra tiles using story boarding and screencasting to develop student justification. It is recommended that teachers come with their own device with a screencasting application, such as Explain Everything or Lensoo.

6-8 | INT | 458 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 23 | BT

*Co-presenter: M.E. Matthews — Assist. Prof. of Mathematics, CA State Univ, Chico*

**Blass, Lindsey — Math/Technology Integration Coach**

**Rock Star Blended Learning in Math**

Use blended learning as an innovative approach to personalize student learning through mixing live instruction with digital delivery of content. This session will focus on how to align curriculum with digital tools for lesson delivery, targeted skill practice and assessment. Experience how tools like Blendspace, EdPuzzle, Quizziz, Google Forms and more can impact engagement and performance in your math classroom.

3-8 | INT | 106 | Saturday, 8:00 - 9:00 | Asilomar | Scripps Conference | BT

**Brown, Kyndall — Executive Director,**

**California Mathematics Project**

**Multiple Representations to Support Modeling**

This workshop uses an open-ended exploration, The Birthday Cake Problem, to show the connections between multiple representations and Modeling with Mathematics.

6-8 | INT | 250 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 32 | BT

**Brownell, Christopher — Professor/Researcher, Fresno Pacific Univ**

**Sparking Engagement in Multiplicative Thinking Via Doubling**

An early, natural instance of multiplicative reasoning children use is that of doubling. This just so happens to be related to ancient humanity's earliest methods of multiplication. In this interactive session participants will engage this natural propensity and connect the ancient with the contemporary through the use of a "magic trick" and other interest sparking experiences. A focus on the concept of multiplication as a way to "build-up" quantities will be taken.

3-8 | PRS | 344 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 25 | BT

**Burns, Brian**

**Picking Out the Mathematical Practices**

What do the Mathematical Practices "look" like? How will you know if your students and teachers are practicing them? What is the correlation between the Mathematical Practices and the content standards? After this engaging session, participants will have these questions answered, know how to pick out what practices their students and teachers are using, and why this is important to student learning and achievement.

GI | PRS | 345 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 26 | BT

**Burrill, Gail — Academic Specialist, Michigan State Univ**

**Mathematical Practices for Calculus**

The new calculus framework describes Mathematical Practices for AP Calculus. Why are these important, what do they look like in classrooms, and how do they align with the CCSSM mathematical practices and to the effective teaching practices in NCTM's Principles to Action? Participants will also consider what might be done prior to calculus to ensure that students come prepared.

8-12 | INT | 104 | Saturday, 8:00 - 9:00 | Asilomar | Oak Shelter | BT

**So You Have to Teach Statistics: Some Strategies to Help**

Statistics is about making sense of numbers and telling a story about those numbers in a context. Simple ideas such as mean and deviation can be tough to understand, but hands-on activities and interactive technology can ground them and make them sense making for students. Participants will consider why these fundamental statistical concepts are important in telling the story and how the ideas develop across the grades.

6-8 | INT | 204 | Saturday, 9:30 - 10:30 | Asilomar | Oak Shelter | BT

**Cagle, Peg — Reseda HS**

**Rich Tasks = Landmarks for Student Navigation of Math Learning**

Explore how to implement rich tasks with the specific goal of maximizing their value as reference points for students to employ both in making sense of the topic at hand and in building connections to the broader mathematical landscape. Examine how creation and curation of public records of student thinking on tasks supports students in orienting their learning, accessing prior knowledge and charting pathways between prior and new understandings. Tasks from Algebra I and Geometry will be used.

8-12 | INT | 417 | Saturday, 1:30 - 3:00 | Asilomar | Nautilus West | BT

**Callahan, Patrick — Consultant, Callahan Consulting**

**Algebra: Why It Is Destroying America?**

Students aren't failing Algebra. Algebra is failing students! We will discuss how the typical algebra courses are harming not just individual students, but society and the economy as well. We'll share data and discuss solutions.

GI | PRS | 303 | Saturday, 11:00 - 12:00 | Asilomar | Heather | BT

**Campos, Edward**

**360 Degree Math: Classroom rEVOLUTION**

Hack your math classroom with some simple classroom design upgrades to drastically improve the learning environment. Use whiteboard walls and desks, chromecast, airserver, and airplay to check for understanding faster, easier and make students' thinking visible throughout the physical and digital space. Experience 360 Degree Math simulated and see how you can decrease the math anxiety, ramp up the fun with music cues, and keep your students solving problems and persevering all day long.

GI | INT | 206 | Saturday, 9:30 - 10:30 | Asilomar | Scripps Conference

**Carlyle, Ann — Instructor/Supervisor, UCSB**

**Ten Frames, Number Lines and Rekenreks**

Numbers are more than symbols. When young students begin to see numerical relationships, then they can use this information to make sense of the quantity the numerals represent. In this K-2 session participants learn about readily available and inexpensive tools that help build young children's number sense. We will explore practical ideas for using tools such as ten frames, rekenreks, number paths and number lines to build mathematical skills and understandings.

PK-2 | INT | 558 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 23 | BT

**Carr, Janice — Professor Emerita, Foothill College**

**Real-World Math for Earth's Sake**

In this hands-on workshop participants will participate in innovative activities that illustrate the math behind real-world ecology concepts such as human population growth and natural resource use. The presented activities build students' understanding and skills in algebraic patterns and functions, decimals, fractions and ratios, linear measurement, as well as number operations and problem solving. Participants receive lesson plans on CD-ROM, all matched to state standards.

6-8 | INT | 404 | Saturday, 1:30 - 3:00 | Asilomar | Oak Shelter | BT

**Carroll, Cathy — Senior Research Associate, WestEd**

**Fluency, Discourse, and Standards for Mathematical Practice**

Fluency doesn't just happen! Let's consider together how the Standards for Mathematical Practice can enhance mathematical discourse in classroom learning activities and support students' development of mathematical fluency. Participants will consider what discourse looks like in the mathematics classroom, with particular attention to how purposeful questioning and the use of multiple representations support discourse and productive struggle.

3-5 | INT | 160 | Saturday, 8:00 - 9:00 | PG Middle School | Library | BT



**Chappill-Nichols, Shalek — Master Teacher,  
Educational R & D, San Jose**

### **Expressing Creativity Using Math**

In this workshop we will use different types of art techniques to challenge young learners to step out of the box and explore math and inspire creativity. We will create lessons around different hands-on activities for young learners that provide them with quality STEM learning experiences.

PK-2 | INT | 108 | Saturday, 8:00 - 9:00 | Asilomar | Toyon | BT

**Cheng, Ivan — Professor, California State Univ, Northridge**  
**Guiding Students to Those Aha Moments Without the Ughh!**

It's not funny giving away the punch line of a joke before telling the joke. The same goes for teaching math. Come learn how to help students discover the "punch line" of a lesson through guided discovery activities. As always, you will get ready-to-use activities, as well as tips for making your own.

6-8 | INT | 403 | Saturday, 1:30 - 3:00 | Asilomar | Heather | BT

Co-presenter: *Rebecca Pariso — Blackstock Jr High*

**Chialvo, Federico — Director of Mathematics, Synapse School**  
**Young Mathematicians and the Thrill of Mathematical Discovery**

What kinds of mathematical contexts can provide elementary school students the thrill of mathematical discovery, and how can this fit into our curriculum? We will explore a few "low floor, high ceiling" mathematical investigations that will get your students noticing patterns and wondering why. We will discuss ways to facilitate these kinds of math tasks and discussions with young students, and how these rich experiences can foster the mathematical practices as well as improve core skills.

PK-5 | INT | 357 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 39 | BT

**Conde, Alma — Lincoln ES**

### **Come Play Some Strategy Games With Us!**

Our students develop fluency, learn strategies and concepts when playing games that use mathematics. You will play our favorite games for grades 3-8. We will share our students' mathematical thinking that is developed and also share how our students read directions, teach games to others, and shift their thinking about what mathematics is. We will share how and when we use games in our classrooms and with families. You might also enjoy the ComMuniCator special edition on games!

3-8 | INT | 442 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 22 | BT

Co-presenter: *Carol Wegner — Teacher*

**Cook, Marcy — Math Consultant**

### **Engage All Students in a Thinking Mathematics Classroom**

Create a classroom where strategic thinking and reasoning are constants. Provide quality starters and meaningful independent task time activities involving all in problem solving, communicating and justifying thinking. Focus on mathematics as a language where students have an opportunity to express their thoughts and defend their thinking. Provide quality problems with more than one answer or more than one way to obtain the answer. Embrace purposeful struggle demanding perseverance.

3-8 | PRS | 253 | Saturday, 9:30 - 10:30 | PG Middle School | Auditorium | BT

### **Problems Worth Puzzling for Primary Pupils**

Align your thinking with good mathematical practices by providing quality problems to all students. Embrace making sense of numbers, composing/decomposing numbers, and thinking with problems requiring reasoning and persevering. Provide puzzle-like problems establishing a climate of challenge and feelings of success. Use a variety of materials such as "critters", tiles, blocks, mobiles and dominoes to involve all.

PK-2 | PRS | 153 | Saturday, 8:00 - 9:00 | PG Middle School | Auditorium | BT

**Costa, Elmano — Professor, California State Univ, Stanislaus**  
**English Learners and Math Practices: Challenging But Possible!**

Can teachers have the same rigor in math lessons for EL students? Can they emphasize the same mathematical standards of practice with their ELs? Yes they can! This workshop will show you how to plan and deliver lessons to make the standards of mathematical practice a reality in every classroom. The session begins by presenting features of effective lesson design for ELs and then models how to implement them in a math lesson taught in Portuguese.

GI | INT | 147 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 28 | BT

**De Anda, Juana — Flowery School**

### **Come Play Some (grade level) Classroom Games with Us!**

Students develop fluency, learn strategies and concepts when playing games that use mathematics. We'll play our favorite games for grades 1-3 (Kaboom, Math Facts Baseball and War with Dominoes.) We will share our student's mathematical thinking that is developed and also how they learn to read directions, teach games to others, and shift their thinking about what mathematics is. We will share how and when we use games in our classrooms and with families.

PK-2 | W | 242 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 22 | BT

Co-presenter: *Kristina Reguero-Garrison — Teacher, Sonoma Valley USD*

## **SESSION CAPACITY/SEATING**

We have made every attempt to provide adequate seating for participants at the conference. However, to ensure your safety and adhere to fire regulations, the number of participants allowed in each meeting room will be limited to the number of seats approved by the Fire Marshall. Anyone sitting on the floor or standing will be asked to leave the room. Please check the Program Matrix for the seating capacity of each room. All seats are available on a first-come, first-served basis.

**DeCarli, Elizabeth — High School Math Specialist**  
**Strategic Use of Technology Tools in High School Statistics**

The focus on statistics and probability in high school is a significant shift for many teachers. Experience activities that you can do with students, both with and without technology, while discussing statistical representations, measures of spread and variability, scatter plots, regression, simulations, and how probability and statistics are related. We will feature software and websites that provide visual and dynamic representations of statistical concepts.

8-12 | PRS | 110 | Saturday, 8:00 - 9:00 | Asilomar | Curlew | BT

Co-presenter: *Andres Marti — HS Math Specialist, San Francisco USD*

**Dell, Chris — Shasta COE**  
**STEM in the Math Classroom**

What is STEM? Why STEM? How do we do STEM? What does STEM look like in a math classroom? In this session we will discuss these questions and experience tasks that support STEM. This session is appropriate for grades 7-12.

8-12 | INT | 340 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 13 | BT

**Diaz Bonilla, Jesus — Healdsburg Junior HS**  
**Taking the Lesson Out of the Classroom**

The Mike Hauser Academy is a summer program for students entering high school. Students review math concepts in the morning then travel to a local businesses to see how math and science is used in the real world. The program is geared towards exposing under represented youth to career options they may not be exposed to otherwise. Students also get an opportunity to answer the age old question "When will I use this?"

8-12 | PRS | 354 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 36 | BT

**Dickenson, Patricia — Assistant Professor, National Univ**  
**Exploring the Mathematics Practice Standards with Web-Tools**

This session is designed for mathematics teachers of all grades to fully integrate web-based tools as a means for exploring and enriching student application of the mathematics practice standards. Teachers in this session will see how students across grade levels can apply web-based tools to support their conceptual understanding of mathematics.

GI | INT | 535 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 6 | BT

**Dorman, Brandon — Adjunct Professor, Fresno Pacific**  
**Managing Technology for MP3**

Classroom teachers need to be able to use technology effectively to communicate with their students. This presentation will demonstrate four tools around the 4Cs: Creativity, Communication, Critical Thinking and Collaboration. Tools will include Slack, Zaption, podcasting, formative assessment tools and Google docs. These tools will help student teachers build a foundation with their students to help guide mathematical arguments. Problems will be worked on in real-time during the session.

GI | MITI | 509 | Saturday, 3:30 - 5:00 | Asilomar | Marlin | BT

**Douglas, Lew — Consultant, Stanford Online HS**  
**A Transformational Approach to Proof in High School Geometry**

CCSSM HS Geometry Clusters include Understand Congruence in Terms of Rigid Motions and Understand Similarity in Terms of Similarity Transformations. Prove Geometric Theorems and Prove Theorems Involving Similarity are two additional clusters. But the standards don't tell us how to approach these proofs using transformational assumptions. This session will address this deficiency by providing the assumptions, updating some definitions accordingly, and providing examples of proofs.

8-12 | PRS | 506 | Saturday, 3:30 - 5:00 | Asilomar | Scripps Conference

**Druitt, Emma — Director K-8 Math**  
**Finally! Giving Students the Voice in Mathematics Classrooms**

How can we use a student observation form, with calibrated observers, to identify increase the quality of student-to-student discourse? How do we make sense of the evidence and act on our findings? Ten California school districts have collaborated for years to identify concrete structures to answer this question. With the support of Dr. Kenji Hakuta, these districts will share their incredible journeys in building the capacity of school sites to systematically collect evidence of academic discourse.

Ldrshp | PRS | 305 | Saturday, 11:00 - 12:00 | Asilomar | Evergreen

Co-presenter: *Kenji Hakuta — Emeritus Professor, Stanford School of Ed.*

**Duri, Lynn — Albert F. Biella ES**  
**Come Play Some Math Games With Us!**

Our students develop fluency, learn strategies and concepts when playing games that use mathematics. You will play our favorite games. We will share our students' mathematical thinking that has developed and also share how our students learn to read directions, teach games to others and shift their thinking about what mathematics is. We will share how and when we use games in the classroom and with families. You might also enjoy the ComMuniCator special edition on Games!

PK-5 | INT | 542 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 22 | BT

Co-presenter: *Christine Wedel — Classroom Teacher, Albert Biella ES*

**Erickson, Tim — Senior Scientist, eeps media**  
**Connect Functions and Geometry with Data and Modeling**

Do the whole modeling cycle in a classroom-practical, tech-rich investigation. In this session, you will measure parts of a geometric figure, plot the measurements as data (using Desmos or Fathom), find functions that fit the data, and then use the functions to understand the original geometrical context. We'll experience both linear and non-linear situations. We'll also see real student work and discuss assessment. BYOL: If you can, bring your own laptop. If you can't, you can share!

8-12 | INT | 540 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 13

**CONFERENCE EVALUATION**



Enter to win a free registration or free housing at next year's conference by downloading the EduPlus app.

**Farrand, Scott — Professor, California State Univ, Sacramento**  
**Setting Up Surprises in Calculus**

Calculus is full of surprises, for students and for teachers. Come to encounter aspects of calculus that will make you wonder how you hadn't already seen these cool results before. Also, come to hear ideas for setting your calculus students up to be stunned by calculus ideas and ask "why?" We'll look at specific exercises that create intrigue, and thereby engage students.

8-12 | PRS | 260 | Saturday, 9:30 - 10:30 | PG Middle School | Library | BT

**Fender, Tierra — Middle School Math Coach, Visitacion Valley MS**  
**Supporting Learning Communities**

Learning communities can support educators to build a shared vision of mathematically powerful classrooms for heterogeneous learners. When educators engage in common experiences, they begin to create safe spaces to connect their collective practice to their vision for classrooms. We will share how we built a strengths-based learning community among a team of coaches that sustains and helps these coaches to support learning communities at school sites across a diverse urban school district.

6-8 | PRS | 143 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 24 | BT

**Fenton, Michael — DESMOS**

**Principles for Building and Using Effective Digital Tasks**

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.

8-12 | PRS | 118 | Saturday, 8:00 - 9:00 | Asilomar | Merrill Hall | BT

**Fetter, Annie — The Math Forum**

**Sense-Making: Is It at the Core of Your Classroom?**

The National Resource Council points to a "productive disposition" as a key strand of mathematical proficiency. A major part of this strand is viewing mathematics as something that makes sense. Are your students making sense of the mathematics they explore? Do they feel that mathematics is an inherently sensible endeavor? We'll look at ways in which students don't make sense of mathematics, consider why, and discuss strategies for making it a larger part of the expectations in your classroom.

GI | PRS | 353 | Saturday, 11:00 - 12:00 | PG Middle School | Auditorium | BT

**Fitzgerald, Tanisha — Notre Dame HS**

**Logarithmic Earthquake Project: Algebra 2 Project with Real**

We will discuss the design and implementation of an earthquake project that ties into the logarithms unit of Algebra 2 as well as touch on social justice issues facing society today. We'll show examples of student work, how to differentiate the project and how to provide students an opportunity to stand in solidarity with those individuals affected by devastation. Attendees will walk away from the session with a shared Google folder with all materials needed to implement the project.

8-12 | INT | 116 | Saturday, 8:00 - 9:00 | Asilomar | Nautilus East | BT

Co-presenter: Beverly Heigre — Math Teacher, Notre Dame HS

**Foy, Noirin**

**Co-Teaching: Mathematical Practices For All Students**

Students in special education and general education are increasingly learning together in inclusive classrooms. Learn how math teachers and special education teachers can collaborate and use classroom management strategies, manipulatives, and technology so all students can engage in the mathematical practices in a general education classroom.

6-8 | PRS | 145 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 26 | BT

Co-presenter: Valerie Ruiz — Special Education Teacher

**Frandsen, Eric — Oceanside USD**

**Designing Experiences for Effective Student Communication**

Ten California school districts have been working together to address the question: How do you embark on a district journey to ensure every classroom in every school is grounded in students amplifying their mathematical understanding through communicating their reasoning? One proven strategy, is the selection of a rigorous task as the foundation in supporting students to build their muscle in communicating their reasoning.

Ldrshp | PRS | 105 | Saturday, 8:00 - 9:00 | Asilomar | Evergreen

Co-presenter: Nicholas Restivo

**Fry Bohlin, Carol — Professor, Mathematics Education, California State Univ, Fresno**

**Math Courses and Programs for Prospective Gr. 6-9 Teachers**

FLM, SMA, SA, MIAA... Multiple credential pathways exist for teaching middle grades mathematics! Math educators and CAMTE members from Chico State, CSU-East Bay, Fresno State, and San Jose State will share courses of study for the Supplementary Authorization, Subject Matter Authorization, and Foundational-Level Mathematics credential, discussing the benefits and challenges of each. What are the implications of ESSA (and the demise of NCLB's HQT) regarding Supplementary Authorizations? Come and see!

Tchr Ed | PRS | 409 | Saturday, 1:30 - 3:00 | Asilomar | Marlin

Co-presenter: M.E. Matthews — Asst. Professor, Mathematics, California State Univ, Chico

**Fulton, Brad — Mistletoe Elem**

**S.T.E.M. on a Shoestring**

The integration of science, technology, engineering, and math empowers student learning today and employment tomorrow. Learn how to integrate powerful STEM lessons on a tight budget. Ready-for-Monday projects are included.

3-8 | PRS | 360 | Saturday, 11:00 - 12:00 | PG Middle School | Library | BT

**Gale, Mardi — Sr. Research Associate, WestEd**

**Coaching/Being Coached for the SMPs: Essential Elements**

How do we coach/teach for SMPs? What are classroom dimensions that matter? Examine successful models for coaching from SVMU & TRU Math that support teachers as they shift their practice for deeper learning. Documents also provide guidance for PLCs.

GI | PRS | 205 | Saturday, 9:30 - 10:30 | Asilomar | Evergreen | BT

**Gamino, Elizabeth — Research Associate, CMC-Central**  
**Productive Struggle in PreK-TK**

Young students don't come to us with "productive struggle" behaviors. Come explore ways to engage students in "minds-on hands-on" tasks that lead to understanding, make learning goals attainable, efforts worthwhile, produce results, lead students to feel empowered, and promotes efficacy. Discover what the research states, what are best practices, and how to teach mathematics in early learning classroom. Alignment of the CDE Preschool Foundations to the Kindergarten Standards will also be shared.  
 PK-2 | INT | 233 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 4  
 Co-presenter: Wilma Hashimoto — Research Associate, CMC - Central

**Garner, Jamie — Stanislaus COE**  
**Number Talks: Making the Math Visible with Models**

Are you using number talks with your students? Are you wondering if the students in your class are making sense of each other's strategies? This session will focus on incorporating the use of visual representations, like number lines and area models, into your number talks to make the thinking of your students more accessible. Participants will engage in number talks where models for and of thinking are highlighted and leave with strategies for integrating models into their own practice.  
 PK-5 | INT | 151 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 33 | BT

**Garrison, Danielle — Bentley School**  
**Inquiry, Investigations and Explorations**

Inquiry, Investigations and Explorations. What is it all about and how does it look in a math classroom? Come learn how to transform your classroom into a mathematics workshop where your learners are engaged in inquiry and worthwhile mathematical tasks that ask them to prove and communicate their thinking. Get exposure to several excellent math investigations and leave with resources that you can implement immediately.  
 3-8 | INT | 317 | Saturday, 11:00 - 12:00 | Asilomar | Nautilus West | BT

**Giganti, Paul — Honorable Past President**  
**Discovering Area Formulas**

The concept of Area is usually the first time students encounter the use of formulas and is a beautiful integration of algebra and geometry. However, area need not be taught as merely formulas to memorize without understanding. 3-8 grade students can actually derive area formulas using hands-on activities. In this session teachers will learn and do several mini-lessons on finding the area of common geometric shapes to show students where the formulas come from for a deeper understanding of area.  
 3-8 | INT | 157 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 39 | BT



**Gojak, Linda**  
**So You Think You Have (Math) Problems!**

Students often lament, "I don't get what they want me to do!" when solving word problems. Are you aware there are 15 situations for addition and subtraction word problems and 28 situations for multiplication and division word problems. Common Core calls for problem solving to be the foundation for developing operation sense. Let's dig deeper into how we can support students in solving problems and build operational understanding at the same time!  
 PK-5 | INT | 553 | Saturday, 3:30 - 5:00 | PG Middle School | Auditorium | BT

**Goldenstein, Donna**  
**Enriching the Geometry/Measurement**  
**CCMS Content Through Art**

This Make-It and Take-It Session will focus on making line designs. These designs are geometric patterns formed entirely by the use of straight line segments that produce the illusion of a curve. After the paper and pencil activities, participants will make a string art project based on these designs. Geometry and measurement common core standards will be referenced as well as the mathematical practices of perseverance, precision, and using tools strategically.  
 3-8 | MITI | 436 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 7 | BT

**Goldfield, Dan — Island HS**  
**The Math of Nature**

We will explore the math of bees (Math as a tool for optimization and problem solving). The cubic yard (Math as a tool for understanding size and scope). We will investigate our Air or Water Quality (Math as a tool for answering an open ended question). Each activity can scale from remedial to advanced learners from 5th to 12th grade. Bring your calculators and notebooks and be ready to do some math!  
 8-12 | INT | 504 | Saturday, 3:30 - 5:00 | Asilomar | Oak Shelter | BT

**Gomez, Emiliano — MDTP Site director, UC Berkeley**  
**Transformational Geometry and Dynamic Software**

Flatland needs an airport to serve its three cities. Where should we build it? We will explore this question using geometric transformations and dynamic software like Sketchpad or GeoGebra. We will discuss how this activity makes use of the transformational approach to Geometry suggested by the CCSS, and we will pay explicit attention to several Standards for Mathematical Practice highlighted by our exploration.  
 8-12 | PRS | 455 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 37 | BT

**Grip, Bruce — Consultant, California Mathematics Council**  
**Mathematical Modeling in the Classroom and Life**

What is mathematical modeling? What is it not? How can I begin to do modeling tasks in my classroom? What makes some tasks better than others? There are so many more ideas and resources and misinformation than when California was first introduced to the Standards for Mathematical Practice. Learn how to use mathematical modeling and real-world contexts to develop deeper understanding for struggling students.  
 8-12 | PRS | 155 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 37 | BT



**Hagman, Jennifer — Math Consultant, RSBCMTA**

**The Power of Feedback**

Are your students producing what you expect? Do rubrics, exemplars, and detailed explanations leave you wanting more? Come learn how we use feedback to positively impact the quality of student work and to re-engage students for deeper learning.

3-8 | INT | 443 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 24 | BT

*Co-presenter: Kelli Wasserman — Math Consultant*

**Hakansson, Susie — Immediate Past-President, TODOS: Mathematics for ALL**

**Fractions On the Number Line for All Students**

This session will focus on increasing teachers' conceptual understanding of fractions using the number line approach through problem solving and discourse and will include activities and materials that can be adapted for use in the classroom. Best practices for working with English learners will be included. Come and have some fun learning and interacting with others about fraction sense!

3-5 | INT | 456 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 38 | BT

**Heigre, Beverly — Notre Dame HS**

**The Architecture of Tom Jefferson: Integrating Math, Science**

Thomas Jefferson was not only a founding father, but an architect and gardener. We use some of Jefferson's original source documents in lessons that ask students to analyze geometry inherent in classic architecture, relate architecture and building materials to structures in their own cities, and take a historical Google Earth tour of some of the first buildings to dot the colonial landscape. Other lessons: analyze garden designs and create their own garden plan using geometric principles.

8-12 | PRS | 216 | Saturday, 9:30 - 10:30 | Asilomar | Nautilus East | BT

*Co-presenter: Lee Pruett — Science Teacher, Notre Dame HS*

**Hein deMause, Jennifer — Math Content Specialist**

**After the Bell: The Math Practices in After-School Programs**

While classroom teachers have been immersed in the changes brought by the CCSS-M, after-school program leaders have been left out in the cold. Hear how SFUSD is using the SMP's to provide after-school staff with a better understanding of today's math classroom and how to translate that insight into support for students. We'll provide practical resources and strategies to help you lay the groundwork for improving collaboration between school and after-school staffs.

Ldrshp | PRS | 158 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 23

*Co-presenter: Kathy Bradley — Math Content Specialist, San Francisco USD*

**Henwood, Cory — Math Coach and Curriculum Designer, [www.commoncore.com](http://www.commoncore.com)**

**Empowering Collaboration in 3 Acts**

Creating an effective atmosphere where students can collaborate and problem solve together is difficult, but essential. Technology is useful in ensuring all students routinely contribute, their voices are heard and valued. We will explore collaborative tools for problem solving in 3 Acts including Nearpod, Desmos and Peardeck. Find out how to empower all students and see how selectively sharing the thoughts from a class can point all students, even the brightest, towards improving their methods.

GI | INT | 331 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 1 | BT

**Hull Barnes, Elizabeth — Math Program Administrator, San Francisco USD**

**What Do the Students Think Discourse is For?**

The San Francisco USD will share how we are measuring effective discourse through video in comparison to students' self-reported understanding of what they are doing in small groups. Using a number of evidence-gathering tools, including conversation with the teacher, we will give a more complete picture of what is happening with student learning. So many teachers and districts are trying to implement SMP 3 in a meaningful way. This is our attempt to ask the students themselves.

Ldrshp | INT | 405 | Saturday, 1:30 - 3:00 | Asilomar | Evergreen | BT

*Co-presenter: Emma Trevino — Project Manager for Implementation, San Francisco USD*

**Humphreys, Kathy**

**Cultivating Agency and Authority Through Number Talks**

In this session I share my dissertation study of two high school teachers as they learned to enact Number Talks. I wanted to know what the teachers found most challenging and how coaching supported their learning. In examining the videos of classroom lessons, I noticed marked differences in how agency and authority emerged in the two classes. I hope what I learned while searching for "Why?" will be useful for teachers and coaches alike.

8-12 | INT | 448 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 29

**Ichinose, Cherie — Assist. Professor, California State Univ, Fullerton**

**Survey Said! Playing Family Feud to Spark Engagement**

In this interactive session we will play Family Feud using mathematics-based questions. We will show how the game can be customized to cover any topic or grade level. Each attendee will leave with an editable template of Family Feud.

8-12 | INT | 140 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 13 | BT

*Co-presenter: Marty Bonsangue — Professor, CSU Fullerton*

**ASILOMAR PATHWAYS**

Please stay on the paved paths that meander through the grounds or the boardwalks that take you on a delightful journey through the dunes. By keeping people off of the vegetation, Asilomar is able to preserve the natural landscape for all to enjoy for many years to come. You might see some paths that look like walking trails, but if they are not paved, they are simply animal trails created by many hooves walking the same route through the grounds. Thank you very much for your cooperation.



**Jackson, Brent — Project Director, Santa Rosa City Schools**  
**Make the Way: Student Agency, Authority and Identity (AAI)**

Learn how we've been working with teachers to create mathematically powerful classrooms (MPC) by implementing Maker tasks to drive students' learning. We are analyzing the impact of the implementation of Maker tasks using the 5-Dimensions of MPC. Hear what we're learning about students' AAI and how teachers develop understanding about the role of AAI. We will analyze video using a tool we have developed to help teacher-leaders and admin., identify students actions that are indicators of MPC.

Tchr Ed | PRS | 551 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 33  
 Co-presenter: Joan Easterday — California Math Project

**Jarry-Shore, Michael — Stanford Univ**

**An Exploration of the Cartesian Plane Through Beading**

Teachers today are to design tasks that support students in seeing how math connects to other disciplines (e.g., NCTM, 2000). This session will examine one such task, in which students explored the Cartesian plane by creating Indigenous-inspired beaded bracelets. Session attendees will both use available software/hardware in designing their own bracelets and be given time to discuss other curricular connections that they see.

3-8 | MITI | 336 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 7 | BT

**Kassab, Lara — Assistant Professor, San Jose State Univ**

**Justifying Reasoning: What Are Our Students Missing?**

With Cheryl Roddick and Juliana Tapper. CCSS-M aligned instructional materials and performance assessments ask students to justify their reasoning, not just solve problems. Students are often only partially successful and struggle to make key connections. This session focuses on learning about and using a strategy for supporting students in producing the verbal and written language to justify reasoning. The teacher-designed strategy is universal, intended to be a support for existing curriculum.

8-12 | INT | 440 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 13 | BT

Co-presenter: Alison Vickery — Math Teacher/Dept. Chair, San Jose USD

**Kelemanik, Grace**

**Meet the Needs of All Students Thru Instructional Routines**

The predictable nature of instructional routines makes them powerful tools for engaging students with special needs and English language learners. Learn how the uniform design of the Recognizing Repetition routine incorporates research-based support strategies to develop repeated reasoning (MP8) in all students. Experience the routine and discuss supports baked into its design that provide special populations access to repeated reasoning and support in generalizing and communicating repetition.

6-8 | INT | 418 | Saturday, 1:30 - 3:00 | Asilomar | Merrill Hall

**ELECTRONIC DEVICES**

Out of respect for presenters and other participants, please turn off electronic devices during sessions.

**Khalsa, Arjan — CEO, Conceptua Math**

**Digital Tools + Three-Act Tasks: Marriages Made in the Cloud**

Bring your inquisitive mind (required) and your iPad (optional). Make noticing, wondering, and problem solving as successful as possible with free, online tools that facilitate rich tasks. Use video, online discussion guides, and virtual manipulatives to support inquiry, rich discourse, and perseverance. We will dive deep into a grade 3-5 task, reflect on our own learning, and give participants access to free resources for using more tasks in the classroom or pre-service setting.

3-5 | INT | 107 | Saturday, 8:00 - 9:00 | Asilomar | Acacia | BT

Co-presenter: Julie McNamara — Assistant Professor, California State Univ East Bay

**Khare, Deepti**

**Text Access Through Active Reading Strategies**

We all want our students to do rigorous problem solving but too often they don't understand what to do or where to start! Come learn about active reading strategies to help your students access rigorous Math text and problem tasks. Participants in this interactive session will explore different strategies and tools that can enhance students' problem solving and literacy skills.

8-12 | INT | 460 | Saturday, 1:30 - 3:00 | PG Middle School | Library

**Knight, Kimberly — Instructional Coach, Beaumont USD**

**Integrated STEM Lessons as Model Eliciting Activities**

MEAs are open-ended, interdisciplinary problem-solving activities that reveal students' thinking about the embedded concepts. MEAs resemble engineering problems because students work in teams to apply their knowledge of science and mathematics to solve open-ended and realistic problems. MEAs follow a problem-based, student centered approach to learning, where students are encouraged to grapple with the problem while the teacher acts as a facilitator.

3-8 | INT | 350 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 32 | BT

Co-presenter: Jamie Santos — Instructional Coach, Beaumont USD

**Kotko, Andy — Mather Heights ES**

**Math Talks and Other Routines that Foster Number Sense**

Come experience routines and discussion that you can use with your primary students to foster a robust number sense. You can integrate these activities into daily warm ups or as full lessons. Math talks build numerical flexibility as students discuss and evaluate multiple approaches to solving problems. Help your students move from rote procedures to mindfully and intuitively selecting between various problem solving approaches.

PK-2 | INT | 244 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 36 | BT

**Kriegler, Shelley — Author**

**Proportional Reasoning: Three Strategies to Spark Engagement**

Come experience three activities that engage students in concept development and practice of proportional reasoning: "poster problems," a "blank paper lesson," and a "big square puzzle." Take-away lessons included.

6-8 | INT | 231 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 1 | BT



**Kysh, Judy — Professor, San Francisco State Univ**  
**Teach Problem Solving Strategies So All Succeed in Algebra**

Examples of how teaching problem solving strategies such as Guess & Check, Look for Subproblems, Make a Table, Use a Manipulative to explore and learn algebra can enable all students in heterogeneous classrooms to engage and succeed. Strategies allow every student to start and work through word problems, equations, order of operations, and graphing problems, while some students move to higher levels of abstraction. Specific strategies work well to develop specific algebra skills.

8-12 | PRS | 334 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 5 | BT

**LaBelle, Laura — Consultant-Curriculum Writer, Big Red Educational Products, LLC**

**Building Measurement Lessons While Moving Full STEAM Ahead**

Research reveals measurement to be an oft forgotten domain. This workshop consists of activities, including STEAM performance tasks, to move beyond abstract teaching towards a more concrete approach. After a discussion of the metric system, attendees will examine lessons and tools that bring measurement to life. Participants will leave with a packet of activities, instructions for homemade measurement tools, assessment tasks, and ideas that will help build lessons while moving full STEAM ahead.

3-8 | INT | 356 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 38 | BT

*Co-presenter: Gregg Nelsen — Consultant-Curriculum writer, Big Red Educational Products, LLC*

**Lambertson, Lori — The Exploratorium**  
**Exploring Math and Science w/Exploratorium "Snack" Activities**

Mathematics is the language of science. The Exploratorium Teacher Institute just updated its free online collection of classroom versions of Exploratorium museum exhibits (aka snacks). We'll explore the math and science of granular materials, mirrors, and soap films while emphasizing mathematical practices. We will build "snack" versions of museum exhibits to take back to your classroom. You will also be introduced to the rest of this free online collection of math and science activities.

8-12 | INT | 445 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 26 | BT

**Lane, Matthew — Lead Instructor, Rithm School**  
**The Mathematics of Voting**

The way we elect our leaders can have a profound impact on our collective well-being. Unfortunately, our most popular voting system is far from optimal. In this session, we'll describe the shortcomings of our current system, and analyze several alternatives. What if the cure to our country's two-party gridlock could be found in an entirely different way of voting, and is there such a thing as a 'perfect' voting system?

GI | INT | 351 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 33 | BT

*Hashtag* **CMCMATH**

**Lau, David — Ohlone College**  
**Calculus Applied to Business, Economics, and Finance**

This session involves the use of basic differentiation and integration to solving problems in business, economics and finance. We will discuss the use of logistics curve and its applications. The meaning of elasticity of demand and applications with real data including interpretation. Discussion on sinking fund, present values and amortization in finance with the use of integrations along with PowerPoint slides and handouts as well. TI-84 graphing calculators included.

8-12 | PRS | 508 | Saturday, 3:30 - 5:00 | Asilomar | Toyon | BT

**Lazzarini, Jeanne**

**Let's Link Mathematical Practices with Financial Literacy!**

Financial literacy is an amazingly important topic that engages all students with a real-life need to know math! Join me as we explore numerous ways to incorporate all eight of the Common Core Math Practices with hands-on methods that help students to appreciate the math behind profit and loss, interest rates, how to write checkbooks and balance accounts, the price for goods and services, about foreign exchange rates, and more! Discover powerful math thinking that truly makes "cents" to students!

6-8 | INT | 515 | Saturday, 3:30 - 5:00 | Asilomar | Triton | BT

**Lecheler, Tony — Notre Dame HS**

**Geometry City Project: STEAM Geometry Project with Real App**

We will journey through the process of design, implementation and differentiation on a semester long cross-curricular project. In this project we incorporate concepts such as constructions, congruence, triangle properties, area, volume and proportions. Cross-curricularly, we've tied into English, Social Studies, Science & Social Justice, and technology.

8-12 | PRS | 316 | Saturday, 11:00 - 12:00 | Asilomar | Nautilus East | BT

*Co-presenter: Beverly Heigre — Math Teacher, Notre Dame HS*

**Leinwand, Steven — Principal Research Analyst**  
**Rich Tasks + Just the Right Questions = Classroom Magic**

We'll take a look at how great tasks without the right questions are as limited as great questions about narrow tasks as a straw man to model a range of great lessons that link readily available tasks to just the right questions. It is these lessons that produce the mathematical magic we all strive to engender daily.

GI | PRS | 318 | Saturday, 11:00 - 12:00 | Asilomar | Merrill Hall | BT

**Liu, Celine — Math Specialist, UCSB**  
**Math AND Science, Not Math OR Science!**

Participants will experience an upper elementary 3-Act lesson that uses math in the context of a scientific concept in order to a) examine the overlap in the standards for mathematical practice and science and engineering practices; b) explore protocols for lesson design to support the SMPs and increase student engagement. We will observe students engaging in this lesson through classroom videos and participants will walk away with a 3-Act learning sequence and extra instructional minutes!

3-5 | INT | 548 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 29 | BT

*Co-presenter: Leena Bakshi — Science Coordinator, Alameda COE*

**Luberoff, Eli — Founder, Desmos Inc**

**Knocking Down Barriers with Technology**

One-to-one. Accessibility. Personalization. Internationalization. Low floor. High ceiling. What do these all have in common? Each is targeted to making math work for every student. Not just the confident students with engaged parents, not just the struggling students, every student. We'll explore the technology and techniques that can open doors, challenge the bored, empower the disempowered, and turn every student into a math student. Bring your devices and your open minds.

GI | INT | 103 | Saturday, 8:00 - 9:00 | Asilomar | Heather

**Magner, Philip — California State University, Stanislaus**

**Finding PI While Regressing**

Waldo was looking for pi. He found it in the relationships of a circle. He converted the data to find regressions for linear and quadratic functions. Let's use the interrelated features of geometry, spreadsheet, and graphing on a TI Nspire handheld to collect the data, graph it, and regress. See why you will throw away your tape measures.

8-12 | INT | 215 | Saturday, 9:30 - 10:30 | Asilomar | Triton | \$

**Manion, Laura — Live Oak School**

**Equity and Social Justice Projects and Middle School Math**

In this session, a middle school math teacher will share a series of projects that she uses in her classroom that combine middle school math topics with opportunities for understanding around issues of equity and social justice. Many of these projects incorporate opportunities for cross-curricular learning and field trips, and all of the projects give opportunities for students to see how mathematics can be used to understand their world.

6-8 | PRS | 133 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 4 | BT

**Matthews, Mary Elizabeth — Assistant Professor of Mathematics, California State Univ, Chico**

**Developing Teacher Argumentation Using Technology**

Many preservice teachers (PSTs) continue to struggle with differentiating between describing solution steps and defending reasoning. In this session, we will review an activity in which secondary PSTs used story boarding to sequence solution development, wrote scripts to develop argumentation, and screencasted to improve articulation. We will discuss the development that occurred, review PST reflections on the activity and watch PST-produced screencasts. Activity handouts will be made available.

Tchr Ed | PRS | 310 | Saturday, 11:00 - 12:00 | Asilomar | Curlew

Co-presenter: Mike Blaschke — Science/Math Teacher, Paradise Charter MS

**McAtee, Krista — Math Coach, Sonoma Valley USD**

**Teachers Multiply Our Power to Maximum Learning!**

"Creating schools that enable all children to learn requires the development of systems that enable all educators and schools to learn." - Linda Darling-Hammond. We will examine ways teachers can lead a district in becoming a learning system. When teachers are positioned as leaders and knowledgeable professionals, they can make significant impact on the instructional quality and the culture of schools and districts. Together we will discuss how to multiply our power to maximum learning!

GI | INT | 256 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 38

**McNamara, Julie — Assist. Professor, California State Univ, East Bay**

**Beyond Invert and Multiply: Understanding Fraction Computation**

How come  $1/2 + 1/4$  doesn't equal  $2/6$ ? Do you always need a common denominator to compare fractions? Doesn't multiplication make things bigger? Why do you multiply to divide fractions? Strategies for helping teachers and students address these questions and more will be answered through activities and video clips from classroom lessons. All activities will develop and build on students' "fraction sense" and help students understand fractions as numbers as called for in the CCSSM.

3-5 | INT | 434 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 5 | BT

**For Your Eyes Only: Video as a Tool for Personal Reflection**

Helping preservice teachers (PTs) engage students in rich math tasks and math discourse can be challenging. This session describes a project with secondary PTs aimed at using video records of their own teaching to reflect on their practice and identify goals for improvement. As an assignment in their methods course, PTs used smart phones, iPads, and other common devices to film themselves leading discussions over time. I will share challenges and successes, as well as reflections from the PTs.

Tchr Ed | PRS | 309 | Saturday, 11:00 - 12:00 | Asilomar | Marlin

**Meyer, Dan — DESMOS**

**Math is Power Not Punishment**

We often offer students shortcuts, strategies, and skills before students understand their origin, their value, and the millions of hours of work they've saved mathematicians throughout history. We'll look at techniques for putting students in a position to need these challenging skills so they feel like power, not punishment.

GI | PRS | 218 | Saturday, 9:30 - 10:30 | Asilomar | Merrill Hall | BT

**Moore, Danielle — Consultant, Teaching One Moore**

**Practices to Support Independent Problem Solving**

Educators will learn how to implement the Standards for Mathematical Practice into their daily math routines. This will include tools for providing culturally relevant context based problems (SMP #1), how to support students in using sense making strategies for problem solving (SMP #1, 2), how to set up classrooms with the tools and models that support differentiation (SMP #4, 5), and strategies that increase student discourse and use of academic language (SMP #3,6).

PK-5 | INT | 507 | Saturday, 3:30 - 5:00 | Asilomar | Acacia | BT

~ Name badges ~

Name badges must be worn at all times while attending the conference.

Badges are required for entry into the sessions and the exhibit hall.

**Moore, Sara — Educational Consultant, SDM Learning**  
**Operations to Algorithms: Building from Repeated Reasoning**

Build Procedural Fluency from Conceptual Understanding. While Principles to Action names this as a teaching practice and teachers are often comfortable with both components separately, we struggle to show connections between conceptual experiences with operations and the formal algorithms we use for efficiency. Algorithms are built from repeated reasoning and MP 8 provides a frame for helping students see the connections across a variety of representations. Join us to explore the relationships!

3-8 | INT | 451 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 33 | BT

**Morris, Kathy — Sonoma State Univ**  
**Fractions: Improving Understanding**  
**by Seeing Them as Numbers**

Capitalize on students' prior knowledge by teaching fractions as an expansion of our number system, not just parts of a whole. Resources and experiences in this session will help you leverage familiar whole number strategies such as number lines, decomposition, benchmark numbers, properties of operations, and regrouping to teach operations with fractions. We'll explore common fractions misconceptions and strategize ways to help students overcome them.

3-5 | INT | 251 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 33 | BT

**Morrison, Patty — Viking Elem**  
**Integrating Math and Literature in the PK-1 Classroom**

Literature is a fun way to introduce or review math concepts in the PK, TK, kinder, and 1st grade classrooms. Children love to hear stories and interact with them. I am a TK/K teacher and math is my love! I wrote lessons that you can use in your classroom tomorrow! I will also present ideas on how to extend the math into centers for further practice. There will be give-aways of books I purchased from Scholastic so you can implement the lessons immediately!

PK-2 | PRS | 234 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 5 | BT

**Moskowitz, Stuart — Humboldt State Univ**  
**64=65 and Fibonacci, as Studied by Lewis Carroll**

Charles Dodgson, aka Lewis Carroll, left 1000s of pages of unpublished manuscripts. In one obscure notebook, in purple ink, he devoted 4 pages to a vanishing area paradox, the 64=65 Puzzle. We will review Carroll's contribution towards explaining the paradox as well as interesting connections he made with the Fibonacci Sequence. Of course we start with you, the puzzler, getting a hands-on chance to solve it yourself. The puzzle can be approached with levels ranging from grades 6 thru 12.

8-12 | INT | 144 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 25 | BT

Co-presenter: Calisa Holm — Teacher

**Mulhearn, Dennis — MOEMS, Math Olympiad**  
**Use Cubes as a Setting for Your Problem Solving**

A cube is the starting point for many rich problems. Stack cubes, count cubes, paint cubes and do some real math at the same time. Work out a dozen classic cube contest problems. Take home these and more than 50 additional problems.

3-8 | INT | 217 | Saturday, 9:30 - 10:30 | Asilomar | Nautilus West | BT

**Muller, Eric — Senior Science Educator, Exploratorium**  
**Feeling Pressured: The Amazing Math of Air Pressure**

Come expose yourself to the math in air pressure. This workshop will combine hands-on activities, principles of algebra and geometry, and the basic science of molecular motion to solve a few interesting math problems. We will figure out how much air force is on your body right now as well as determine the immense forces on vessels like planes, spacecraft and submarines. These activities were created at the Exploratorium Teacher Institute in San Francisco.

GI | INT | 333 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 4 | BT

**Myers, Kyle**  
**iRobot! Do You?**

This fun, fast paced, and hands-on session will include learning how to get students excited about learning math through coding robots. Seeing how easy it is to get the robots you want into your classroom. Discovering great resources that will teach your kids unplugged coding skills. Understanding the relevancy of coding basics and vocabulary. Walk away with great ideas to use in your own classroom. Don't worry! You do not need to be a computer programmer (we're not) to get coding!

PK-5 | INT | 416 | Saturday, 1:30 - 3:00 | Asilomar | Nautilus East | BT

Co-presenter: Alina Mills — Teacher, Valencia Park ES

**Nank, Sean — Professor, American College of Education**  
**Speed Skills...Student Achievement: What's the Alternative?**

Educators are told timed math tests are detrimental to student learning (especially considering a fixed vs. growth mindset) but what is the alternative to memorization and speed tests? The key is returning to the patterns and beauty of mathematics and number sense while finding a balance between memorization and conceptual understanding. In this session, we will explore different ways of conceptually achieving automaticity without using memorization and stressful methods to learn math facts.

PK-5 | INT | 246 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 27 | BT

**Newell, Christine — Mathematics Project Coordinator, Stanislaus COE**

**This Math Was Made for Talking: Targeting Math Discussions**

Number talks are powerful tools for building students' mathematical thinking, fluency and discourse, but there's more to them than just show and tell. Learn how to leverage your talks: analyze and use student strategies shared during number talks to plan and lead targeted follow-up discussions that reengage students in their mathematical thinking. Gain resources to start these conversations the day you return to your classroom.

PK-5 | PRS | 258 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 23 | BT

**Nguyen, Fawn — Mesa Union**  
**Computational Thinking as a Problem-Solving Strategy**

In this CUE Rock Star-inspired math session, we'll look at computational thinking as a problem-solving strategy. We'll walk through some visual patterns and low-entry-high-exit tasks, including getting tangled in ropes! I'll also share how I use Google Classroom to manage all the work.

6-8 | INT | 306 | Saturday, 11:00 - 12:00 | Asilomar | Scripps Conference

**Nguyen, Ho — Middle School Math Coach, San Francisco USD**  
**Detracking: The Ongoing Work to Support Heterogeneous Classes**

In 2014, the SFUSD School Board passed a resolution to create a single course pathway for all students through 10th grade, leading to a multi-pronged approach to detract math classes in middle and high schools. Come learn about the choices and actions we took to build a program of heterogeneous classes, including a core curriculum based on rich tasks, systemic PD for teachers, the expansion of our Complex Instruction program, and a campaign to change belief systems about who can succeed in math.

Ldrshp | PRS | 245 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 26

Co-presenter: *Andres Marti — Math Content Specialist, San Francisco USD*

**Nickerson, Rob — ORIGO Education**  
**Empowering Mathematical Thinking**

Developing mathematical thinkers makes use of rich, meaningful tasks in which students utilize the eight Standards for Mathematical Practice. Teachers select tasks that promote reasoning, multiple entry points, different representations, and a variety of strategies. This interactive session will explore ways to empower students to think and extend their current mathematical understanding.

PK-5 | INT | 547 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 39 | BT

**Pauls, Steve — Professor, Fresno Pacific Univ**  
**Using Graphical Analysis to Make Sense of Real Data**

Participants will collect data from a small number of physical systems that have played significant roles in the history of math and science. Then through the use of graphical analysis and technology participants will model the observed behavior mathematically to make predictions. Quadratic data will be gathered and modeled; then the role of linearization of physical systems will be emphasized providing context for linear functions.

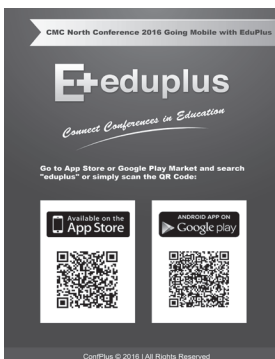
6-8 | INT | 545 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 26 | BT

Co-presenter: *Christopher Brownell — Professor, Fresno Pacific Univ*

**Paulus, Chris — Santa Maria HS**  
**Mathematics Practices? Interactive Mathematics Program**

IMP embodies the CCSSM practices and excels at topic progression resulting in mastery after four years. We will examine this through trig ratios, starting with a complex unit problem from Year 4, and tracing the scaffolding in Years 1-3 that prepared students to answer it. Expect to solve problems, review student work, and highlight CCSSM practices!

8-12 | INT | 433 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 4



**Picciotto, Henri — Author and Consultant, MathEducationPage.org**  
**Computing Transformations Using Complex Numbers and Matrices**

I will assume familiarity with the basics of transformational geometry, and present topics for possible use in grades 10-12. An introduction to the mathematics underlying computer graphics: a visual approach to complex numbers in Algebra 2, including review and extension of trigonometry; application of complex numbers to the computation of geometric transformations; and finally 2 by 2 and 3 by 3 matrices for these computations, including how complex numbers help us find the matrix for rotations.

8-12 | PRS | 235 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 6 | BT

**Pickford, Avery — The Nueva School**  
**Cafe Patternea: A Project-Based Introduction to Algebra**

Experience a low floor, high ceiling project we use to motivate algebra and algebraic thinking. Students choose and describe visual patterns with multiple representations, including t-table, algebraic and graphical. A range of patterns offers differentiation. Dissonance created by mathematically equivalent expressions that look different motivates skills such as combining like terms and expanding expressions. You will hear our experiences, including a CS collaboration, and you will do math!

8-12 | INT | 534 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 5

**Pickford-Murray, Bredeen — The Bay School**  
**Beyond Sudoku: Using Logic Puzzles to Develop Math Reasoning**

Logic puzzles are an engaging and accessible way to introduce students to deductive reasoning. Participants will break down the process of proof-writing, connect the rules of logic puzzles to axiomatic proof systems, make conjectures, write "because statements" and develop their ideas into simple proofs, modeling how to use these ideas with students.

8-12 | INT | 146 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 27

**Preston, Robert — Math Coach/Project Director**  
**Division: Let's Help Students Make Sense of It**

Division is often troublesome for both teachers and students. This session will develop way to address both partitive and quotative division situations with understanding so that proficiency towards with the standard, traditional U.S. algorithm is enhanced. Connections between whole number division and division with fractional quantities will also be made explicit.

3-5 | INT | 556 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 38 | BT





**Pugalee, David — Director/Professor, UNC Charlotte**

**Writing and Thinking in Math Class to Support Mathematical Practices**

Writing in mathematics sustains the development of reasoning, communication, and connections while developing metacognitive thinking supporting both deep understanding of content and students' effective development of the mathematical practices. This session will highlight a plan for creating and implementing an effective mathematical writing program.

Mathematics classroom-tested writing strategies will be used to demonstrate support of the eight mathematical practices.

3-8 | PRS | 154 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 36 | BT

**Ramirez, Nora — Executive Secretary, TODOS: Mathematics for ALL**

**Using Problem Solving to Engage ELs in the Math Practices**

Attending to reading, speaking, reading, writing and representing while analyzing and solving word problems, gives ELs tools and experiences that consistently supports their engagement in the Mathematical Practices. This problem solving process affects mathematical understanding, language acquisition, and number and operational sense. Participants will experience the problem solving process and walk away with research-based tools and strategies that they can immediately apply in their work.

3-8 | W | 247 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 28 | BT

**Ramos, Jeanne — Administrator, Los Angeles USD**

**Developing Algebraic Thinking and Academic Language**

Participants will engage in activities that build students' access to and confidence in doing rigorous mathematics, in particular for English learners, through problem-solving tasks that develop algebraic thinking and academic language proficiency. Tasks will embed multiple standards for mathematical practice.

6-8 | INT | 447 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 28 | BT

**Ray-Riek, Max — Project Manager, The Math Forum at NCTM**

**3 People + 10 Stools + 12 Beads = Thinking and Learning**

This session attempts to use three people, ten stools, and 12 beads to start answering the following questions: - Why is it useful for teachers to spend time working on challenging problems?

- How can we get better at recognizing and describing good thinking and thinking skills? - What are routines and strategies for focusing on thinking? - What does it mean to learn a new way of thinking in math? - Oh, and we'll also answer a question about secret rites at a mysterious meeting of math teachers!

GI | INT | 518 | Saturday, 3:30 - 5:00 | Asilomar | Merrill Hall | BT

**Reichel-Howe, Lorie — Staff Development Trainer, Teach2Excel**

**How Does a Math Teacher Handle That?**

Successful educators develop the communication skills needed for respectfully and effectively responding in conflict-filled situations where opinions differ, emotions run strong, and where stakes are high. Whether meeting with parents, team members, or administrators, your response determines whether conflict will be escalated or deescalated, whether issues remain unresolved or respectfully addressed, and whether progress is halted or achieved.

Ldrshp | INT | 516 | Saturday, 3:30 - 5:00 | Asilomar | Nautilus East | BT

**Resek, Diane — Professor Emerita, San Francisco State Univ**  
**Measuring in the Round: A Concrete Introduction to Radians**

Participants will work in groups to construct a measuring tape whose unit is one radius of their chosen circle. On graph paper, they will make a circle the same size and will mark points on the circle indicating different angles, using their measuring tape to measure the arcs, and thus, the radian measure, for those angles. Then using the tape and the circle they will construct graphs of the sine, cosine, and tangent functions.

8-12 | INT | 255 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 37 | BT

**Restivo, Nicholas — Executive Director, MOEMS**

**Understand the Mysteries of Geometry by Constructing a Box**

Transform greeting cards into boxes to discover and refine geometry concepts and definitions, make conjectures, and entertain questions about parallelograms, rectangles, squares, and quadrilaterals. Utilize ratio, proportion, area, and volume to focus on their relationships while participating in this highly interactive hands-on activity to bring back to your classroom. This activity transfers well for use in events outside of the regular classroom with parents alongside students.

6-8 | INT | 531 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 1 | BT

**Roberts, Christine — Mathematics Curric. Specialist, Tulare COE**  
**Structuring Tasks to Engage Students in Productive Struggle**

How do you support students while doing challenging tasks? Do they work hard and focus on the task at hand or do they get frustrated and give up? We will explore ways to select and structure tasks to engage your students in productive struggle. Redefine the role that effort and struggle play in learning mathematics in your classroom. Learn strategies to help students build perseverance as they make sense of and solve problems.

3-5 | INT | 503 | Saturday, 3:30 - 5:00 | Asilomar | Heather | BT

**Rock, Monica — Coordinator of Curric. and Inst., Hayward DO**  
**Modular Origami**

Origami is a perfect vehicle to engage students while at the same time enhancing their mathematical skills. Origami touches on Geometry, Fractions, Thinking Skills and Problem Solving. In this make and take you will learn folding techniques while creating a cube and a stellated star. So come create and learn about this amazing art.

3-8 | MITI | 236 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 7 | BT

**Rodgers, Sherry — Shasta COE**

**Newcomers' Session**

Are you new to Asilomar? Come for a 20 minute repeating presentation on how to navigate your first conference at Asilomar. We will show you all you need to know!

GI | PRS | 115 | Saturday, 8:00 - 9:00 | Asilomar | Triton | BT

**PROGRAM CHANGES**

Although this book contains the latest information available as of the printing deadline, some last-minute changes are inevitable. We apologize for any inconvenience that may result, and we appreciate your understanding.

**Rodriguez, Marin****Building Number Sense with Math Games**

Prime numbers are a fundamental building block of math. In this hands-on workshop, we will get to know primes using card games that will build your students number sense in many of the key middle school concept areas. You will take away a games template that will help with mental multiplication skills, exponential notation, prime factorization, factor pairs, greatest common factor, least common multiple/denominator, understanding the concept of relatively prime, and simplifying fractions.

6-8 | MITI | 536 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 7 | BT

**Rossi Becker, Joanne — Professor Emerita, San Jose State Univ****SMPs 7 and 8: Seeing Structure and Generalizing in Geometry**

This session focuses on a rich problem in geometry that provides the opportunity to engage in Math Practices 7 & 8: Seeing Structure and Generalizing. Participants will work on a basic rich problem and generalize the solution. Then in groups they will examine middle school students' work on the same problem, analyze and discuss what the students did and did not understand, and develop formative assessment feedback a teacher might give to those students.

6-8 | INT | 557 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 28 | BT

**Roth, Marc — SFUSD****Completing the Square Backwards**

Participants will work through an extensive unit that features two visual aids to the difference of 2 squares identity. This culminates in a little known Babylonian approach to solving quadratic equations and deriving the quadratic formula. This approach bridges the gap between the two common methods: factoring and completing the square. Many reproducible worksheets will be provided. The materials have been used very successfully in the San Francisco Juvenile Justice Center.

8-12 | MITI | 544 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 25 | BT

*Co-presenter: Marc Roth*

**Ruesch, Jeremiah****Wonder Dots**

Attendees will have a CUE Rockstar experience as the Standards for Mathematical Practice come alive in this session. We will engage in pattern recognition, creating number sentences, and communicating our work. Attendees will walk away feeling like a CUE Rockstar with a variety of resources and be able to implement these strategies the next day. Although learners of all ages will enjoy this session, the focus will be in the primary grade levels kinder to 4th grade.

PK-5 | INT | 406 | Saturday, 1:30 - 3:00 | Asilomar | Scripps Conference

**Salguero, Katie — Research Associate, WestEd****Effective Teaching Practices that Support Students with SMPs**

How can teachers support students to enact the Standards for Mathematical Practice? How can we engage students in discourse where they will construct viable arguments and critique the reasoning of others? In this session, we focus on three Effective Teaching Practices from NCTM's Principles to Actions publication and how they support students to engage in Standards for Mathematical Practice. Teachers will have the opportunity to explore these teaching practices and connect them to the SMPs.

3-8 | INT | 510 | Saturday, 3:30 - 5:00 | Asilomar | Curlew | BT

*Co-presenter: Angela Knotts — Research Associate, WestEd*

**Sassone, Kelly Ann — Da Vinci Schools****Building Mathematical Literacy with Subitizing Games**

Decomposing and composing numbers, counting on, and number conservation are numeracy skills acquired through subitizing. Subitizing helps build the foundation for mathematical literacy. These highly engaging subitizing games, number talks, and teaching strategies will build number sense and algebraic thinking, while bringing meaningful play and deeper learning to the classroom. While students play easily differentiated games, teachers can gather authentic data to drive their instruction.

PK-2 | MITI | 355 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 37 | BT

**Schaffer, Karl — Professor, De Anza College****Rhythm and Dance Math**

Whole-body rhythm activities and clapping games help us gain insight into mathematical concepts such as least common multiple, number properties, and aspects of patterning. We will see how to engage students using rhythmic dance and movement activities that develop their understanding of these concepts, and we will explore ways to extend these ideas using four basic operations: addition, multiplication, tessellation, and permutation! These activities help students experience the "A" in STEAM!

GI | INT | 240 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 13 | BT

**Schierer, James — King City HS****Pushing Up Polynomials**

In this session we will look at a table of daily push-ups that will show the progression of polynomials from linear to cubic. We will also show how the explicit and recursive forms come out of the table and graph. Participants will work from an initial table and linear graph, then by totaling the daily results discover the quadratic and on to a cubic equation and graph. The session will also showcase how one standard can build on itself over a three year program.

8-12 | INT | 346 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 27 | BT

*Co-presenter: Jennifer Beach — Math Teacher, King City HS*

CMC North Conference 2016 Going Mobile with EduPlus


**CMC North Mathematics Conference 2016 goes mobile with EduPlus**

Download EduPlus from the App Store, Google Play, or at <http://e.confplusapp.com/>. And be sure to visit <http://event.confplusapp.com/cmcn16/> to get a preview of the EduPlus features. Search sessions, create your own schedule, get notifications and evaluate sessions.



**Schleth, Elizabeth — Petaluma HS****Come Play Some High School Classroom Games With Us!**

Our students develop fluency, learn strategies and concepts when playing games that use math. You'll play our favorite games Rock, paper, scissors; fancy tic-tac-toe, and more! We'll share our student's mathematical thinking that's developed and share how our students learn to read directions, teach games to others, and shift thinking about what mathematics is. We will share how and when we use games in our classrooms and with families. You might enjoy the ComMuniCator special edition on Games!

8-12 | INT | 142 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 22 | BT

**Schultz, Tammy — Monterey Bay Area Math Project****Making Sense of Fractions**

Participants will learn how to move beyond tricks, rules, pizzas, and pies towards the development of deep conceptual understanding of fractions. Using the eight mathematical practices, Cognitively Guided Instruction techniques, number talks, and inquiry-based tasks, teachers will learn how to create a mathematical space for students to use their natural intuition of fractions from their life experiences. We will also explore and analyze a variety of student strategies.

3-5 | INT | 407 | Saturday, 1:30 - 3:00 | Asilomar | Acacia | BT

**Selby, Victor — Curriculum Consultant, Carmel HS (Ret)****Integrating Six Great Scientific Models into Common Core**

This session will show the power and reality of mathematics as the language of science. These awe inspiring moments, from the use of proportions by Eratosthenes to calculate the size of the earth to Einstein's time dilation formula, from Zeno to Newton's idea of limits, will show how math is a crucial symbol system. Topics will include the first calculations of the distance to the moon and the speed of light. Participants will receive a copy of my book "Mathematics and The Human Condition."

8-12 | PRS | 554 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 36 | BT

**Shore, Chris — The Math Projects Journal****The Clothesline: Algebra, Geometry, Statistics on the Line**

This dynamic number line is the Master Number Sense Maker. Help students enhance numeracy, make sense of variables, develop proportional reasoning and increase understanding of statistical measures. This manipulable tool will blow your mind; I promise. [clotheslinemath.com](http://clotheslinemath.com)

8-12 | INT | 560 | Saturday, 3:30 - 5:00 | PG Middle School | Library | BT

**Short, James — Math Coordinator, Ventura COE****Intuition to Formal Math: Engaging Contexts Math Practices**

Engaging students in interesting contextualized problems gives opportunities to develop math practices to build conceptual understanding and then formal mathematical ideas. Experience classroom activities in algebra and statistics that do just that!

8-12 | INT | 444 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 25 | BT

**Shumate, Linda — Shasta COE****Newcomers' Session**

Are you new to Asilomar? Come for a 20-minute repeating presentation on how to navigate your first conference at Asilomar. We will show you all you need to know!

GI | W | 135 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 6 | BT

GI | PRS | 15 | Friday, 1:30-4:30 | Asilomar | Triton

**Silver, Jody — Math Coach, Alvarado ES****Children's Lit Is Not Just for the Primary Crowd**

There is a plethora of children's literature out there that is ripe for the teaching in intermediate grade math classes. Children's literature can be a great hook for the reluctant mathematician in your class. Join us for a hands-on session where we'll read literature, participate in some activities, and talk about how the books and activities tie into the Standards for Mathematical Practice as well as the content standards.

3-5 | MITI | 533 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 4 | BT

Co-presenter: Katharine Trettin — Teacher, New Haven USD

**Smith, Keith — Education Programs Consultant, California Department of Education****Fraction Operation Resources in the Digital Library**

In this session, participants will engage with several activities designed to develop students' understanding of fractions as numbers and to extend their knowledge of operations with whole numbers to operations with fractions. These activities are a sampling of the formative assessment resources available to California teachers in the Smarter Balanced Digital Library. The workshop will include a demonstration on how to access and use the Digital Library.

3-5 | INT | 358 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 23 | BT

Co-presenter: Emily Oliva — Education Programs Consultant, California Department of Education

**Sommer, Miriam — Adele Harrison MS****Balancing Assessment for Understanding, Knowledge and Skills**

What do you know about what your students really know? At Trellis Education, we are using the big ideas and essential questions of content units to guide the writing of our assessments. We'll introduce a systematic way to assess what students understand about the concepts, what they know, and what they can do. We will immediately put into action a process that you can take with you for any content unit. If you're able to bring an assessment you have used in the past, it's a great starting point!

GI | INT | 454 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 36 | BT

Co-presenter: Krista McAtee — Math Coordinator, Sonoma Valley USD & Trellis Mentor Fellow, Sonoma County Math Council

Hashtag **CMCMATH**

**Southam, Jon — Sonoma Valley HS****Making Sense of Statistics**

The CCSS contain a substantial amount of statistics in the secondary grades with the intention of preparing students to be statistically literate in our world of big data. Are we ready to instruct students in this area? In this session, not only will we look at these standards for secondary schools, but attendees will participate in statistics activities that require abstract reasoning, constructing arguments, and modeling with mathematics.

8-12 | INT | 415 | Saturday, 1:30 - 3:00 | Asilomar | Triton | BT

*Co-presenter: Tammy Rivara — Teacher, Sonoma Valley HS*

**Stadel, Andrew — Digital Learning Coach, Tustin USD****Boost Conceptual and Procedural Fluency with Rich Tasks**

Would your students benefit from rich number sense tasks connected to ratios, proportions, expressions, solving equations, functions, and more? Come participate in hands-on tasks that provide students with opportunities to use their own reasoning strategies and methods for solving problems that coherently build conceptual understanding and procedural fluency.

6-8 | INT | 453 | Saturday, 1:30 - 3:00 | PG Middle School | Auditorium | BT

**Standiford, Gail****Transforming with Desmos**

Bring your own device to learn how to use tables and lists to explore transformations in Desmos. This session will help beginning and experienced teachers learn how to use this powerful software to teach transformations conceptually.

8-12 | INT | 307 | Saturday, 11:00 - 12:00 | Asilomar | Acacia | BT

**Starnes, Daren — The Lawrenceville School****Statistics for Common Core and SAT: Understanding Inference**

This session will focus on the statistical inference components of the Common Core State Standards and the Redesigned SAT. Participants will engage in activities that highlight inferential thinking in sample surveys, observational studies, and experiments. We'll use simulations to model random sampling and random assignment, and to highlight the underlying logic of inference for confidence intervals and hypothesis tests. The appropriate scope of inference for each study will be discussed.

8-12 | INT | 410 | Saturday, 1:30 - 3:00 | Asilomar | Curlew | BT

**Stone, Robyn — Harker School****Mathematize This!**

Math is hiding in unexpected places! In this workshop, we will discover how to "mathematize" classroom stations, playtime, and even transition time. Participants will learn effective math vocabulary to mathematize moments throughout the day. Participants will engage in hands-on, early math activities they can implement in their own classrooms. Big ideas of all math strands will be explored: number sense, geometry, algebraic thinking, measurement, and mathematical reasoning.

PK-2 | INT | 408 | Saturday, 1:30 - 3:00 | Asilomar | Toyon | BT

**Sulsberger, Megan — Cal State Monterey Bay****Pre-Service Teachers: Math Identity Matters**

This session will first explore the concept of "Math Identity" and why understanding pre-service teachers' math identities is important for educators working with pre-service teachers. Some useful techniques for collecting and analyzing pre-service teachers' math identities will be presented as they have been successfully implemented in my math methods courses and research. Finally, some powerful approaches to improving pre-service teachers' self-perceptions as math teachers will be discussed.

Tchr Ed | PRS | 109 | Saturday, 8:00 - 9:00 | Asilomar | Marlin

**Szoke, Noam — Math Content Specialist****Access and Equity in Elementary Mathematics**

In this session we will share the work we are doing in San Francisco to create, support, and sustain a culture of access and equity in our Elementary Schools. We will present elements of our district curriculum, pedagogical support, and professional development that help teachers and schools ensure that all students have access to a challenging math curriculum by redefining who is and isn't good in math and using a strengths-based lens to look at our students and their mathematical thinking.

PK-5 | INT | 148 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 29 | BT

*Co-presenter: Kelli Riggs Swaicha Chanduri — Math Content Specialist Cohort 4, San Francisco USD*

**Tamez, Modesto — Exploratorium****Mathematics of Sound and Hearing**

This session is designed to find the simple mathematics of sound and hearing. Using simple inexpensive materials i.e. scissors, tag board, pvc pipes, etc. and combining this with smart phone technology the teachers will have a suite of activities that will be engaging for the students and simultaneously have the students see the mathematical relationship to sound and hearing. One powerful new activity is to use simple curves to produce paper horns for listening and producing loud sounds.

3-8 | MITI | 210 | Saturday, 9:30 - 10:30 | Asilomar | Curlew | BT

**Taylor, Megan — CEO & Founder, Trellis Education****Teaching as a Lab for Learning**

Accomplished math teachers make teaching look easy. But what are they really doing that is so effective? In this session you will explore core teaching practices for mathematics that have the biggest bang for their buck in terms of student learning. Then we'll engage in lightning-round cycles of planning and rehearsing instructional activities with one another. You'll leave having seen measurable change in your teaching practice and with a process for continuing your growth. Plus it will be FUN!

8-12 | INT | 203 | Saturday, 9:30 - 10:30 | Asilomar | Heather | BT



@CAMathCouncil

**Thompson, Angela — Assistant Professor, Governors State Univ**  
**All Students Learn through Reflective Writing...On Exams**

Reflective writing on a math exam leads to student development of 1) productive struggle, 2) mathematical reasoning and problem solving, 3) conceptual understanding, and 4) correcting errors. The most striking results come from students who struggle in mathematics assessed in more traditional formats. We connect our assessment activity to research and mathematical standards, provide examples of writing prompts with student responses, and discuss ways to re-imagine best practices on assessments.

8-12 | PRS | 347 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 28 | BT

Co-presenter: Michelle Hale — Preservice Teacher, Governors State Univ

**Torres, Angela — Math Content Specialist, San Francisco USD**  
**Launching Math Tasks to Engage All Students**

Launching can be just as important as the rich math task put in front of kids. How can a launch give students more access to tasks and support interdependence in group work? Come and experience the excitement a research-based launch from Complex Instruction brings to the mathematics. See how the launch can engage all students and help them recognize the strengths they and their peers bring to the task. Find out how this strategy can be applied to tasks K-12.

GI | INT | 555 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 37 | BT

Co-presenter: Noam Szoke — Math Content Specialist, San Francisco USD

**Trevino, Emma — SFUSD**

**Analysis and Reasoning**

Mathematically proficient students need to develop the academic language to communicate their reasoning as they construct viable arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. Also, they need to understand each others' ways of thinking about mathematics. During this session, we will explore how academic language and mathematical reasoning intersect in students' arguments.

GI | PRS | 505 | Saturday, 3:30 - 5:00 | Asilomar | Evergreen

Co-presenter: Carmen Whitman

**Trinkle, Mary — Costa<sup>√</sup>to Elementary School**  
**Inquiry-Based, Student-Centered Mathematics: How to Do It?**

The challenge to balance mathematics instruction is a constant struggle for teachers. How do we make sure students are building conceptual understanding and fluency? How do we balance practice and word problems? How do we provide opportunities for students to use the mathematical practices? In this session, we will focus on how to incorporate balanced instruction to improve students' mathematical learning. We will discuss how to structure mathematics using an inquiry-based mathematics classroom.

PK-5 | INT | 117 | Saturday, 8:00 - 9:00 | Asilomar | Nautilus West | BT

Co-presenter: Melissa Moore — 1st Grade Teacher

**ELECTRONIC DEVICES**

Out of respect for presenters and other participants, please turn off electronic devices during sessions.

**Tucker, Deborah — Independent Science Education Consultant**  
**Connect Math With Next Generation Science Standards (NGSS)**

Explore hands-on science instruction and its relationship to students' mastering Common Core Math Standards and Next Generation Science Standards. Learn various uses and purposes of hands-on science assessment and several math and English language arts connections to science.

3-5 | INT | 543 | Saturday, 3:30 - 5:00 | PG Middle School | Rm 24 | BT

Co-presenter: Grant Gardner — President and CEO, Assessment Services, Inc.

**Vierra, Vicki — K-12 Math Specialist, Ventura COE**  
**Fluency Founded on Number Sense**

Fluency is deeper than "fast facts." Help your students develop a flexibility with numbers built on conceptual understanding. Make depth, not speed the goal of problem solving through tasks and games that engage students' mathematical reasoning.

3-8 | INT | 457 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 39 | BT

**Waldman, Brian — Math Coach**

**Promoting Discourse for ELLs in Heterogeneous Small Groups**

Effective collaborative group work is dependent on peer-to-peer discourse. With strategic interventions and thoughtful community building around mathematics, English Language Learners can be active participants in diverse small group structures. We will discuss how to build and sustain the engagement of ELLs in heterogeneous small groups by tapping into the strengths that they and their peers bring, and by utilizing classroom structures and strategies to strengthen communication about math.

6-8 | PRS | 150 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 32 | BT

**Wallace, Matt — UC Davis**

**Using Tests to Promote a Growth Mindset**

If it's worth promoting the idea that mistakes are valuable in math class, then it's worth making mistakes valuable learning opportunities on math tests. This session will discuss the importance of aligning classroom tests with growth mindset classroom practices, as well as focus on test, feedback, and grading practices that promote a growth mindset. Test, rubric and narrative examples of these practices will be provided and ways to begin using these ideas in one's own classroom will be shared.

GI | PRS | 335 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 6 | BT

**Wedel, Christine — Albert F. Biella ES**

**Come Play Some Games With Us!**

Our students develop fluency, learn strategies and concepts when playing games that use mathematics. You will play our favorite games. We will share our students' mathematical thinking that has developed and also share how our students learn to read directions, teach games to others and shift their thinking about what mathematics is. We will share how and when we use games in the classroom and with families. You might also enjoy the ComMuniCator special edition on Games!

PK-5 | INT | 342 | Saturday, 11:00 - 12:00 | PG Middle School | Rm 22 | BT

**Weimar, Stephen — Director, The Math Forum at NCTM**  
**How Does One Get Better at Mathematical Thinking?**

The mathematical practices are important, not only in their own right, but also as key processes for learning content. Getting good at mathematical thinking requires building out a vocabulary for types of thinking and developmental trajectories for the practices that are as rich as what is developed on the content side. We will share work at the Math Forum that goes beyond problem solving to help teachers scaffold the improvement of mathematical thinking that leads to increased learning.

6-8 | INT | 517 | Saturday, 3:30 - 5:00 | Asilomar | Nautilus West | BT

**Weker, Ethan — Mid-Peninsula HS**

**Get Your Students Talking: Introducing Debate to Math Class**

What is the value of  $0/0$ ? Is there a better order for Order of Operations? Is math invented or discovered? Embracing these questions leads to new and better understanding of mathematical concepts. Watch a demo debate, learn how to structure debates in your math class, and then introduce the fun of arguing to your students. Debating in math class is a novel way to “Construct viable arguments and critique the reasoning of others,” as described in Math Practice 3.

8-12 | PRS | 304 | Saturday, 11:00 - 12:00 | Asilomar | Oak Shelter | BT

Co-presenter: Noirin Foy — CC8, Algebra & Geometry Teacher, Los Altos SD

**Weltman, Anna — Student**

**Inspire Inquiry, Bridge Math and Art: Seeing Stars in GCD**

We know the mathematics we teach is important. But how can we get our students to ask the questions that drive it? The Common Core Math Practices push us to design tasks that inspire our students to wonder, conjecture, and use math to answer questions they care about. In this session, we will explore how bringing art into math class can promote inquiry. We'll focus on a math concept important in late elementary- greatest common divisor- but the design principles will go beyond a single lesson.

3-8 | MITI | 248 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 29 | BT

**Wilkins, Christi — Executive Director, Dramatic Results**

**From Virtual to Visual: Weaving Art into Applied Mathematics**

What ancient art form provides fresh drinking water, can hold 500 people at one time and feeds people around the globe every day? Come experience a hands-on 3D digital/analog integrated program for 3-5th graders that makes learning STEAM relevant and engaging and results in 20+ point gains in their math performance. Participants will explore both historic and contemporary uses of weaving in architecture and astronomy while applying CCSS Math practices to create their own colored reed basket.

3-5 | INT | 136 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 7 | BT

**Winicki Landman, Greisy — Cal Poly Pomona, Math Dept**  
**At the Intersection of Not Very Traveled Roads**

In this session the regular pentagon will be the master of ceremonies guiding our integration of school mathematics with the Mathematical Practices and the Habits of Mind. We will create meaningful connections among school ideas, between mathematical ideas and other subjects, and with daily life. Come ready to notice, wonder, discover and play with great school mathematical ideas.

8-12 | INT | 243 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 24 | BT

**Yu, Julie — Senior Scientist, Exploratorium**

**Geometry of Nature: Exploring Patterns, Shapes and Symmetry**

Using naturally occurring examples of patterns, shapes, and symmetry can provide context for concepts learned in a traditional geometry class. This workshop will present hands-on activities to explore macroscopic and microscopic examples of geometry in nature. By interacting directly with different phenomena, students can discover how geometry affects our world. Teachers will gain concrete ideas of how to integrate patterns and symmetry from nature into their classes.

8-12 | INT | 208 | Saturday, 9:30 - 10:30 | Asilomar | Toyon | BT

**Zager, Tracy — Math Coach, Rollinsford Grade School**

**Gut Instincts: Developing All Students' Math Intuitions**

We've long misunderstood mathematical intuition, assuming it's innate rather than developed through high-quality learning experiences. As a result, students who haven't yet had opportunities to foster their intuitions are often denied access to meaningful math. We'll explore techniques that empower all students to grasp math intuitively: playing with new concepts to develop instincts; internalizing the habit of thinking about reasonableness; and refining intuition through metacognitive practice.

GI | INT | 431 | Saturday, 1:30 - 3:00 | PG Middle School | Rm 1 | BT



~ Name badges ~  
 Name badges must be worn at  
 all times while attending the conference.  
 Badges are required for entry into the  
 sessions and the exhibit hall.

**SESSION CAPACITY/SEATING**

We have made every attempt to provide adequate seating for participants at the conference. However, to ensure your safety and adhere to fire regulations, the number of participants allowed in each meeting room will be limited to the number of seats approved by the Fire Marshall. Anyone sitting on the floor or standing will be asked to leave the room. Please check the Program Matrix for the seating capacity of each room. All seats are available on a first-come, first-served basis.



## SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchr.	Comm. Product
		K-2	3-5	6-8	8-12	Ldshp/TchEd	GI		
Albrecht, Masha	Summative Assessment Without Testing: Successful Examples				√			√	
Alcossar, Howard	I Love My AP Calculus Class!				√				
Allen, Mani	Students with Possibilities Can Show Their Thinking	√	√					√	
Amarasinghe, Rajee	Essential Math Concepts for Preservice Teachers	√	√	√					
Anderson, Jody	Spring into Common Core Concept Lessons Using Math and Reading	√						√	
Anspach, Chris	Developing Problem Solving and Conceptual Understanding				√			√	
Arth, Karen	Understanding the Tangent Ratio and its Connection to Slope				√			√	√
	Mathematical Fun with Bubbles, Wind-up Trains and Blocks			√				√	√
Baker, Elizabeth	Group Work Strategies		√	√					
Bales, Janet	Growth Mindset in a Blended Learning Environment			√				√	√
Balli, Jessica	Smarter Balanced: Lessons from Writing Performance Tasks						√	√	
Barlow, Rick	Building Understanding Through Discourse				√			√	
Beatini, Tom	Making Connections and Building Bridges with Algebra Tiles			√				√	
Biagetti, Stephanie	Using Math Conversations to Target the ELD Standards	√	√					√	
Biehl, Chuck	Discrete Math Modeling: Learn and Live to Serve!				√			√	
Blaschke, Mike	Screencasting and Story Boarding for Argument Construction			√				√	√
Blass, Lindsey	Rock Star Blended Learning in Math		√	√				√	
Brown, Kyndall	Multiple Representations to Support Modeling			√				√	
Brownell, Christopher	Sparking Engagement in Multiplicative Thinking Via Doubling		√	√				√	
Burns, Brian	Picking Out the Mathematical Practices						√	√	
Burrill, Gail	So You Have to Teach Statistics: Some Strategies to Help			√				√	
	Mathematical Practices for Calculus				√			√	
Cagle, Peg	Rich Tasks = Landmarks for Student Navigation of Math Learning				√			√	
Callahan, Patrick	Algebra: Why It Is Destroying America?						√	√	
Campos, Edward	360 Degree Math: Classroom rEVOLUTION						√		
Carlyle, Ann	Ten Frames, Number Lines and Rekenreks	√						√	
Carr, Janice	Real-World Math for Earth's Sake			√				√	
Carroll, Cathy	Fluency, Discourse, and Standards for Mathematical Practice		√					√	
Champagne, Zachary	Informing Practice Through Research: Ten Lessons								
	From One to Infinity: Learning to Count, When it Counts	√	√						
Chappill-Nichols, Shalek	Expressing Creativity Using Math	√						√	
Cheng, Ivan	Guiding Students to Those Aha Moments Without the Ughh!			√				√	
Chialvo, Federico	Young Mathematicians and the Thrill of Mathematical Discovery	√	√					√	
Conde, Alma	Come Play Some Strategy Games With Us!		√	√				√	
Cook, Marcy	Engage All Students in a Thinking Mathematics Classroom		√	√				√	
	Problems Worth Puzzling for Primary Pupils	√						√	

## SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchrs.	Comm. Product
		K-2	3-5	6-8	8-12	Ldship/TchEd	GI		
Costa, Elmano	English Learners and Math Practices: Challenging But Possible!						√	√	
De Anda, Juana	Come Play Some (grade level) Classroom Games with Us!	√						√	
DeCarli, Elizabeth	Strategic Use of Technology Tools in High School Statistics				√			√	
Dell, Chris	STEM in the Math Classroom				√			√	
Diaz Bonilla, Jesus	Taking the Lesson Out of the Classroom				√			√	
Dickenson, Patricia	Exploring the Mathematics Practice Standards with Web-Tools						√	√	
Dorman, Brandon	Managing Technology for MP3						√	√	
Douglas, Lew	A Transformational Approach to Proof in High School Geometry				√				
	A Deep Dive Into Transformational Proof in HS Geometry				√				
Druitt, Emma	Finally! Giving Students the Voice in Mathematics Classrooms					√			
Duri, Lynn	Come Play Some Math Games With Us!	√	√					√	
Erickson, Tim	Connect Functions and Geometry with Data and Modeling				√				√
Farrand, Scott	Setting Up Surprises in Calculus				√			√	
Fender, Tierra	Supporting Learning Communities			√				√	
Fenton, Michael	Principles for Building and Using Effective Digital Tasks				√			√	
Fetter, Annie	Sense-Making: Is It at the Core of Your Classroom?						√	√	
Fitzgerald, Tanisha	Logarithmic Earthquake Project: Algebra 2 Project with Real				√			√	
Foy, Noirin	Co-Teaching: Mathematical Practices For All Students			√				√	
Frandsen, Eric	Designing Experiences for Effective Student Communication					√			
Fry Bohlin, Carol	Math Courses and Programs for Prospective Gr. 6-9 Teachers					√			
Fulton, Brad	S.T.E.M. on a Shoestring		√	√				√	
Gale, Mardi	Coaching/Being Coached for the SMPs: Essential Elements						√	√	
Gamino, Elizabeth	Productive Struggle in PreK-TK	√							
Garner, Jamie	Number Talks: Making the Math Visible with Models	√	√					√	
Garrison, Danielle	Inquiry, Investigations and Explorations		√	√				√	
Giganti, Paul	Discovering Area Formulas		√	√				√	
Gojak, Linda	So You Think You Have (Math) Problems!	√	√					√	
Goldenstein, Donna	Enriching the Geometry/Measurement CCMS Content Through Art		√	√				√	
Goldfield, Dan	The Math of Nature				√			√	
Gomez, Emiliano	Transformational Geometry and Dynamic Software				√			√	
Grip, Bruce	Mathematical Modeling in the Classroom and Life				√			√	
Hagman, Jennifer	The Power of Feedback		√	√				√	
Hakansson, Susie	Fractions On the Number Line for All Students		√					√	
Heigre, Beverly	The Architecture of Tom Jefferson: Integrating Math, Science				√			√	
Hein deMause, Jennifer	After the Bell: The Math Practices in After-School Programs					√			
Henwood, Cory	Empowering Collaboration in 3 Acts						√	√	

## SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchr.	Comm. Product
		K-2	3-5	6-8	8-12	Ldshp/TchEd	GI		
Hull Barnes, Elizabeth	What Do the Students Think Discourse is For?					√		√	
Humphreys, Cathy	Cultivating Agency and Authority Through Number Talks				√				
Ichinose, Cherie	Survey Said! Playing Family Feud to Spark Engagement				√			√	
Jackson, Brent	Make the Way: Student Agency, Authority and Identity (AAI)					√			
Jarry-Shore, Michael	An Exploration of the Cartesian Plane Through Beading		√	√				√	
Kassab, Lara	Justifying Reasoning: What Are Our Students Missing?				√			√	
Kelemanik, Grace	Meet the Needs of All Students Thru Instructional Routines			√					
	Routines for Reasoning Fostering SMPs in All Students		√	√					
Khalsa, Arjan	Digital Tools + Three-Act Tasks: Marriages Made in the Cloud		√					√	
Khare, Deepti	Text Access Through Active Reading Strategies								
Knight, Kimberly	Integrated STEM Lessons as Model Eliciting Activities		√	√				√	
Kotko, Andy	Math Talks and Other Routines that Foster Number Sense	√						√	
Kriegler, Shelley	Proportional Reasoning: Three Strategies to Spark Engagement			√				√	√
Kysh, Judy	Teach Problem Solving Strategies So All Succeed in Algebra				√			√	
LaBelle, Laura	Building Measurement Lessons While Moving Full STEAM Ahead		√	√				√	
Lambertson, Lori	Exploring Math and Science w/Exploratorium "Snack" Activities				√			√	
Lane, Matthew	The Mathematics of Voting						√	√	
Lau, David	Calculus Applied to Business, Economics, and Finance				√			√	
Lazzarini, Jeanne	Let's Link Mathematical Practices with Financial Literacy!			√				√	
Lecheler, Tony	Geometry City Project: STEAM Geometry Project with Real App				√			√	
Leinwand, Steven	Rich Tasks + Just the Right Questions = Classroom Magic						√	√	
Liu, Celine	Math AND Science, Not Math OR Science!		√					√	
Luberoff, Eli	Knocking Down Barriers with Technology						√		
Magner, Philip	Finding PI While Regressing				√				√
Manion, Laura	Equity and Social Justice Projects and Middle School Math		√	√				√	
Matthews, Mary Elizabeth	Developing Teacher Argumentation Using Technology					√			
McAtee, Krista	Teachers Multiply Our Power to Maximum Learning!						√		
McNamara, Julie	For Your Eyes Only: Video as a Tool for Personal Reflection					√			
	Beyond Invert and Multiply: Understanding Fraction Computation		√					√	
Meyer, Dan	Math is Power Not Punishment						√	√	
	Practice Problems						√		
Moore, Danielle	Practices to Support Independent Problem Solving	√	√					√	
Moore, Sara	Operations to Algorithms: Building from Repeated Reasoning		√	√				√	
Morris, Kathy	Fractions: Improving Understanding by Seeing Them as Numbers		√					√	
Morrison, Patty	Integrating Math and Literature in the PK-1 Classroom	√						√	
Moskowitz, Stuart	64=65 and Fibonacci, as Studied by Lewis Carroll				√			√	

## SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchr.	Comm. Product
		K-2	3-5	6-8	8-12	Ldshp/TchEd	GI		
Mulhearn, Dennis	Use Cubes as a Setting for Your Problem Solving		√	√				√	
Muller, Eric	Feeling Pressured: The Amazing Math of Air Pressure						√	√	
Myers, Kyle	iRobot! Do You?	√	√					√	
Nank, Sean	Speed Kills...Student Achievement: What's the Alternative?	√	√					√	
Newell, Christine	This Math Was Made for Talking: Targeting Math Discussions	√	√					√	
Nguyen, Fawn	Computational Thinking as a Problem-Solving Strategy			√					
Nguyen, Ho	Detracking: The Ongoing Work to Support Heterogeneous Classes					√			
Nickerson, Rob	Empowering Mathematical Thinking	√	√					√	
Pauls, Steve	Using Graphical Analysis to Make Sense of Real Data			√				√	
Paulus, Chris	Mathematics Practices? Interactive Mathematics Program				√				
Picciotto, Henri	Computing Transformations Using Complex Numbers and Matrices				√			√	
Pickford, Avery	Cafe Patternea: A Project-Based Introduction to Algebra				√				
Pickford-Murray, Breedeen	Beyond Sudoku: Using Logic Puzzles to Develop Math Reasoning				√				
Preston, Robert	Division: Let's Help Students Make Sense of It		√					√	
Pugalee, David	Writing and Thinking in Math Class to Support Mathematical Practices		√	√				√	
Ramirez, Nora	Using Problem Solving to Engage ELs in the Math Practices		√	√				√	
Ramos, Jeanne	Developing Algebraic Thinking and Academic Language			√				√	
Ray-Riek, Max	3 People + 10 Stools + 12 Beads = Thinking and Learning						√	√	
	Students' Methods: Linking Concept and Procedure in Fraction, Division and Beyond		√	√					
Reichel-Howe, Lorie	How Does a Math Teacher Handle That?					√		√	
Resek, Diane	Measuring in the Round: A Concrete Introduction to Radians				√			√	
Restivo, Nicholas	Understand the Mysteries of Geometry by Constructing a Box			√				√	
Roberts, Christine	Structuring Tasks to Engage Students in Productive Struggle		√					√	
Rock, Monica	Modular Origami		√	√				√	
Rodgers, Sherry	Newcomers' Session						√	√	
Rodriguez, Marin	Building Number Sense with Math Games			√				√	
Rossi Becker, Joanne	SMPs 7 and 8: Seeing Structure and Generalizing in Geometry			√				√	
Roth, Marc	Completing the Square Backwards				√			√	
Ruesch, Jeremiah	Wonder Dots	√	√						
Salguero, Katie	Effective Teaching Practices that Support Students with SMPs		√	√				√	
Sassone, Kelly Ann	Building Mathematical Literacy with Subitizing Games	√						√	
Schaffer, Karl	Rhythm and Dance Math						√	√	
Schierer, James	Pushing Up Polynomials				√			√	
Schleth, Elizabeth	Come Play Some High School Classroom Games With Us!				√			√	
Schultz, Tammy	Making Sense of Fractions		√					√	



## SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchr.	Comm. Product
		K-2	3-5	6-8	8-12	Ldshp/TchEd	GI		
Selby, Victor	Integrating Six Great Scientific Models into Common Core				√			√	
Shore, Chris	The Clothesline: Algebra, Geometry, Statistics on the Line				√			√	
Short, James	Intuition to Formal Math: Engaging Contexts Math Practices				√			√	
Shumate, Linda	Newcomers' Session						√	√	
Silver, Jody	Children's Lit Is Not Just for the Primary Crowd		√					√	
Smith, Keith	Fraction Operation Resources in the Digital Library		√					√	
Sommer, Miriam	Balancing Assessment for Understanding, Knowledge and Skills						√	√	
Southam, Jon	Making Sense of Statistics				√			√	
Stadel, Andrew	Boost Conceptual and Procedural Fluency with Rich Tasks			√				√	
Standiford, Gail	Transforming with Desmos				√			√	
Starnes, Daren	Statistics for Common Core and SAT: Understanding Inference				√			√	
Stone, Robyn	Mathematize This!	√						√	
Sulsberger, Megan	Pre-Service Teachers: Math Identity Matters					√			
Szoke, Noam	Access and Equity in Elementary Mathematics	√	√					√	
Tamez, Modesto	Mathematics of Sound and Hearing		√	√				√	
Taylor, Megan	Teaching as a Lab for Learning				√			√	
	Hey Math Teachers, It's OK to Cry in Your Car					√			
Thompson, Angela	All Students Learn through Reflective Writing...On Exams				√			√	
Torres, Angela	Launching Math Tasks to Engage All Students						√	√	
Trevino, Emma	Analysis and Reasoning						√		
Trinkle, Mary	Inquiry-Based, Student-Centered Mathematics: How to Do It?	√	√					√	
Tucker, Deborah	Connect Math With Next Generation Science Standards (NGSS)		√					√	
Vierra, Vicki	Fluency Founded on Number Sense		√	√				√	
Waldman, Brian	Promoting Discourse for ELLs in Heterogeneous Small Groups			√				√	
Wallace, Matt	Using Tests to Promote a Growth Mindset						√	√	
Wedel, Christine	Come Play Some Games With Us!	√	√					√	
Weimar, Stephen	How Does One Get Better at Mathematical Thinking?			√				√	
Weker, Ethan	Get Your Students Talking: Introducing Debate to Math Class				√			√	
Weltman, Anna	Inspire Inquiry, Bridge Math and Art: Seeing Stars in GCD		√	√				√	
Wilkins, Christi	From Virtual to Visual: Weaving Art into Applied Mathematics		√					√	
Winicki Landman, Greisy	At the Intersection of Not Very Traveled Roads				√			√	
Yu, Julie	Geometry of Nature: Exploring Patterns, Shapes and Symmetry				√			√	
Zager, Tracy	Gut Instincts: Developing All Students' Math Intuitions						√	√	

**@CAMathCouncil**

## EXHIBITS

Company	PG Middle Gym	Company	PG Middle Gym
Bay Area Math Teachers' Circle Network	237	MOEMS	252
Bedford, Freeman & Worth High School Publishers	258	Moore Educational Resources/Boxlight-Mimio	241-242
Big Ideas Learning	244	Music Notes	219
California Casualty	245	Nasco	206-208
California Jump\$tart	243	National Geographic Learning/Cengage Learning	225-226
California Teachers Association	214	National Council of Teachers of Mathematics	211-212
Carnegie Learning, Inc	234-235	Next Gen Math	221
Center for Math and Teaching	256	ORIGO Education	238-239
Cignition	259	Outlandish USA/ALGEBRACARDS	276
CMC ComMuniCator	202-203	Pearson	227-228
CMC-N Bag pick-up	205	Reasoning Mind	274
CMC-N Exhibits/T-Shirts	204	Silicon Valley Education Foundation	218
CMC-N grants, Student Activity Trust	213	Sokikom	229
CPM Educational Program	253-255	SpringBoard, College Board	209
CSU/UC Mathematics Diagnostic Testing Project (MDTP)	236	Stenhouse Publishers	224
Curriculum Associates	223	Stokes Publishing Company	266-267
ETA hand2mind	277	Super Math World	217
Heinemann Publishing	232-233	Teacherwear	265
Houghton Mifflin Harcourt	271-273	TEAM UP! For Common Core Learning	275
Ignited	263	Texas Instruments	215-216
LearnZillion	257	The Math Learning Center	246-248
Make it STEM	251	Triumph Learning	222
Math Teachers Press, Inc	231	UC Davis C-STEM Center	264
McGraw-Hill Education	261-262	YMIR - the Ultimate Puzzle	249

Pacific Grove Middle School      Friday / 6:00 - 7:30pm      Saturday / 7:30am - 5:30pm  
Exhibits close promptly at times listed above so visit early!

~ Name badges ~

**Name badges must be worn at all times while attending the conference. Badges are required for entry into the sessions and the exhibit hall.**

## EXHIBITS — PACIFIC GROVE MIDDLE SCHOOL

<b>271</b> Houghton Mifflin Harcourt	<b>272</b>	<b>273</b>	<b>274</b> Reasoning Mind	<b>275</b> TEAM UP! Common Core	<b>276</b> Outlandish USA	<b>277</b> ETA hand2 mind
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**EXIT  
LADIES  
ROOM**

<b>209</b> SpringBoard College Board
<b>208</b> Nasco
<b>207</b> Nasco
<b>206</b> Nasco

**ENTRANCE**

<b>205</b> CMC-N Bag pickup
<b>204</b> CMC-N Exhibits T-Shirts
<b>203</b> CMC Communicator
<b>202</b> CMC Communicator

<b>219</b> Music Notes	<b>229</b> Sokikom
<b>218</b> Silicon Valley Educ Fnd	<b>228</b> Pearson
<b>217</b> Super Math World	<b>227</b> Pearson
<b>216</b> Texas Instrument	<b>226</b> Nat Geo Cengage
<b>215</b> Texas Instrument	<b>225</b> Nat Geo Cengage
<b>214</b> Calif Teachers Assoc	<b>224</b> Stenhouse Publishers
<b>213</b> SATF Grants	<b>223</b> Curriculum Associates
<b>212</b> NCTM	<b>222</b> Triumph Learning
<b>211</b> NCTM	<b>221</b> Next Gen Math

<b>239</b> ORIGO Education	<b>249</b> YMIR Ultimate Puzzle
<b>238</b> ORIGO Education	<b>248</b> Math Learning Center
<b>237</b> Bay Area Teachers' Circle	<b>247</b> Math Learning Center
<b>236</b> CSU/UC Math Diag	<b>246</b> Math Learning Center
<b>235</b> Carnegie Learning	<b>245</b> California Casualty
<b>234</b> Carnegie Learning	<b>244</b> Big Ideas Learning
<b>233</b> Heinemann Pub	<b>243</b> California Jump\$tart
<b>232</b> Heinemann Pub	<b>242</b> Moore Education
<b>231</b> Math Teachers Press	<b>241</b> Moore Education

<b>259</b> Cignition
<b>258</b> Bedford Freeman & Worth
<b>257</b> LearnZillion
<b>256</b> Center for Math Teaching
<b>255</b> CPM
<b>254</b> CPM
<b>253</b> CPM
<b>252</b> MOEMS
<b>251</b> Make it STEM

**EXIT  
MEN'S  
ROOM**

<b>261</b> McGraw-Hill Education	<b>262</b>	<b>263</b> Ignited	<b>264</b> UC Davis C-STEM Center	<b>265</b> Teacher wear	<b>266</b> Stokes Publishing Co.	<b>267</b>
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## AWARD NOMINATIONS

It is time to nominate those individuals who might be recognized for their contributions to mathematics education. CMC has three awards:

**1** The **George Polya Memorial Award** may be conferred upon a teacher K-16, who has been deemed as an outstanding teacher of mathematics over a sustained period of time, has supported CMC activities, has been an active participant in CMC, and has high visibility throughout the state of CA.

**2** The **Edward Begle Memorial Award** may be conferred on an educator who has, for a sustained period of time, been supportive of CMC activities, has offered continual encouragement, and has been actively involved in California mathematics.

**3** The **Walter Denham Memorial Award** may be presented to a person who is recognized as an advocate for mathematics education, not only at the local level, but also at the broader state and national levels.

For more information about the nomination process, check the CMC-Math website under Awards and Recognition. Nominations are due May 1, 2017.

## 2014 AND 2015 PAEMST AWARD FINALISTS!

The 2014 and 2015 winners of the **Presidential Award for Excellence in Teaching Math and Science** were finally announced earlier this year and our two winners from California just returned from Washington D.C. where they received their awards. Congratulations to Andrew Kotko and Maria McClain.

### 2014 PAEMST Awardee: Andrew Kotko

Andrew (Andy) Kotko has been an educator for 14 years, teaching first grade at Mather Heights Elementary School for the past five years. He is a founding teacher of the Folsom Cordova Academy for Advanced Learning, a public magnet school focused on inquiry and project-based learning.

Andy enjoys developing and sharing activities that incorporate depth and complexity into the fundamentals of mathematics. By affirming exploration and risk-taking, Andy instills a foundation of critical thinking and problem solving in his students. He shares his passion for teaching through district workshops as well as conferences with the California Math Council.

### 2015 PAEMST Awardee: Maria McClain

Maria McClain has been teaching mathematics for the past 28 years, the last 20 of which have been at Deer Valley High School, where she currently teaches Mastering Algebra I, Precalculus, Advanced Placement (AP) Calculus AB, and AP Statistics.

### Mrs. Anamarie Buljan

Anamarie (Mia) is a second grade teacher at Glassbrook Elementary School in the Hayward USD. She has been teaching eighteen years, has been a district Math Coach, Coordinator of Professional Development and the Director of Primary Education for the Silicon Valley Mathematics Initiative. Her teaching has been featured on the insidemathematics.org website.

### Ms. Gabriela Cardenas

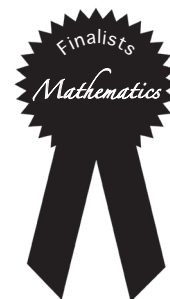
Gabriela is a first/second/multiage Dual-Language Demonstration Teacher at the UCLA Lab School in Los Angeles, California. She has been teaching for eleven years. At UCLA, she has presented on Cognitively Guided Instruction in a Spanish Dual Language Immersion Classroom.

### Ms. Rebecca Jones

Rebecca is a fifth grade teacher at Ocean Air School in the Del Mar Union School District in San Diego. She has been teaching for fifteen years. She has been a Cognitively Guided Instruction Math Lead Teacher and has led staff development throughout the district, county and state.

### Mrs. Nancy Villalta

Nancy is a fourth grade teacher at Moffett Elementary School in the Lennox School District. She is a member of the Instructional Leadership Corps, which is an initiative by Stanford University and CTA focusing on providing teachers professional development on implementing the Common Core Standards.



For more information about awards, or to nominate, visit Presidential Awards at [www.cmc-math.org/PAEMST](http://www.cmc-math.org/PAEMST) or California Math Council at [www.cmc-math.org/awards](http://www.cmc-math.org/awards)



California Mathematics Council — North

# CERTIFICATE OF ATTENDANCE

*is hereby granted to*

*in recognition of attendance and participation at the*

*CMC-N Mathematics Conference at Asilomar*

*Pacific Grove, CA*

*December 2 - December 4, 2016*

*Rebecca Lewis*

Rebecca Lewis, CMC-N President

A collage of STEM-related images including a calculator, a microscope, an astronaut, laboratory flasks, a circuit board, and various mathematical symbols and formulas.

Inspiring Generation STEM

There is a mathematician and scientist in every student.

[education.ti.com](http://education.ti.com)

The Texas Instruments logo, featuring a stylized 'ti' in a square followed by the words 'TEXAS INSTRUMENTS'.

## BOARD MEMBERS

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## CALENDAR OF MATH EVENTS



**April 3-5, 2017**  
 NCSM Annual Conference, San Antonio, TX

**April 5-8, 2017**  
 NCTM Annual Meeting and Exposition, San Antonio, TX

**October 27-28, 2017**  
 CMC-S Palm Springs Conference, Palm Springs, CA

**December 1-3, 2017**  
 CMC-N Asilomar Conference, Pacific Grove, CA

**March 10-11, 2017**  
 CMC-C Symposium, San Luis Obispo, CA

For information and links to these math events go to:  
[www.cmc-math.org/activities/calendar.html](http://www.cmc-math.org/activities/calendar.html)

## AFFILIATED GROUPS

**Contact your local affiliate to find out more about their organization and become involved at a local level!**

CA Math Council to the Far North (CMCN $\infty$ )  
 Mary Ann Sheridan, masheri@suddenlink.net

Mt. Lassen Math Council (MLMC)  
 Hope Bjerke, hbjerke1@gmail.com

Sonoma County Math Council (SCMC)  
 Ben Ford, ben.ford@sonoma.edu

Sacramento Area Math Educators (SAME)  
 Brian Lim, blim128@yahoo.com

Math Educators of Solano County (MESOC)  
 Julie Crozier, crozier4mesoc@aol.com

Alameda Contra Costa County  
 Math Educators (AC<sup>3</sup>ME)  
 David Lincoln, lincoln.hotmath@att.net

Council of Math & Science Educators  
 San Mateo County (CMSESMC)  
 Brennan Brockbank,  
 brennan.brockman@gmail.com

Santa Clara Valley Math Association (SCVMA)  
 Rita Korsunsky, rikorsunsky@gmail.com

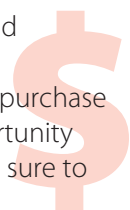
Monterey Bay Counties Math Education (MBCME)  
 Linda Dilger, ldilger@monterey.k12.ca.us

Northern Nevada Mathematics Council (N<sup>2</sup>MC)  
 Teruni Lamberg, terunil@unr.edu

San Francisco Math Teachers Association (SFMTA)  
 Mark Mosheim, Mosheim@gmail.com

## EXHIBITS

Be sure to make time in your schedule to visit the exhibits at the Pacific Grove Middle School Gym. You'll find a remarkable collection of mathematics education books, curriculum materials, teaching resources, games, manipulatives, and technology and services. Exhibit hours allow ample opportunity to explore, try out, and purchase product/services for use in your classroom or to help you meet your career goals. You'll also have the opportunity to get fresh ideas, valuable information and resources and to see demonstrations of how products work. Be sure to check the list of exhibits and map of the exhibit hall on page 38.



## California Mathematics Council - Northern Section

**Purpose:**

CMC-N wishes to encourage creativity and innovation among Northern California educators for the purpose of developing mathematically powerful students.

**Who May Apply:**

CMC-N members from any public or private school or district whose membership has been paid for the current school year.

**Requirements:**

- √ Can only apply once per school year
- √ Should have additional sources of funding
- √ Application completed in full

**Deadlines:**

March 1 – up to \$500 **and** November 1 – up to \$500

**Application:**

**1. Title Page**

- a. Title of Grant
- b. Name of Grant Leader, CMC Member #, home phone and home email.
- c. School name, address, fax and email.
- d. Grant impact – number of students, teachers and percent members of minorities.
- e. Maximum amount requested to implement the grant.

**2. Description of Materials Use**

- a. How will materials be used and with what goals in mind?
- b. Statement of need as related to your students.
- c. Projected activities and timeline, if applicable.
- d. Impact – Who and how many will be affected?

**3. Project Budget**

- a. Items to be purchased.
- b. Expected vendor and prices.
- c. Additional funding sources available to you.  
(Grant requests maybe only partially funded.)
- d. Total amount requested.

**4. Approval Signatures**

- a. Grant leader and building site administrator and title

**End Report:**

Submit a short report to the Mini-Grant committee by the end of the year on how the purchased materials were used and the effectiveness of the purchased materials in order to be considered for a grant in the future

**Applications must be limited to five pages including the cover page.**

**MAIL TO**

**US Mail:**

CMC-N Grants, c/o FaraLee S Wright  
PO Box 2738, Suisun City, CA 94585-5738

**Via email:**

faralee.wright@sbcglobal.net  
(application cover page with signatures should be scanned)

**NOTE:**

- Grant covers materials only, not teacher work time or compensation.
- Only one Mini-Grant can be awarded per applicant per school year.
- Grant is limited to current CMC-N members and to school sites in the CMC-N area.

# STAY CONNECTED WITH CMC

www.facebook.com/CAMathCouncil

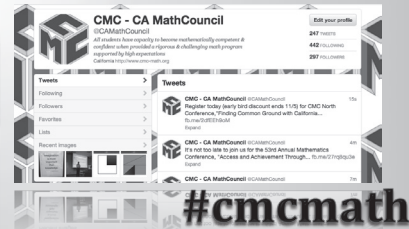


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@CAMathCouncil



www.cmc-math.org



The Math Forum  
PEOPLE LEARNING MATH TOGETHER



CMC North

# IGNITE!

SATURDAY 7:30 PM  
MERRILL HALL  
STEVE WEIMAR EMCEE

5 minutes. 20 slides.  
Lots of ideas.

Christine Roberts • Ed Campos Jr. • Gretchen Muller & Monica Rock • Henri Piciotto  
Jon Southam • Lizzie Hull Barnes • Masha Albrecht • Rick Barlow • Zachary Champagne



## SPECIFICS:

Course Title: **California Mathematics Council North Annual Conference**

Course Code: **16F EDU 870B 01**

CEUs: **1.5**

Course Fee: **\$65**

Date: **12/2/16 - 12/4/16**

- Earn 1.5 CEU (Continuing Education Units) for your Asilomar participation.
- Units are from CSU, **Sacramento State College of Continuing Education**. Generally it cannot be applied toward a degree program, but can be used as:
  - professional growth units for your credential, and,
  - district credit for step advancement. Check with your district regarding its policy on accepting these units.
- Credit will be given in the Spring Semester. Grades will not be available until May 2017. Please do NOT call before that time. After February 1, 2017, you may send an e-mail to be sure your materials were received.
- Grades are CR/NC only.
- You must complete each of the requirements below.

## REQUIREMENTS:

- ✓ Register for the conference.
- ✓ Attend the opening session Friday evening 7:30-9:00 p.m. at Pacific Grove Middle School Auditorium.
- ✓ Attend at least three sessions on Saturday, visit either exhibit area, and attend a Sunday closing session.
- ✓ Type a paper as described below. Save a tree: single spacing is fine. Include your name, address and phone number on it in case of problems.
- ✓ Complete the **Registration Agreement** and mail with credit card information or your check for \$65.00 (payable to CSUS College of Continuing Education) with your paper to Brian Lim by December 31, 2016.

## PAPER:

1. Submit a two-part paper. In the first part devote a paragraph or more to each session you attended. Include details on the title, speaker, ideas, activities, and theme(s). Then, in the second part, reflect on how the conference affected your thinking about math, How has it affected your classroom? How do you believe it will affect it in the future? What common themes did you see throughout the conference? This part should be at least 1 or 2 pages.
2. If you prefer, the two parts above can be combined into one using a more narrative style.

## REMEMBER:

The paper must exhibit a great deal of reflection, and must not be just a chronicle of how you spent your weekend.

Mail the registration form, payment, and paper in a single packet by December 31, 2016 to:

CMC, Attn: Brian Lim  
PO Box 234  
Kentfield, CA 94914

**Download form at**  
<http://cmc-math.org/temp/wp-content/uploads/2016/09/Registration-Agreement.pdf>

**Contract Education Program**  
**Registration Agreement**

For CEU/Non-Credit Courses

Please submit registration form to: College of Continuing Education, 3000 State University Drive East, Sacramento, CA 95819-6103 Attention: Information and Registration Services.  
 For your convenience you may also phone in your registration to (916) 278-4433.

- Registration and payment must be received no later than two weeks following the last class meeting.
- Please check with your district office regarding whether or not they will accept these units toward salary advancements.
- Refund requests will not be accepted. This policy applies to all non-credit, and CEU contract courses.
- For more information on the College of Continuing Education refund policy please go to [www.cce.csus.edu](http://www.cce.csus.edu).

**SACRAMENTO STATE**  
COLLEGE OF CONTINUING EDUCATION

**PLEASE PROVIDE THE FOLLOWING INFORMATION:**

Name - Last  First

Home Address (Number, Street, Apt.)

City  State  Zip

Occupation

Home Phone  Work Phone

E-mail

Birthday  Sex  Male  Female

Highest level of education completed:  
 High School  A.A.  B.A./B.S.  M.A./M.S.  Ph.D.  
 Trade School/Other  Some College

COURSE CODE	COURSE TITLE	DATES
16F EDU 870B 01	California Mathematics Council North Annual Confer	12/2/16- 12/4/16

**PAYMENT**

Check - payable to CSUS College of Continuing Education      Card Number

Visa      Expiration Date

Master Card      Amount

Discover      Name of Cardholder

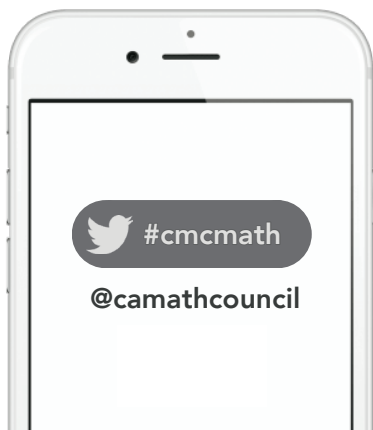
Cardholder's Signature

All courses, instructors, locations and fees are subject to change or deletion without notice.



# CALIFORNIA MATHEMATICS COUNCIL

## how to use twitter



### Connect to the best faculty lounge around.

If you don't already have a Twitter account, consider signing up for one. There is a thriving community of mathematics educators engaging in conversations that you might enjoy and could benefit from your contributions.

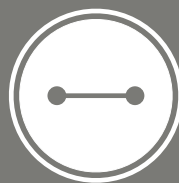
Keep your eye on the hashtag #cmcmath before, during, and after the conference to see what people are talking about and keep up with any announcements or special events. Stay connected to our math world through Twitter!



Join the conversation. Share some of the great things you do in your classroom and learn what others do in theirs. Keep the discussions you start here going long after the conference is over and the tweets have been posted.



Not ready to jump in? It's okay to just watch and listen in. There is a lot to consider and learn from the conversations and chats happening all the time. Read as much or as little as you like. It's ok.



Connect to others attending the conference. Grow your personal network by following presenters and the people you meet during the conference. Teaching is complex and we can do so much better together.



To get started:

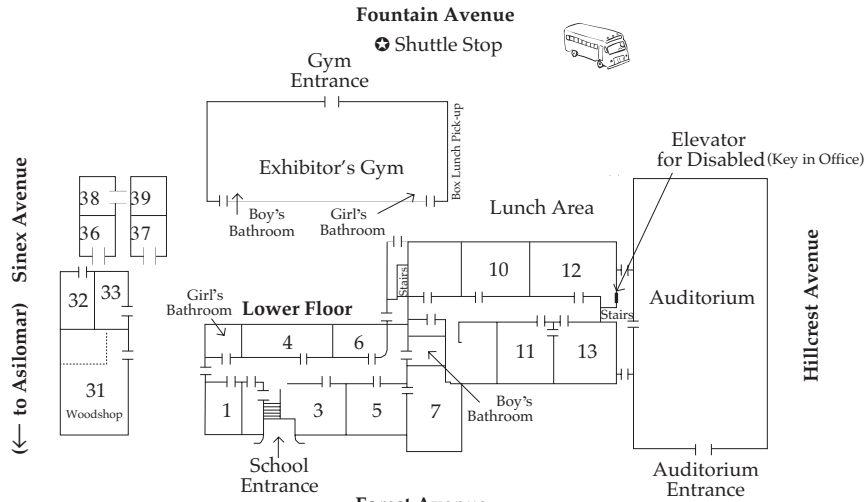
1. Create an account.
2. Follow some people (We suggest @camathcouncil).
3. Check twitter.
4. Make some awesome new friends.

Max will tell you more: <http://bit.ly/tweetmemaybe>

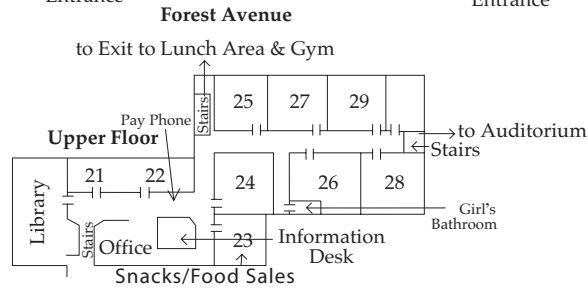


@camathcouncil

# PACIFIC GROVE MIDDLE SCHOOL



Please park on streets adjacent to the school.



### BUS SERVICE

Bus service will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 4:30-9:30pm and on Saturday from 7:15am - 6:00pm.

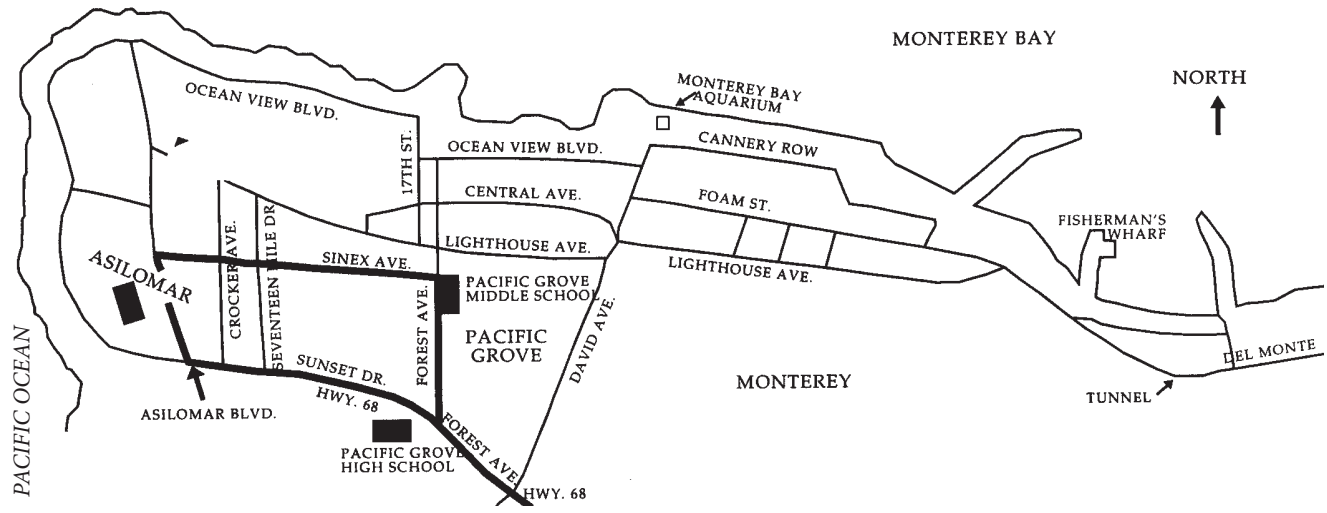


CMC North Conference 2016 Going Mobile with EduPlus

### CMC North Mathematics Conference 2016 goes mobile with EduPlus

Download EduPlus from the App Store, Google Play, or at <http://e.confplusapp.com/>. And be sure to visit <http://event.confplusapp.com/cm16/> to get a preview of the EduPlus features. Search sessions, create your own schedule, get notifications and evaluate sessions.

## PACIFIC GROVE





A B C D E F G H I

1 2 3 4 5 6 7 8

LOGGING	MEETING ROOMS	PARKING LOTS
Afterglow Rooms 1301-1312	Acacia B4	Parking Lot A E5
Breakers East Rooms 821-832	Chapel Auditorium D5	Parking Lot B G5
Breakers West Rooms 833-840	Curlwe C4	Parking Lot C H4
Cypress Rooms 717-724	Dolphin C5	Parking Lot D F4
Deer Lodge Rooms 121-130	Evergreen F1	Parking Lot E E3
Director's Cottage	Fred Farr Forum E2	Parking Lot F D4
Embers Rooms 918-924	Heather C4	Parking Lot G D3
Engineer's Cottage	Kiln E2	Parking Lot H B3
Forest Lodge Rooms 1202-1211	Madrone G3	Parking Lot I A4
Guest Inn Rooms 901-903	Manzanita I & II B4	Parking Lot J B4
Hearth Rooms 1325-1336	Marlin D4	Parking Lot K B4
Live Oak Rooms 101-110	Merrill Hall G4	Parking Lot L B5
Lodge Rooms 201-218	Nautilus H4	Parking Lot M E2
Long View North Rooms 101-110	Oak Knoll I & II C4	Parking Lot N H2
Long View Middle Rooms 111-120	Oak Shelter F1	Parking Lot P I3
Long View South Rooms 121-130	Sanderling C6	
Manzanita Rooms 1001-1022	Scripts D4	
Oak Knoll Rooms 108-1024	Surf & Sand G5	
Pirates' Den Rooms 501-510	Toyon B4	
Sand Rooms 605-610	Triton H4	
Scripts Rooms 301-323	Willow I & II B4	
Shores Rooms 709-716	Whitehead G3	
Spindrift North Rooms 849-856	OTHER	
Spindrift South Rooms 841-848	BBQ Area E6	
Stuck-up Inn Rooms 401-414	Crocker Dining Hall F6	
Surf Rooms 601-604	Fire Pits H5	
Tree Tops Rooms 11-120	Guest Check-In E5	
Whitecaps North Rooms 809-820	Hearth Social Hall E5	
Whitecaps South Rooms 801-808	Human Resources F1	
Willow Inn Rooms 1025-1036	Meditation Space A3	
Windward Rooms 701-708	Mott Training Center G1	
Woodside Rooms 1212-1223	Park Store E5	
	Phoebe's Café E5	
	Seascope F6	
	Swimming Pool A5	
	Conference and Event Sales E4	
	Viewpoint E4	
	Volleyball Court H5	
	Woodlands F5	
	Yoga Room A3	



**LEGEND**

- Information/Guest Check-In
- Disabled Parking
- EV Charging Station
- Beverage Vending Machine
- Ice Machine
- Julia Morgan Historic Building
- Roadway
- Pedestrian Pathway
- Outdoor Group Activity Area



**Asilomar Math Conference Room Guide**  
**A** – North Woods (Toyon)  
**B** – View Crescent (Curlwe, Sanderling)  
**C** – Merrill Hall  
**D** – Sea Galaxy (Nautilus East & West, Triton)  
**E** – Fireside (Evergreen, Fred Farr, Kiln)