BUILDING BRIDGES BETWEEN LEADERSHIP AND LEARNING MATHEMATICS

Leveraging Education Innovation and Research to Inspire and Engage

48TH NCSM ANNUAL CONFERENCE • APRIL 11-13, 2016
OAKLAND - SAN FRANCISCO BAY AREA

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Rich Mathematical Tasks: Familiar Resources to Meet the Challenges of a New Era

Presenters: Linda Gojak and Sara Delano Moore

April 11, 2016 at 1:30P.M.
Room OCC 206

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BUILDING BRIDGES BETWEEN LEADERSHIP AND LEARNING MATHEMATICS

Leveraging Education Innovation and Research to Inspire and Engage

48th NCSM Annual Conference

April 11–13, 2016 • Oakland-San Francisco Bay Area

REGISTRATION

Registration takes place at the registration booth on the first floor of the Oakland Marriott City Center Convention Center at the following times:

Sunday, April 10, 2:00 pm–6:00 pm
Monday, April 11, 6:45 am–5:00 pm
Tuesday, April 12, 6:45 am–5:00 pm
Wednesday, April 13, 7:30 am–10:30 am

SPONSOR DISPLAY AREA

Visit Sponsors and engage in stimulating professional dialogue with colleagues in the Exhibit Hall East of the Oakland Marriott City Center Convention Center, during the following times:

Monday, April 11, 9:00 am–5:30 pm
Tuesday, April 12, 8:30 am–4:00 pm

We have also scheduled an extended passing period for visiting with our vendors on Tuesday morning from 9:15 am to 10:00 am. Please be sure to check out the latest resources available!

NCSM BUSINESS MEETING

The Business Meeting will be held on Tuesday, April 12 at 4:30 pm to 5:15 pm in Junior Ballroom 1–2 of the Oakland Marriott City Center Convention Center. All members are invited and encouraged to attend and learn about the "State of the Organization" and opportunities for getting involved in NCSM.

CAUCUSES

Caucuses for NCSM regions, International attendees, and Past Presidents will be held Tuesday afternoon, April 12, at 3:30 pm to 4:15 pm. Details and a full schedule of caucuses are found at the end of Tuesday sessions.

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PRESIDENT'S MESSAGE

Welcome to Oakland and NCSM's 48th Annual Conference:
BUILDING BRIDGES BETWEEN LEADERSHIP AND LEARNING MATHEMATICS

On behalf of the NCSM Board of Directors and the Oakland Conference Committee, it is my pleasure to welcome you to this year's annual meeting and invite you to join us as we work to articulate a clear and actionable vision of mathematics education leadership!

This year's theme, *BUILDING BRIDGES BETWEEN LEADERSHIP AND LEARNING MATHEMATICS: Leveraging Education Innovation and Research to Inspire and Engage,* is designed to provide you with a rich professional learning experience that will support leaders at all levels. It features an exciting mix of nearly 300 sessions given by mathematics education's most influential, provoking, and knowledgeable speakers and thought leaders. Sessions are organized by strands around five critical topics including:

- *Cultivating leadership in a time of change*
- *Coaching that matters*
- *Advancing the social justice conversation*
- *Enhancing mathematics education in the digital age*
- *Sharing research that informs mathematics education*

Whether you choose to focus in one area or build your learning experience with sessions from each strand we believe we have created a flexible offering of learning opportunities that will fuel your leadership needs over the next 12 months. In addition to the opportunities built into this year's conference strands, you will find sessions that integrate the *Common Core State Standards for Mathematics (CCSSM)* and other state related standards; the associated PARCC and SBAC assessments; and other related projects.

I would also invite you to pay special attention to conference sessions that introduce you to new and enhanced resources that NCSM is releasing during the annual conference this year (all of which are *free* to NCSM members):

- the introduction of *NCSM Vision 2020: Mathematics Education Leadership for the Future,*
- *new IT WORKED! resources in the coaching corner,*
- *Three Act Video selection tool* to help leaders support teachers on selecting three act videos from the many sources that are available,
- new *Formative Assessment Jump Start modules,* expanding the collection of professional learning modules focused on formative assessment,
- draft modules for the digital initiative APP to continue the work from the white paper *Mathematics Education in the Digital Age,* and
- an updated NCSM/NCTM Curriculum Analysis Toolkit.

This year NCSM is continuing its collaboration with the NCTM Research Advisory Committee to provide joint sessions of interest to both practitioners and researchers. Selected sessions are open to registered attendees at both the NCSM Annual Conference and the NCTM Research Pre–Session on Wednesday at no additional charge.

As mathematics education leaders, we work continuously to improve our own professional practice so that we can better support and lead others. The 48th NCSM Annual Conference will allow you to further your professional growth as you develop networks and build relationships with national and international mathematics education leaders who will motivate, inspire, support, and challenge each of us to ensure that we make mathematics meaningful, relevant, and accessible for each and every student.

Thank you for joining us for another wonderful NCSM Annual Conference!

Sincerely,

John W. Staley
President

WELCOME TO OAKLAND AND THE 48TH NCSM ANNUAL CONFERENCE

We are glad you have joined us for the 48th Annual Conference. These three days promise to be an exciting learning experience, offering you an opportunity to take advantage of over 300 sessions and events including:

Monday, April 11, 2016

- The First-Timers welcome sessions will be provided for attendees at 7:30 am to 8:00 am or 5:15 pm to 5:45 pm in Grand Ballroom ABC.
- Monday morning's Opening Session with John Staley, NCSM President and Beverly Kimes, Program Chair.
- Keynote Address by Dr. Keith Devlin of Stanford University presenting *Game-Based Learning: The Hype is Starting to Give Way to Some Surprising Substance.*
- Following the opening session, there are a variety of Major Speakers, Spotlight Speakers, Sponsor Showcases, Technology Showcases, and regular sessions that address the conference strands across different grade levels.
- A special Coaching Session Kick-Off will be offered at 9:30 am in OCC 202 for coaches, specialists, and teacher leaders.
- Elite Sponsor Displays in Exhibit Hall East of the Oakland Marriott City Center Convention Center.
- Your first opportunity with Hot Topics will be from 3:00 pm to 3:45 p.m., located in the Foyer of Exhibit Hall West where you can discuss important topics for leaders in mathematics.
- NCSM Regional Directors and State Team Leaders Meeting will be at 5:15 pm to 5:45 pm in Junior Ballroom 1–2.
- The day ends with a ticketed reception at 5:30 pm co-sponsored by Math Teachers Press.

Tuesday, April 12, 2016

- The first event is a ticketed breakfast sponsored by McGraw Hill. If you do not receive a ticket you will be welcome to attend and hear the speaker after the breakfast.
- The day continues with numerous sessions and powerful speakers, as well as another opportunity to visit the Sponsor Display Area that is open from 8:30 am to 4:00 pm.
- Hot Topics will be located in the Foyer of Exhibit Hall West from 10:15 am to 11:00 am where you will have the opportunity to visit personally with a number of the Major speakers.
- There is a ticketed luncheon from 12:30 pm to 2:00 pm, compliments of Texas Instruments.
- The afternoon brings another round of sessions, followed by NCSM Caucuses and the Business Meeting. At your Regional Caucus meeting you will meet your NCSM Regional Director and visit with other conference attendees from your region. At the NCSM Business meeting in Junior Ballroom 1–2 you will have the opportunity to hear about the "State of the Organization" and honor the new Affiliates as they receive their official charters.
- The day ends with a ticketed reception at 5:30 pm sponsored by Discovery Education.

Wednesday, April 13, 2016

- The first event is a ticketed breakfast sponsored by Pearson. If you do not receive a ticket you will be welcome to attend and hear the speaker after the breakfast.
- The morning continues with a full complement of Major Speakers, Spotlight Speakers, and regular sessions.
- There is a ticketed luncheon from 12:30 pm to 2:00 pm, co-sponsored by DreamBox Learning.
- The afternoon includes two additional rounds of sessions until 4:30 pm.

We want to thank:

- Our sponsors for breakfasts, lunches, receptions and a variety of other ways of support. The conference committee is grateful to all those whose interest and efforts help to make the conference a rewarding experience for all those in attendance.
- Those who submitted proposals to speak for your willingness to share your ideas and experience with your colleagues.
- Program Proposal Reviewers for your time and efforts in carefully reviewing the many proposals that were submitted for the program.
- On-Site Program Committee for supporting our speakers and taking care of their on-site needs.
- Local Support Committee for helping to ensure a smooth-running conference.
- Volunteers for graciously giving of their time.
- The staff of the Oakland Marriott City Center Convention Center for supporting logistics and on-site needs.
- NCSM Office for their support throughout the planning process and "in the moment" at the conference, helping make things run ever-so-smoothly. Thank you!

2015–2016 CONFERENCE PLANNING COMMITTEE

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Russell West
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Fairbanks, AK

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PROGRAM OVERVIEW

1. **Cultivating Leadership in a Time of Change**
   Presentations in this strand will focus on leader actions and thought processes that help improve teaching and learning at the building, district, region and state/province levels.

2. **Coaching That Matters**
   Presentations in this strand will focus on the coach's role in supporting all aspects of the teaching and learning of mathematics.

3. **Advancing the Social Justice Conversation**
   Presentations in this strand will focus on the unique interactions of mathematics education and student learners within their racial, cultural, linguistic, and socioeconomic communities.

4. **Enhancing Mathematics Education in the Digital Age**
   Presentations in this strand will focus on technological innovations that promote deep student learning of mathematical concepts as well as models of professional learning experiences that take advantage of the affordances of technology.

5. **Sharing Research That Informs Mathematics Education**
   Presentations in this strand will focus on research found to impact practice in the mathematics classroom and in professional learning for teachers.

Visit the NCSM Website at ***mathedleadership.org*** for the latest information and complete listing of conference sessions.

SESSION TYPES

- Opening Session with Keynote Address—Monday morning
- NCSM State/Provincial Leaders Meeting—Monday afternoon
- Hot Topics Café—Monday afternoon and Tuesday morning
- NCSM Annual Business Meeting— Tuesday afternoon
- NCSM Caucus Sessions—Tuesday afternoon
- Major Sessions—Monday, Tuesday, and Wednesday
- Spotlight Sessions—Monday, Tuesday, and Wednesday
- Regular Sessions—Monday, Tuesday, and Wednesday
- Sponsor Showcases—Monday and Tuesday
- Technology Showcases—Monday and Tuesday

SESSION NUMBER EXPLANATION

The first digit corresponds to the day of the week (1 for Monday, 2 for Tuesday and 3 for Wednesday).
The second digit corresponds to a common time span, for example, on Monday, the 2 in the second digit corresponds to the time span of 10:45 am–11:45 am. Finally, the last two digits correspond to the room, for example, all sessions in the room OCC 201, will have a session number ending in 05. So Session Number 1205 is on Monday at 10:45 am in OCC 201.

Nominate a leader in mathematics education for the *Ross Taylor/Glenn Gilbert National Leadership Award.* See details in the section: About *NCSM.*

Attend your Regional Caucus on Tuesday afternoon. In the section at the end of Tuesday sessions.

Look for an email next week inviting you to complete the *Online Conference Feedback Survey.*

Support the *Iris Carl Mathematics Leadership Fund.* See the section: About *NCSM* for more information.

GENERAL INFORMATION

EMERGENCY INFORMATION
Dial 9–911 from any house phone for any medical emergency.

FIRE CODE
Fire Code regulations apply to all conference session rooms. Sessions will be closed when seating capacity is reached. Regulations require that there is no standing, no sitting on the floor, and no moving of chairs from one room to another. We appreciate your cooperation in this matter.

SESSION SEATING
Rooms have been set to conform to Fire Code. As per fire marshal orders, only those seated in chairs will be allowed to remain in the meeting rooms. Seating at all sessions is on a first-come, first-served basis. Seating capacities for the rooms are listed on the colored summary pages for each day in this program book.

NON-SMOKING POLICY
The *Annual Conference* is a non-smoking event. Those who wish to smoke must do so outside the buildings in designated smoking areas.

CONFERENCE BADGES AND BAGS
2016 Annual Conference name badges must be worn by attendees for admittance to conference sessions, meal functions, and the sponsor display area. One NCSM Conference bag is given to each registered participant as long as supplies last. Replacement bags and extra bags will not be distributed at the conference.

CONFERENCE PLANNER
A conference planner, located at the back of the program, is for your use in choosing a schedule of sessions and events to attend. Because all rooms have a limited seating capacity, it is suggested that you select at least one alternate session for each time slot in case your first choice is full. This information will also be available on the Conference App.

TIPS FOR A SUCCESSFUL CONFERENCE
If this is your first Annual Conference, be sure to attend one of the 30-minute First Timer's Sessions in OCC 208 either Monday morning at 7:30 am, prior to the Opening Session/ Keynote, or at the end of the day on Monday at 5:15 pm. Special Gifts are planned for all first-timers attending these sessions.

- Attend one of the First Timer's Sessions on Monday 7:30 am or 5:15 pm in OCC 208
- Become familiar with the locations of the session rooms and other conference venues
- Visit the Sponsor Display Area in the Exhibit Hall East of the Oakland Marriott City Center Convention Center, on Monday or Tuesday
- Use the Conference Planner (at the back of this program) to outline your daily schedule
- Network with colleagues and share experiences about the different sessions you attend
- Turn off cell phones during sessions and functions
- Attend the Technology Showcases in OCC 207 and Sponsor Showcases in OCC 206 of the Oakland Marriott City Center Convention Center to learn about the latest in educational products and materials.

SESSION CHANGES
The listings in this program book represent the latest conference information (as of publication) and supersede all previously printed information. Be sure to also check the Program Addendum included in your conference bag and use the Conference App for any last-minute revisions. NCSM reserves the right to change speakers, facilities, or program content at any time.

CONFERENCE APP
We are very excited to announce the Conference App will be available to all attendees at the 2016 Annual Conference in Oakland. This App will give you the ability to have the entire program available at your fingertips electronically on your cell phone, iPad, tablet, or computer. It will also allow you to plan and schedule your sessions and take notes right in the App. Look for details in your conference bag and posted at registration to have immediate access to this great experience.

TAPING, RECORDING, OR PHOTOGRAPHING SESSIONS
Written permission to tape, record, or photograph sessions must be obtained directly from the speaker(s) before the session begins. The request must contain a statement indicating the intended use of such a tape, recording, or photograph as well as your name and contact information. A copy of the request should be given to the lead speaker.

NCSM BUSINESS MEETING
The NCSM Business Meeting will be held on Tuesday, April 12 at 4:30 pm to 5:15 pm in Junior Ballroom 1–2 of the Oakland Marriott City Center Convention Center. All members are invited and encouraged to attend and learn about the "State of the Organization" and opportunities for getting involved in NCSM.

CAUCUSES
Caucuses for NCSM regions, International attendees, and Past Presidents will be held Tuesday afternoon, April 12, 3:30 pm to 4:15 pm. Details and a full schedule of caucuses are found at the end of Tuesday sessions.

The Caucuses are perfect opportunities for all conference attendees to network, collaborate, and communicate within each NCSM region. During the sessions, participants will:

- Identify and discuss national issues
- Enhance leadership capacity
- Share information on opportunities for Professional Development for math leaders
- Enjoy networking among members from their region
- Explore avenues for becoming a contributing active member of NCSM!

Use the Conference Planner (at the back of this program) to outline your daily schedule.

GENERAL INFORMATION

COMMERCIAL SESSIONS

The conference program includes two types of commercial sessions that have become an integral part of the educational services NCSM provides conference attendees. These sessions will be held in OCC 206 and OCC 207 of the Oakland Marriott City Center Convention Center.

- **Sponsor Showcases** are provided by Elite Sponsors to share information about their products and materials.
- **Technology Showcases** focus on the latest products related to the use of technology in mathematics education.

SPONSOR DISPLAY AREA

The Sponsor Display Area is an important part of the educational services NCSM provides conference attendees. Attendees can examine current resources, explore trends and practices, review products and services, and engage in discussion with NCSM's sponsors. Be sure to make time in your schedule to visit the NCSM Sponsor Display Area in Exhibit Hall East of the Oakland Marriott City Center Convention Center. Wear your conference name badge to gain entrance.

Hours: Monday, April 11, 9:00 am to 5:30 pm
Tuesday, April 12, 8:30 am to 4:00 pm

All attendees are also encouraged to visit the Sponsor Display Area on Tuesday morning from 9:15 am to 10:00 am.

NCSM ANNUAL CONFERENCE SPONSORS

Many sponsors generously support NCSM and its membership throughout the year. Acknowledgement of all NCSM Sponsors for their contributions can be found at the back of this program.

We thank the following sponsors for their contributions to events related to *the Annual Conference.*

- Conference Bags – Casio
- Conference Neck Wallet – Think Through Math
- Conference Signage – Explore Learning
- Conference Membership Gift – CPM Educational
- Gift: Clock – EAI
- Gift: Calculator – Mind Research
- Literary Gift – Math Solutions
- Memberships and Registration – The Math Forum
- Volunteer T-shirts – Casio
- Monday Break – Mind Research
- Monday Reception – Co-sponsored by Math Teachers Press
- Tuesday Breakfast – McGraw Hill
- Tuesday Luncheon – Texas Instruments
- Tuesday Caucus Refreshments – Think Through Math
- Tuesday Evening Reception – Discovery Education
- Wednesday Breakfast – Pearson
- Wednesday Lunch – Co-sponsored by DreamBox Learning

TICKETED FUNCTIONS

Attendees with tickets for events are encouraged to arrive promptly. Open seats will be available on a first-come, first-served basis after all attendees with tickets are seated.

FREQUENTLY ASKED QUESTIONS

Are meal function tickets automatically included in my registration?

Meal functions are not included in the conference registration fee. Some of our sponsor partners graciously agree to host a meal function and provide a certain number of meals within their budget. If a seat was available for a function you selected when you registered, an admission ticket was provided in your registration packet.

I have a meal ticket. Does that guarantee me a seat no matter what time I show up?

If you have a ticket, don't be late! Experience has shown that some people with tickets opt to make other plans at the last minute. In order to allow as many attendees as possible to enjoy the meal functions, when the ticketed line goes through, the waiting line will follow as soon as possible. If you are late, you may not get the meal for which you have a ticket.

What do I do with a meal function ticket I have, that I no longer need?

You may turn in any tickets you won't use to the Conference Registration booth on Level 1 of the Oakland Marriott City Center Convention Center. This will enable someone without a ticket to get into the event. You may also hand extra tickets to any NCSM Board Member at any time during the conference.

Is there a waiting list/waiting line for meal functions?

Again this year, those without tickets may wait in the special line that will form to the side of the ticketed line. The waiting line will be permitted to enter based on the available seats once the ticketed line goes through and the start time for the function is reached. Depending on the function, there is generally a good chance of getting in, especially if you get in line early!

SPOTLIGHT SPEAKERS!

Spotlight speakers are featured speakers with a larger room. These speakers have shared with us often at NCSM and always have important information to share.

STUDENT RECOGNITION CERTIFICATES

NCSM provides certificates as a means of honoring students who excel in the study of mathematics. All public, private, and parochial schools, as well as colleges and universities, that have at least one NCSM member on the faculty, are eligible to participate. Each school may receive up to two awards per year. Pick up certificates at the registration booth. More information about these certificates is available at mathedleadership.org.

CONFERENCE FEEDBACK

You will receive an email in the week following the conference inviting you to share your feedback with the conference committee. We encourage you to take the time to complete the online survey, as your thoughts and opinions will be helpful to the planners of the 49th Annual Conference to be held in the San Antonio, Texas, April 3–5, 2017.

GENERAL INFORMATION

LOST AND FOUND

If you find an item you believe belongs to someone attending the NCSM Conference, please bring it to the NCSM registration booth on the first floor of the Oakland Marriott City Center Convention Center. Articles will be held there until 10:30 am on Wednesday, at which time they will be turned over to the Oakland Marriott City Center.

NCSM BOOKSTORE, MEMBERSHIP BOOTH, AND COACHING TABLE

Located in the Exhibit Hall Lobby Level 1 of the Oakland Marriott City Center Convention Center, the Bookstore, Membership Booth, and Coaching Table hours are Sunday, April 10, 2:00 pm to 5:00 pm, Monday, April 11, 9:30 am to 5:00 pm, and Tuesday, April 12, 8:30 am to 4:00 pm. Bring your NCSM Gift Card to redeem your special gift at the Membership Booth. We have many NCSM publications and other items to support your leadership role.

Don't leave Oakland without picking up your favorite book. Join us at the Bookstore where you can purchase NCSM publications, books and articles by some of our speakers and select NCTM publications to add to your professional library.

NCTM RESEARCH PRE–SESSION AND BOOKSTORE

NCSM registrants wearing their NCSM Conference badges are welcome to attend these NCTM Research Pre-session events:

- Opening Session on Wednesday evening, April 13 at 7:00 pm in the Moscone Convention Center in San Francisco
- Wednesday Research Pre-Sessions at the Moscone Convention Center
- The NCTM Bookstore is open to all NCSM registrants on Wednesday, April 13 from 10:00 am to 5:00 pm for registrants wearing their NCSM Conference badges.

HOT TOPICS CONVERSATION CAFÉ NETWORKING AND ROUND TABLE DISCUSSIONS

Stop by the Hot Topic tables located in Foyer of Exhibit Hall West to join casual conversations with many of the Major Speakers on Monday from 3:00 pm to 3:45 pm and Tuesday from 10:15 am to 11:00 am. Topics of interest to mathematics education leaders will include: having a positive impact, equity, access and relevance, addressing gaps in prerequisite knowledge, equity through a professional learning community, promoting growth mindsets, and approaches to acceleration and compression.

2016 CONFERENCE SCHEDULE OVERVIEW

Note: Commercial Sessions = Sponsor Showcases & Technology Showcases • All Sessions – ***Oakland Marriott Conference Center***

Date & Time	Event	Location
Monday, April 11		
6:45 am–5:00 pm	**Advance & On-Site Registration**	**Level 1, Oakland Marriott CC**
7:30 am–8:00 am	**First-Timers Session – Special Gifts**	**Grand Ballroom ABC**
8:00 am–9:15 am	**Opening Session & Keynote – Keith Devlin**	**Exhibit Hall West**
9:30 am–5:30 pm	**Sponsor Displays**	**Exhibit Hall East**
9:30 am–5:00 pm	**NCSM Bookstore, Membership Booth, & Coaches Center**	**Exhibit Hall Foyer Lobby Level 1**
9:15 am–11:45 am	**Major, Spotlight, and Regular Sessions**	**Oakland Marriott CC**
9:30 am–11:45 am	**Commercial Sessions**	**OCC 206–207**
12:15 pm–5:00 pm	**Major, Spotlight, and Regular Sessions**	**Oakland Marriott CC**
12:15 pm–5:00 pm	**Commercial Sessions**	**OCC 206–207**
3:00 pm–3:45 pm	**Hot Topic Café**	**Foyer Exhibit Hall West**
5:15 pm–5:45 pm	**NCSM Regional Directors and State Team Leaders Meeting**	**Junior Ballroom 1–2**
5:15 pm–5:45 pm	**First-Timers Session – Special Gifts**	**OCC 208**
5:30 pm–7:00 pm	**Reception – Co-sponsored by Math Teachers Press**	**Exhibit Hall West**
Tuesday, April 12		
6:45 am–5:00 pm	**Advance & On-Site Registration**	**Level 1, Oakland Marriott CC**
7:00 am–8:00 am	**Breakfast – McGraw Hill** (Ticket Required)	**Exhibit Hall West**
8:30 am–4:00 pm	**Sponsor Displays**	**Exhibit Hall East**
8:30 am–4:00 pm	**NCSM Bookstore, Membership Booth, & Coaches Center**	**Exhibit Hall Foyer Lobby Level 1**
8:15 am–12:15 pm	**Major, Spotlight, and Regular Sessions**	**Oakland Marriott CC**
8:15 am–12:15 pm	**Commercial Sessions**	**OCC 206–207**
9:15 am–10:00 am	**Special Focus on Sponsor Displays**	**Exhibit Hall East**
10:15 am–11:00 am	**Hot Topic Café**	**Foyer Exhibit Hall East**
12:30 pm–2:00 pm	**Luncheon – Texas Instruments** (Ticket Required)	**Exhibit Hall West**
2:15 pm–3:15 pm	**Major, Spotlight, and Regular Sessions**	**Oakland Marriott CC**
2:15 pm–3:15 pm	**Commercial Sessions**	**OCC 206–207**
3:30 pm–4:15 pm	**Caucus Meetings**	**OCC 201–212**
4:30 pm–5:15 pm	**NCSM Business Meeting & State of the Organization Report**	**Junior Ballroom 1–2**
5:30 pm–7:00 pm	**Reception – Discovery Education** (Ticket Required)	**Exhibit Hall West**
Wednesday, April 13		
7:30 am–10:30 am	**Advance & On-Site Registration**	**Level 1, Oakland Marriott CC**
7:30 am–8:30 am	**Breakfast – Pearson** (Ticket Required)	**Exhibit Hall West**
8:45 am–12:15 pm	**Major, Spotlight, and Regular Sessions**	**Oakland Marriott CC**
12:30 pm–2:00 pm	**Luncheon –** (Ticket Required) **Co-sponsored by DreamBox Learning**	**Exhibit Hall West**
2:15 pm–4:30 pm	**Major, Spotlight and Regular Sessions**	**Oakland Marriott CC**

NOTES

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PROGRAM SUMMARY INFORMATION FOR MONDAY, APRIL 11

See page 5 for Conference Strand descriptions.

NOTES

MONDAY SUMMARY

7:00–8:00: Session 1001: NCSM Affiliate Leaders Meeting, Grand Ballroom EFGH
7:30–8:00: Session 1002: Conference Orientation—First Timers Session, Grand Ballroom ABC
8:00–8:30: Session 1018: Opening NCSM Session: Welcome, John W. Staley and Beverly K. Kimes, Exhibit Hall West
8:30–9:15: Session 1019: Keynote Presenter: Keith Devlin, Exhibit Hall West

	Grand Ballroom EFGH	Grand Ballroom ABC	Junior Ballroom 1–2	Junior Ballroom 3–4	OCC 201	OCC 202
9:30–10:30	**Session 1101** Strand 1, General ***West,*** *Who Are You and What do You Want to Create?*	**Session 1102** Strand 1, General ***Usiskin,*** *A Curriculum Developer Looks at the Common Core and its Testing*	**Session 1103** Strand 3, Secondary (6–12) ***Seda, Brown,*** *What Has Culture Got to do with the Standards for Mathematical Practice (SMP)?*	**Session 1104** Strand 1, General ***Whitesides, Guarino, Beltramini, Gray, Greenstein,*** *Adapting Curriculum Materials: Engaging in a Collaborative Process*	**Session 1105** Strand 2, Secondary (6–12) ***Mateas, Nikula, Mark,*** *Helping Teachers Plan Instruction Incorporating the Standads for Mathematical Practice (SMP)*	**Session 1106** Strand 2, General ***Karsten, Akwaji-Anderson, McKillop, Brady, Gauthier,*** *NCSM: Coaching Kickoff*
10:45–11:45	**Session 1201** Strand 5, General ***Boaler,*** *Leading Mathematics Change with Powerful Brain Science*	**Session 1202** Strand 4, Middle (6–8) ***Steele, Smith,*** *Moving to Action: Fostering effective Teaching Practices in the Middle Grades with Principles to Actions*	**Session 1203** Strand 4, Intermediate (3–5) ***Khalsa, Fletcher,*** *Digital Tools and Three-Act Tasks: Marriages Made in the Cloud*	**Session 1204** Strand 2, General ***Bruney,*** *Diagnostics and Formative Assessments for Learning*	**Session 1205** Strand 1, Elementary (K–5) ***Rigby, Kazemi, Lewis, Lenges,*** *Organizing for Learning: Leadership Practices That Support Ambitious Mathematics Teaching*	**Session 1206** Strand 2, Intermediate (3–5) ***Sammons, Tellish, Akers,*** *Tasks + Questioning and Reasoning = Mathematical Thinkers*
12:15–1:15	**Session 1401** Strand 3, General ***Franco,*** *Student Voices—Let Them be Heard*	**Session 1402** Strand 2, Middle (6–8) ***Joyner,*** *Coaching for Success: Get Ready (Learning Targets), Get Set (Intentional Listening), Go! (Feedback)*	**Session 1403** Strand 1, General ***Zimba,*** *The Life-Changing Magic of Tidying the Mathematics Curriculum*	**Session 1404** Strand 2, Primary (PK–2) ***Bastable,*** *Fluency Based on Conceptual Understanding with Multi-Digit Addition and Subtraction: What Mathematics Do Coaches Need to Know?*	**Session 1405** Strand 3, General ***Fulmore, Childs, Baltzley,*** *Teaching for Social Justice in Mathematics*	**Session 1406** Strand 1, General ***Wuttig, Daml,*** *Changing Mathematical Mindset of Students, Teachers, Families, and the Community*
1:30–2:30	**Session 1501** Strand 4, General ***Meyer,*** *Beyond Relevance and Real World: Talking with Teachers About Engagement in Mathematics*	**Session 1502** Strand 3, General ***Foster,*** *Supporting Students in Agency, Identity and Authority*	**Session 1503** Strand 1, Elementary (K–5) ***Kanter, Leinwand,*** *What Every Mathematics Leader Needs to Know About Cultivating Numerical Fluency*	**Session 1504** Strand 1, Middle (6–8) ***Phillips,*** *The Marriage of Functions and Algebra in the CCSSM Era*	**Session 1505** Strand 2, General ***Anderson, Crissman, Lee,*** *Coaching Teachers on the Use of Mathematical Talk*	**Session 1506** Strand 1, Middle (6–8) ***Nowak,*** *Open Educational Resources (OER): Designing Teacher Professional Learning Around High-Quality Curricular Materials*
2:45–3:45	**Session 1601** Strand 5, High School (9–12) ***McCallum,*** *Achieving Curricular Coherence in High School with the CCSSM*	**Session 1602** Strand 2, General ***Dixon,*** *Coaching for Cognitive Dissonance: Using Classroom Video as a Catalyst for Change*	**Session 1603** Strand 1, Elementary (K–5) ***Kobett, Andrews,*** *PLC Roundtable: Implementing Principles to Actions in Your PLC*	**Session 1604** Strand 4, Secondary (6–12) ***Ellis, Burrill,*** *Statistics and Probability: Implementing the CCSSM Vision and Spirit*	**Session 1605** Strand 5, Intermediate (3–5) ***Petit, Laird,*** *Using Mathematics Education Research to Develop Fraction Concepts: Integrating Learning Progressions and Formative Assessment*	**Session 1606** Strand 2, General ***Kelemanik, Lucenta,*** *Coaching Teachers' Planning for Mathematical-Practice-Focused Instructional Routines: A Vehicle for Developing Practice*
4:00–5:00	**Session 1701** Strand 3, General ***Treisman,*** *From Individual to Collective Action in Improving our Students' Mathematical Achievement*	**Session 1702** Strand 5, Intermediate (3–5) ***Fuson,*** *Supporting the CCSSM NF Learning Progression and Avoiding Errors by Using the Standards for Mathematical Practice (SMP)*	**Session 1703** Strand 4, Middle (6–8) ***Carroll,*** *Distance Learning for Teachers: Adventuring into Online Mathematics Professional Development (PD)*	**Session 1704** Strand 5, General ***Parrish, Dominick,*** *Fraction Number Talks: Moving Beyond Telling*	**Session 1705** Strand 5, Secondary (6–12) ***Westwood, Cracraft,*** *Growth Mindset Interventions Yield BIG Dividends*	**Session 1706** Strand 4, Elementary (K–5) ***Turner, Susi,*** *A Picture + Technology = Understanding x 10*
5:15–5:45		**Session 1802** Strand 1, General ***Rendon,*** *What's it all About? An Orientation for Those New to the NCSM Annual Conference*	**Session 1803** Strand 1, General ***Barnes,*** *Regional Directors and State Team Leaders*			

5:30–7:00: Session 1918: Reception (ticket required), Exhibit Hall West, Sponsored in part by *Math Teachers Press*

MONDAY SUMMARY

7:00–8:00: Session 1001: NCSM Affiliate Leaders Meeting, Grand Ballroom EFGH
7:30–8:00: Session 1002: Conference Orientation—First Timers Session, Grand Ballroom ABC
8:00–8:30: Session 1018: Opening NCSM Session: Welcome, John W. Staley and Beverly K. Kimes, Exhibit Hall West
8:30–9:15: Session 1019: Keynote Presenter: Keith Devlin, Exhibit Hall West

	OCC 203	OCC 204	OCC 205	OCC 206	OCC 207	OCC 208
9:30–10:30	**Session 1107** Strand 1, Middle (6–8) ***Rogers,*** *Developing Deeper Student Thinking and Reflection Through Lesson Re–Engagement Design with Middle School Teacher Leaders*	**Session 1108** Strand 4, Secondary (6–12) ***Gates, Kerins, Cordner, Badertscher, Cuoco,*** *Considerations for Designing Online Immersive Mathematical Professional Development*	**Session 1109** Strand 2, Middle (6–8) ***Ryan, Werner,*** *The Power of Representations: Coaching New Teachers to Focus on Mathematical Concepts and Relationships*	**Session 1110** Strand 4, General ***Reiners,*** *The Probabilities of Wheel of Fortune—A Contestant's Perspective* **SPONSOR SHOWCASE**	**Session 1111** Strand 4, Elementary (K–5) ***Whited,*** *Scout-Using Technology for Observational Assessments* **TECHNOLOGY SHOWCASE**	**Session 1112** Strand 5, General ***Clarke, Clarke,*** *Strategies for Encouraging Student Persistence on Cognitively Demanding Tasks: research Insights from Australia*
10:45–11:45	**Session 1207** Strand 2, Elementary (K–5) ***Blanke, Kelly, Djuric*** *Working in Harmony: Orchestrating Effective Parent Education*	**Session 1208** Strand 5, Middle (6–8) ***Yanisko, Khalil*** *Changing School Culture: New Teachers Learning to Facilitate High-Quality Mathematics Instruction*	**Session 1209** Strand 3, Secondary (6–12) ***Rogers, Seabold, Wilson-Banks,*** *Develop Mathematical Practices Through the Lens of Anti-Bias Education: Persevering While Problem Solving in Your World*	**Session 1210** Strand 1, General ***Green,*** *Optimize Blended Learning Environments and Professional Development* **SPONSOR SHOWCASE**	**Session 1211** Strand 4, Elementary (K–5) ***Whited,*** *Leveraging the Power of Technology in Inquiry Based Learning* **TECHNOLOGY SHOWCASE**	**Session 1212** Strand 1, Secondary (6–12) ***Ganguly, Davenport, Richman, Dietiker,*** *Looking Carefully at Curriculum Alignment: Collaborating with Teacher Leaders to Make Good Choices About Curriculum*
12:15–1:15	**Session 1407** Strand 5, High School (9–12) ***Cook, Joyoprayitno,*** *Reclaiming Lost Ground: Research-Based Interventions for Underprepared Algebra Students*	**Session 1408** Strand 4, High School (9–12) ***Lemon,*** *Open Educational Resources (OER) That Promote High Levels of Engagement and Student Thinking!*	**Session 1409** Strand 2, Elementary (K–5) ***Clark, Collura,*** *Videos of Classroom Discourse and Interviews to Develop Teacher Understanding of Number Sense and Reasoning*	**Session 1410** Strand 1, Elementary (K–5) ***Mayfield, Weynand,*** *Maximizing Learning or Missing Opportunities: Helping Teachers Foster Algebra Readiness*	**Session 1411** Strand 4, Elementary (K–5) ***Whittington, Schieffer, Leslie,*** *Documenting and Disseminating Effective Teacher Leadership Practices in a Digital Age*	**Session 1412** Strand 4, Middle (6–8) ***Gough,*** *Multiple Modalities—Show What you Know in More Than One Way*
1:30–2:30	**Session 1507** Strand 3, Middle (6–8) ***Nikula, Asturias, Buffington,*** *Access and Production for English Learners—What's the Role of Mathematical Diagrams?*	**Session 1508** Strand 5, Elementary (K–5) ***Rigelman, McGatha,*** *Bridging Mathematics Specialist Research and Practice*	**Session 1509** Strand 3, Secondary (6–12) ***Imm, Cook,*** *Modeling Where It Matters Most: Disrupting the Pattern of Endless Algebra*	**Session 1510** Strand 2, Elementary (K–5) ***Gojak, Moore,*** *Rich Mathematical Tasks: Familiar Resources to Meet the Challenges of a New Era* **SPONSOR SHOWCASE**	**Session 1511** Strand 4, Elementary (K–5) ***Hearn, Chambers,*** *The Power of Open Curriculum: Get Hands on with LearnZillion* **TECHNOLOGY SHOWCASE**	**Session 1512** Strand 2, Intermediate (3–5) ***Norris, Schuhl,*** *Raise the Demand: Deepen the Learning*
2:45–3:45	**Session 1607** Strand 1, General ***Rimbey,*** *Leading Change: Professional Development (PD) Moves That Promote New Ways of Thinking, Learning and Teaching*	**Session 1608** Strand 2, Elementary (K–5) ***Daley, Malone,*** *Unit Planning as an Approach for Professional Learning*	**Session 1609** Strand 1, Middle (6–8) ***Gochenaur,*** *Cultivating Teacher-Leaders by Helping Them Serve Students with Disabilities*	**Session 1610** Strand 3, General ***Lambert,*** *Neurodiversity and Mathematics: A Radical Rethinking of Children with Disabilities in Inquiry Mathematics Classrooms*	**Session 1611** Strand 4, General ***Clark, Freeman,*** *Defining a Model Mathematics Classroom in Physical and Virtual Schools* **TECHNOLOGY SHOWCASE**	**Session 1612** Strand 4, General ***Mitchell, Chintala,*** *Cultivating an Online Mathematical Community: Changing Professional Learning so It Matches the Way We Live*
4:00–5:00	**Session 1707** Strand 2, Secondary (6–12) ***Cunningham, Scott,*** *High School Coaching Model: Building Bridges Between Coaching and a PLC Culture*	**Session 1708** Strand 1, Elementary (K–5) ***Shumway, Everett,*** *Leaders Who Never Stop Learning: Using Research and Reflection to Develop Effective Professional Development (PD)*	**Session 1709** Strand 3, High School (9–12) ***Kuehl,*** *Yes, They Can! Supporting English Learners in Doing Meaningful Mathematics*	**Session 1710** Strand 3, Middle (6–8) ***Knudsen, Stevens, Lara-Meloy,*** *Teaching Mathematical Argumentation Equitably in Urban Districts*	**Session 1711** Strand 2, General ***Booth, Gogolen, Walters,*** *Finally! A Coaching Framework That's Actually About the Mathematics* **TECHNOLOGY SHOWCASE**	**Session 1712** Strand 2, General ***Parr,*** *Techniques That Support Struggling and Novice Teachers*

5:30–7:00: Session 1918: Reception (ticket required), Exhibit Hall West, Sponsored in part by *Math Teachers Press*

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8:30–9:15: Session 1019: Keynote Presenter: Keith Devlin, Exhibit Hall West

	OCC 210/11	OCC 212	California	Oakland	Skyline
9:30–10:30	**Session 1113** Strand 1, Elementary (K–5) ***Pittock, Gunsallus,*** *Improving Instruction: Deep Mathematical Knowledge and Other Levers of Change*	**Session 1114** Strand 5, Elementary (K–5) ***Fletcher, Wiernicki, Snell, Marshall,*** *K–5 Game Changer: The Power of Student Interviews and Mathematical Reasoning Inventories*	**Session 1115** Strand 5, Middle (6–8) ***Schefelker, Giera, Laughlin,*** *Using Fraction Number Talks to Build Effective Discourse in Middle School*	**Session 1116** Strand 5, General ***Mills,*** *Developing a Long View: Expanding Professional Learning (PL) Design to Better Support and Cohere Teacher Growth Over Time*	**Session 1117** Strand 4, High School (9–12) ***Bellman,*** *Using Free Apps to Encourage, Develop, and Support Young Teachers' Use of Classroom Level Assessment*
10:45–11:45	**Session 1213** Strand 2, Intermediate (3–5) ***Blue, Krownapple,*** *D3: Diving Deeper Into Decimals*	**Session 1214** Strand 1, Middle (6–8) ***Kenyon, Bradley,*** *The San Francisco Unified School District (SFUSD) Mathematics Teaching Toolkit: Changing the Practice Along with the Content*	**Session 1215** Strand 1, General ***Agness, Craig, Barnes,*** *Making It Work! Aligning Mathematical IEP Goals with the Standards for Mathematical Practice (SMP)*	**Session 1216** Strand 2, General ***Funderburk, Falting,*** *Bridging Coaching Conversations to Classroom Practice: Maximizing Your Coaching Impact*	**Session 1217** Strand 5, General ***Benken,*** *Expanding Teachers' Knowledge Through Long-Term Collaborative Professional Development: The Case of Algebra*
12:15–1:15	**Session 1413** Strand 5, Middle (6–8) ***MacLeod,*** *Expeditionary Math: Learning to be a Mathematician Through Adventures*	**Session 1414** Strand 3, Elementary ***Mingle,*** *Girls and STEM: Are They Not Going In, or Are We Pushing Them Out?*	**Session 1415** Strand 4, High School (9–12) ***Casey, Bambrick,*** *Probing Student Understanding and Assessing for Learning in a Technology-Rich Classroom*	**Session 1416** Strand 1, Elementary (K–5) ***Lischka, Barlow, Hartland, Willingham,*** *Implementing Lesson Study: Obstacles and Challenges Identified by Emerging Teacher Leaders*	**Session 1417** Strand 3, General ***Brown, Gray, Mimms,*** *California State University (CSU) Summer Algebra Institute Project: Culturally-Based Program Development and Evaluation*
1:30–2:30	**Session 1513** Strand 2, Elementary (K–5) ***Zager,*** *"I'm Not really a Math Person"—Coaching Strategies for Elementary Teachers Who Have Been Turned Off Mathematics*	**Session 1514** Strand 5, Secondary (6–12) ***Eubanks-Turner, Bargagliotti,*** *Engaging Teachers in Mathematical Practices in a Statistics Professional Development*	**Session 1515** Strand 4, General ***Callard, Carson, Foster,*** *Engaging Teachers in Online Professional Learning: Collaborating in an Online Space to Impact Teacher Practices*	**Session 1516** Strand 1, General ***Cagle,*** *Preparation for Ambitious Teaching: Necessary but Not Sufficient–Building Teacher Leadership Capacity from the Beginning*	**Session 1517** Strand 4, High School (9–12) ***Wilson,*** *Slow Mathematics: Looking for Meaning Before the Procedure*
2:45–3:45	**Session 1613** Strand 3, High School (9–12) ***Miller,*** *How Do We Help Underrepresented Minority Students Reach Their Potential in Mathematics?*	**Session 1614** Strand 2, General ***Roman, Arrington,*** *Intentional Coaching and Planning: Integrating Practices into Content Instruction*	**Session 1615** Strand 2, Secondary (6–12) ***Rudolph, Johnson, Everett,*** *On Your Mark! Get Set! GO! Danielson, the Standards for Mathematical Practice (SMP), and Formative Assessment Racing Hand in Hand*	**Session 1616** Strand 5, Secondary (6–12) ***Hendrickson, Hilton,*** *A Framework for Building Procedural Fluency on a Foundation of Conceptual Understanding*	**Session 1617** Strand 1, Secondary (6–12) ***Diehl,*** *Leading Change with a Growth Mindset*
	FOYER EXHIBIT HALL WEST 3:00–3:45	**Session 1620** Strand 1, General ***HOT TOPICS*** ***West, Mukhopadhyay, Shore***			
4:00–5:00	**Session 1713** Strand 3, Secondary (6–12) ***Tucher, Barnes, Daro, Asturias,*** *Secondary Course Sequences: San Francisco and Oakland Partnering Across the Bay Bridge*	**Session 1714** Strand 2, Secondary (6–12) ***Lancour, Trievel,*** *Coaching High School Number Talks: Moving Beyond Experimentation to a More Targeted, Strategic, and Purposeful Approach*	**Session 1715** Strand 1, General ***Knapp, Gibbons,*** *How Coaches and Principals Work Together to Create Opportunities to Talk About Teaching and Learning*	**Session 1716** Strand 1, General ***Broaddus,*** *Improving Assessment Literacy for Students, Parents, Educators, and Policymakers with Five Essential Understandings*	**Session 1717** Strand 2, Intermediate (3–5) ***Adams, Dixon, Nolan,*** *Making Sense of Mathematics for Teaching: Leading with Content*

5:30–7:00: Session 1918: Reception (ticket required), Exhibit Hall West, Sponsored in part by *Math Teachers Press*

STRAND 1: CULTIVATING LEADERSHIP IN A TIME OF CHANGE

SESSION	LOCATION	TIME
1018	EXHIBIT HALL WEST	8:00–8:30
1101	GRAND BALLROOM EFGH	9:30–10:30
1102	GRAND BALLROOM ABC	9:30–10:30
1104	JUNIOR BALLROOM 3–4	9:30–10:30
1107	OCC 203	9:30–10:30
1113	OCC 210/211	9:30–10:30
1205	OCC 201	10:45–11:45
1210	OCC 206	10:45–11:45
1212	OCC 208	10:45–11:45
1214	OCC 212	10:45–11:45
1215	CALIFORNIA	10:45–11:45
1403	JUNIOR BALLROOM 1–2	12:15–1:15
1406	OCC 202	12:15–1:15
1410	OCC 206	12:15–1:15
1416	OAKLAND	12:15–1:15
1503	JUNIOR BALLROOM 1–2	1:30–2:30
1504	JUNIOR BALLROOM 3–4	1:30–2:30
1506	OCC 202	1:30–2:30
1516	OAKLAND	1:30–2:30
1603	JUNIOR BALLROOM 1–2	2:45–3:45
1607	OCC 203	2:45–3:45
1609	OCC 205	2:45–3:45
1617	SKYLINE	2:45–3:45
1620	FOYER EXHIBIT HALL WEST	3:00–3:45
1708	OCC 204	4:00–5:00
1715	CALIFORNIA	4:00–5:00
1716	OAKLAND	4:00–5:00
1802	GRAND BALLROOM ABC	5:15–5:45
1803	JUNIOR BALLROOM 1–2	5:15–5:45

STRAND 2: COACHING THAT MATTERS

SESSION	LOCATION	TIME
1105	OCC 201	9:30–10:30
1106	OCC 202	9:30–10:30
1109	OCC 205	9:30–10:30
1204	JUNIOR BALLROOM 3–4	10:45–11:45
1206	OCC 202	10:45–11:45
1207	OCC 203	10:45–11:45
1213	OCC 210/11	10:45–11:45
1216	OAKLAND	10:45–11:45
1402	GRAND BALLROOM ABC	12:15–1:15
1404	JUNIOR BALLROOM 3–4	12:15–1:15
1409	OCC 205	12:15–1:15
1505	OCC 201	1:30–2:30
1510	OCC 206	1:30–2:30
1512	OCC 208	1:30–2:30
1513	OCC 210/11	1:30–2:30
1602	GRAND BALLROOM ABC	2:45–3:45
1606	OCC 202	2:45–3:45
1608	OCC 204	2:45–3:45
1614	OCC 212	2:45–3:45
1615	CALIFORNIA	2:45–3:45
1707	OCC 203	4:00–5:00
1711	OCC 207	4:00–5:00
1712	OCC 208	4:00–5:00
1714	OCC 212	4:00–5:00
1717	SKYLINE	4:00–5:00

STRAND 4: ENHANCING MATHEMATICS EDUCATION IN THE DIGITAL AGE

SESSION	LOCATION	TIME
1019	EXHIBIT HALL WEST	8:30–9:15
1108	OCC 204	9:30–10:30
1110	OCC 206	9:30–10:30
1111	OCC 207	9:30–10:30
1117	SKYLINE	9:30–10:30
1202	GRAND BALLROOM ABC	10:45–11:45
1203	JUNIOR BALLROOM 1–2	10:45–11:45
1211	OCC 207	10:45–11:45
1408	OCC 204	12:15–1:15
1411	OCC 207	12:15–1:15
1412	OCC 208	12:15–1:15
1415	CALIFORNIA	12:15–1:15
1501	GRAND BALLROOM EFGH	1:30–2:30
1511	OCC 207	1:30–2:30
1515	CALIFORNIA	1:30–2:30
1517	SKYLINE	1:30–2:30
1604	JUNIOR BALLROOM 3–4	2:45–3:45
1611	OCC 207	2:45–3:45
1612	OCC 208	2:45–3:45
1703	JUNIOR BALLROOM 1–2	4:00–5:00
1706	OCC 202	4:00–5:00

STRAND 3: ADVANCING THE SOCIAL JUSTICE CONVERSATION

SESSION	LOCATION	TIME
1103	JUNIOR BALLROOM 1–2	9:30–10:30
1209	OCC 205	10:45–11:45
1401	GRAND BALLROOM EFGH	12:15–1:15
1405	OCC 201	12:15–1:15
1414	OCC 212	12:15–1:15
1417	SKYLINE	12:15–1:15
1502	GRAND BALLROOM ABC	1:30–2:30
1507	OCC 203	1:30–2:30
1509	OCC 205	1:30–2:30
1610	OCC 206	2:45–3:45
1613	OCC 210/11	2:45–3:45
1701	GRAND BALLROOM EFGH	4:00–5:00
1709	OCC 205	4:00–5:00
1710	OCC 206	4:00–5:00
1713	OCC 210/11	4:00–5:00

STRAND 5: SHARING RESEARCH THAT INFORMS MATHEMATICS EDUCATION

SESSION	LOCATION	TIME
1112	OCC 208	9:30–10:30
1114	OCC 212	9:30–10:30
1115	CALIFORNIA	9:30–10:30
1116	OAKLAND	9:30–10:30
1201	GRAND BALLROOM EFGH	10:45–11:45
1208	OCC 204	10:45–11:45
1217	SKYLINE	10:45–11:45
1407	OCC 203	12:15–1:15
1413	OCC 210/11	12:15–1:15
1508	OCC 204	1:30–2:30
1514	OCC 212	1:30–2:30
1601	GRAND BALLROOM EFGH	2:45–3:45
1605	OCC 201	2:45–3:45
1616	OAKLAND	2:45–3:45
1702	GRAND BALLROOM ABC	4:00–5:00
1704	JUNIOR BALLROOM 3–4	4:00–5:00
1705	OCC 201	4:00–5:00

SESSION 1001 **7:00 AM–8:00 AM** **GRAND BALLROOM EFGH**

NCSM AFFILIATE LEADERS MEETING

This meeting of NCSM affiliate leaders will focus on the critical work of NCSM for 2016–2017. This meeting is for invited affiliate leaders.

Carol Matsumoto, NCSM Affiliates Coordinator, Winnipeg, Manitoba

CONFERENCE ORIENTATION – FIRST TIMERS SESSION

SESSION 1002 **7:30 AM–8:00 AM** **GRAND BALLROOM ABC**
STRAND 1 **GENERAL**

What's It All About? An Orientation for Those New to the NCSM Annual Conference

This session is for those who are new to the NCSM Annual Conference. Participants will network with others, review the structure of the conference, explore the different conference options, set personal priorities and goals, and work on a personal plan of what to do and where to go during the conference.

Gwen Zimmermann, NCSM C1 Regional Director, Lincolnshire, Illinois

OPENING NCSM SESSION: WELCOME 8:00 AM–8:30 AM

SESSION 1018 **EXHIBIT HALL WEST**
STRAND 1

Welcome to the 48th NCSM Annual Conference

John W. Staley,
NCSM President,
Towson, Maryland

Beverly K. Kimes,
NCSM 1st Vice President and Program Chair,
Birmingham, Alabama

8:30 AM–9:15 AM

KEYNOTE PRESENTER

SESSION 1019 **EXHIBIT HALL WEST**
STRAND 4 **GENERAL**

Game-Based Learning: The Hype Is Starting to Give Way to Some Surprising Substance

In his seminal 2003 book *What Video Games Have to Teach Us About Learning and Literacy*, James Paul Gee observed that the features that makes a video game successful are precisely the criteria for good classroom learning: engagement, challenge, exploration, goals, rewards, and a safe environment in which to try and fail. Turning those observations into successful learning games proved to be more difficult than most of the early game-based learning pioneers realized. Mathematics (my subject) proved to be one of the most difficult areas, which is ironic given that all video games are built on mathematics. Within the past couple of years, however, educators and game developers learned how to collaborate effectively, producing learning games that not only appear to work, but to work far better than even the most enthusiastic proponent ever expected. Even in math. Two recent classroom studies from my own university found significant (up to 20% improvement over a comparison group on a written test) math learning outcomes after just 120 minutes of math-video-game play spread over one month, and similar results have been reported elsewhere. What do these results tell us? Should we even believe them? How were the studies constructed, and what were the written tests really measuring? (Hint: This is a Common Core story.)

Keith Devlin, Stanford University, Stanford, California

Presider, **Beverly K. Kimes**, NCSM 1st Vice President and Program Chair, Birmingham, Alabama

Dr. Keith Devlin is a mathematician at Stanford University, where he is a co-founder and Executive Director of Stanford's H-STAR institute and a co-founder of Stanford's Media X research network. He is a World Economic Forum Fellow, a Fellow of the American Association for the Advancement of Science, and a Fellow of the American Mathematical Society, recipient of the Pythagoras Prize, the Peano Prize, the Carl Sagan Award, and the Joint Policy Board for Mathematics Communications Award. His current research is focused on the use of different media to teach and communicate mathematics to diverse audiences. In this connection, he is a co-founder and President of an educational technology company, BrainQuake, which uses mobile games as a learning and assessment platform. He is "the Math Guy" on National Public Radio.

9:30 AM–10:30 AM

MAJOR PRESENTATION

SESSION 1101 **GRAND BALLROOM EFGH**
STRAND 1 **GENERAL**

Who Are You and What Do You Want To Create?

What is the most important skill you can cultivate to influence the system in which you work in positive and productive ways? Are you caught in old thinking patterns and outdated notions associated with hierarchical structures and defined roles? Do you have the skill set and the courage to speak up in ways others will listen and even act upon? When the pressures of new standards, high-stakes testing linked to student and teacher evaluations seem relentless and you are faced with tough decisions about where to focus your energy, how do you maintain your integrity yet stay in the game? Join me to reflect on what the research says is the most important condition needed for any organization to thrive.

Lucy West, Metamorphosis Teaching Learning Communities, New York, New York

Presider, **Babette Benken**, NCSM eNews Editor, Long Beach, California

Lucy West has been a mover and shaker in the world of education for over 30 years. Her latest book, Agents of Change: How Content Coaching Transforms Teaching and Learning, builds on her highly acclaimed, Content-Focused Coaching: Transforming Mathematics Lessons, and provides in-depth guidance on how to create coaching initiatives that transform schools into vibrant, multi-generational learning communities. Her latest passion is the development of robust, rigorous academic discourse among educators and students. She is working on a multi-media publication that will make explicit the characteristics of robust academic dialogue and the teaching "moves" that cultivate it.

9:30 AM–10:30 AM CONT...

SPOTLIGHT SPEAKER

SESSION 1102 **GRAND BALLROOM ABC**
STRAND 1 **GENERAL**

A Curriculum Developer Looks at the Common Core and its Testing

The CCSSM constitute an ideal curriculum, while PARCC, SBAC, and the other tests constitute a tested curriculum. To what extent are these curricula in sync with each other and to the NCTM Standards (another ideal), and to what extent do these curricula agree with curricula in other countries?

Zalman Usiskin, University of Chicago, Chicago, Illinois

Presider, **Nancy Drickey**, NCSM W2 Regional Director, McMinnville, Oregon

SESSION 1103 **JUNIOR BALLROOM 1–2**
STRAND 3 **SECONDARY (6–12)**

What Has Culture Got to do with the Standards for Mathematical Practice (SMP)?

Teachers who are serious about addressing inequities in mathematical achievement will have to take into account the sociocultural aspects of teaching. In this workshop, participants learn to use specific strategies of an equity pedagogy framework as a lens for understanding the role that culture plays in student engagement of the SMP.

Pamela Seda, Seda Educational Consulting, LLC, Ellenwood, Georgia

Kyndall Brown, University of California, Los Angeles, California

SESSION 1104 **JUNIOR BALLROOM 3–4**
STRAND 1 **GENERAL**

Adapting Curriculum Materials: Engaging in a Collaborative Process

With textbooks declaring their alignment to standards, yet thoughtful organizations still skeptical about that alignment, how can schools move forward preparing students? Illustrative Mathematics worked with teachers and coaches on adapting their instructional materials and learned some generalizable lessons for adapting in a variety of contexts.

Ellen Whitesides, Illustrative Mathematics, Oro Valley, Arizona

Jody Guarino, Orange County Department of Education, Costa Mesa, California

Jennie Beltramini, Anacortes School District, Anacortes, Washington

Kristin Gray, Cape Henlopen School District, Lewes, Delaware

Marni Greenstein, Student Achievement Partners, New York, New York

SESSION 1105 **OCC 201**
STRAND 2 **SECONDARY (6–12)**

Helping Teachers Plan Instruction Incorporating the Standards for Mathematical Practice (SMP)

Planning in new ways to engage students in the SMP is challenging. This session will share ideas about planning for the SMP and a planning protocol that has been field-tested across the country in professional development settings. You will use the planning protocol with colleagues similar to how you might when coaching teachers.

Victor Mateas, Education Development Center, Waltham, Massachusetts

Johannah Nikula, Education Development Center, Waltham, Massachusetts

June Mark, Education Development Center, Waltham, Massachusetts

SESSION 1106 **OCC 202**
STRAND 2 **GENERAL**

NCSM: Coaching Kickoff

Calling all coaches, specialists, and teacher leaders! Come to the 3rd Annual Coaching "Kick-off" session where you will enjoy networking opportunities with others who have coaching responsibilities. You will see the new video resources available on the NCSM Coaching Corner website. You will also have time to share strategies and ideas.

Donna Karsten, Nova Scotia Education and Early Childhood Development, Halifax, Nova Scotia, Canada

Comfort Akwaji-Anderson, NCSM C2 Regional Director, Iowa City, Iowa

David McKillop, Independent Mathematics Consultant, Truro, Nova Scotia, Canada

Denise Brady, Shiawassee Regional Educational Service District, Corunna, Michigan

Jason Gauthier, Allegan Area Educational Service Agency, Allegan, Michigan

SESSION 1107 **OCC 203**
STRAND 1 **MIDDLE (6–8)**

Developing Deeper Student Thinking and Reflection Through Lesson Re-Engagement Design with Middle School Teacher Leaders

Learn what teachers at our middle school are doing to implement Formative Assessment strategies through collaborative discussions of student work, which guide the design of re-engagement lessons for students. Explore ways your team can use this design to critique reasoning and deepen student understanding while developing teacher leaders.

Patricia Rogers, Gilroy Unified School District, Gilroy, California

9:30 AM–10:30 AM CONT...

SESSION 1108 **OCC 204**
STRAND 4 **SECONDARY (6–12)**

Considerations for Designing Online Immersive Mathematical Professional Development

We focus on the design features of an online professional development program, modeled by the Park City Mathematics Institute, that addresses some of the challenges faced online—including attrition and attendance. We will discuss strategies for designing an online environment, plus the challenges and successes for participants and facilitator.

Miriam Gates, Education Development Center, Inc., Waltham, Massachusetts

Bowen Kerins, Education Development Center, Inc., Waltham, Massachusetts

Tracy Cordner, Education Development Center, Inc., Waltham, Massachusetts

Eden Badertscher, Education Development Center, Inc., Waltham, Massachusetts

Al Cuoco, Education Development Center, Inc., Waltham, Massachusetts

SESSION 1109 **OCC 205**
STRAND 2 **MIDDLE (6–8)**

The Power of Representations: Coaching New Teachers to Focus on Mathematical Concepts and Relationships

Effective teaching focuses students' attention on key mathematical concepts and relationships. Routines have been shown to help new teachers structure and facilitate productive conversations. In our session, we share video of a routine that uses representations to support teachers in leading discussions on concepts like equivalence and ratio.

Sarah Ryan, Metamorphosis Teaching Learning Communities, New York, New York

Suzanne Werner, Metamorphosis Teaching Learning Communities, New York, New York

SPONSOR SHOWCASE

SESSION 1110 **OCC 206**
STRAND 4 **GENERAL**

The Probabilities of Wheel of Fortune—A Contestant's Perspective

How do English language letter frequencies and *Wheel* dollar values affect player strategy? How many "safe" spins can you expect to make before going Bankrupt or Losing A Turn? Come explore, play, and simulate with a recent Wheel contestant.

Mike Reiners, Casio/Presenter, Dover, New Jersey

TECHNOLOGY SHOWCASE

SESSION 1111 **OCC 207**
STRAND 4 **ELEMENTARY (K–5)**

Scout-Using Technology for Observational Assessments

In *Investigations in Number, Data, and Space* teacher observations are an important part of ongoing assessment. Learn how technology is being used to help teachers capture, organize, and find student work as a part of ongoing formative assessment in *Investigations 3*.

Kurt Whited, National Math Specialist, Pearson, Chandler, Arizona

SESSION 1112 **OCC 208**
STRAND 5 **GENERAL**

Strategies for Encouraging Student Persistence on Cognitively Demanding Tasks: Research Insights from Australia

We have been working alongside elementary and middle school teachers as they introduce cognitively demanding tasks to students. In this session, we will share examples of the tasks, the ways in which the tasks have been used, and insights from teachers and researchers on strategies for encouraging students to persist when working on such tasks.

Doug Clarke, Australian Catholic University, Melbourne, Australia

Barbara Clarke, Monash University, Frankston Victoria, Australia

SESSION 1113 **OCC 210/11**
STRAND 1 **ELEMENTARY (K–5)**

Improving Instruction: Deep Mathematical Knowledge and Other Levers of Change

Elementary mathematics methods courses rarely have time to address deep understanding of key elementary mathematical topics that is necessary to teach mathematics in the focused, coherent, rigorous way intended by the CCSSM. We will discuss how we support teachers to develop the knowledge of mathematics and the skills required to guide students.

Janet Pittock, Redbird Advanced Learning, Oakland, California

Heather Gunsallus, Redbird Advanced Learning, Oakland, California

9:30 AM–10:30 AM CONT...

SESSION 1114 **OCC 212**
STRAND 5 **ELEMENTARY (K–5)**

K–5 Game Changer: The Power of Student Interviews and Mathematical Reasoning Inventories

Come learn how the implementation of mathematical reasoning inventories changed the course of student learning and increased achievement for an entire district. From training and administration, to analyzing data and providing targeted interventions, participants will experience the whole process. Learn what students know by sitting down with them.

Graham Fletcher, Griffin-Spalding Schools, Griffin, Georgia

Mike Wiernicki, Henry County Schools, McDonough, Georgia

Lya Snell, Georgia Department of Education, Atlanta, Georgia

Sarah Marshall, Henry County Schools, McDonough, Georgia

SESSION 1115 **CALIFORNIA**
STRAND 5 **MIDDLE (6–8)**

Using Fraction Number Talks to Build Effective Discourse in Middle School

Come see how implementing Number Talks helps develop effective discourse in middle school. Learn how student engagement changed when teachers used high leverage number talks to develop fluency with fractions. Participants will be shown classroom videos of students' fractional reasoning and will discuss the number strings used for the discussions.

Beth Schefelkler, School District of South Milwaukee, South Milwaukee, Wisconsin

Joe Giera, School District of South Milwaukee, South Milwaukee, Wisconsin

Connie Laughlin, University of Wisconsin, Milwaukee, Wisconsin

SESSION 1116 **OAKLAND**
STRAND 5 **GENERAL**

Developing A Long View: Expanding Professional Learning (PL) Design to Better Support and Cohere Teacher Growth Over Time

This session will explore the use of five well-researched mathematics education frameworks (Talk Moves, Multiple Representation Star, etc.) to enhance PL experiences on differing topics in ways that both help teachers make connections among topics and support more effective generative learning for educators with differing levels of expertise.

Valerie L. Mills, NCSM Immediate Past-President, Ypsilanti, Michigan

SESSION 1117 **SKYLINE**
STRAND 4 **HIGH SCHOOL (9–12)**

Using Free Apps to Encourage, Develop, and Support Young Teachers' Use of Classroom Level Assessment

Look at a successful program that has been used to develop pre-serve teachers' use of formative decisions from continuous, timely classroom-level assessments. Discuss the tools, assignments, scheduling and support given these teachers over an academic year. This program has been successful for years and can be generalized to teachers at any level.

Allan Bellman, University of Mississippi, University, Mississippi

10:45 AM–11:45 AM

MAJOR PRESENTATION

SESSION 1201 **GRAND BALLROOM EFGH**
STRAND 5 **GENERAL**

Leading Mathematics Change with Powerful Brain Science

Every 12 months the world of brain science changes with new evidence emerging that could and should transform students' mathematical experiences. In this session I will share some of the latest research, much of which runs counter to what happens in mathematics classrooms across the country. We will consider the evidence you most need in leading change, as well as what it means for mathematics classrooms and for teachers and students.

Jo Boaler, Stanford University, Stanford, California

Presider, **Gwen Zimmermann**, NCSM C1 Regional Director, Lincolnshire, Illinois

Dr. Jo Boaler is a Professor of Mathematics Education at Stanford University, and the co-founder of YouCubed. She is an analyst for PISA testing in the OECD, and author of the first MOOC on mathematics teaching and learning. She is an elected fellow of the Royal Society of Arts (Great Britain), and a former president of the International Organization for Women and Mathematics Education. She is the recipient of a National Science Foundation 'Early Career Award' and the NCSM Kay Gilliland Equity Award (2014). She is the author of nine books and numerous research articles. Her latest book is Mathematical Mindsets: Unleashing Students' Potential through Creative Math, Inspiring Messages and Innovative Teaching (2016).

SPOTLIGHT SPEAKER

SESSION 1202 **GRAND BALLROOM ABC**
STRAND 4 **MIDDLE (6–8)**

Moving to Action: Fostering Effective Teaching Practices in the Middle Grades with Principles to Actions

This session features the new NCTM materials designed to support teacher professional learning on the research-based teaching practices in *Principles to Actions*. Engage in analysis of effective mathematics teaching using video cases and resources from selected modules and continue the conversation with teachers and leaders in your regions.

Michael Steele, University of Wisconsin, Milwaukee, Wisconsin

Margaret Smith, University of Pittsburgh, Pittsburgh, Pennsylvania

Presider, **Suzanne Libfeld**, NCSM E1 Regional Director, Bronx, New York

SESSION 1203 **JUNIOR BALLROOM 1–2**
STRAND 4 **INTERMEDIATE (3–5)**

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

Bring your iPad and your inquisitive mind. What do you notice? What do you wonder? How can you lead your district to use free, online tools effectively? This session features mathematical tasks with video anchors and online, virtual manipulatives. Themes will include: inquiry, rich discourse, perseverance, and authentic connections for grades 3–5.

Arjan Khalsa, Conceptua Math, Petaluma, California

Graham Fletcher, Griffin-Spalding Schools, Griffin, Georgia

SESSION 1204 **JUNIOR BALLROOM 3–4**
STRAND 2 **GENERAL**

Diagnostic and Formative Assessments for Learning

Effective use of information from diagnostic and formative assessments is key to teaching and lesson planning processes. In this presentation, participants will learn more about how diagnostic and formative assessment data can improve planning for differentiation and support of struggling learners and how coaches can support this work.

Kevin Bruney, PARCC, Washington, District of Columbia

SESSION 1205 **OCC 201**
STRAND 1 **ELEMENTARY (K–5)**

Organizing for Learning: Leadership Practices That Support Ambitious Mathematics Teaching

This qualitative analysis investigates the instructional leadership practices of school principals and coaches that aim to support instructional improvement in mathematics. We examine the leadership practices, norms and routines established by leaders to support teacher learning, and the learning of the instructional leaders themselves.

Jessica Rigby, University of Washington, Seattle, Washington

Elham Kazemi, University of Washington, Seattle, Washington

Becca Lewis, University of Washington, Seattle, Washington

Anita Lenges, University of Washington, Seattle, Washington

10:45 AM–11:45 AM CONT...

SESSION 1206 **OCC 202**
STRAND 2 **INTERMEDIATE (3–5)**

Tasks + Questioning and Reasoning = Mathematical Thinkers

How can mathematics leaders support teachers in implementing the eight Mathematical Teaching Practices outlined in *Principles to Actions*? Participants will identify high-quality tasks and purposeful questions that promote reasoning and problem solving. Discourse will be fostered through hands-on investigations with high cognitive demand.

Kay Sammons, Howard County Public School System, Ellicott City, Maryland

Joan Tellish, Howard County Public School System, Ellicott City, Maryland

Cheryl Akers, Howard County Public School System, Ellicott City, Maryland

SESSION 1207 **OCC 203**
STRAND 2 **ELEMENTARY (K–5)**

Working in Harmony: Orchestrating Effective Parent Education

It is critical to work in harmony with parents to support ALL students' mathematical learning. Our coaching teams implemented informational meetings, parent coffees, Problems of the Month, and family mathematics nights to nurture parents' understanding of the CCSSM. Receive ready-to-use resources to educate and build constructive partnerships.

Barbara Blanke, Cal Poly State University, San Luis Obispo, California

Kimberly Kelly, San Luis Coastal Unified School District, San Luis Obispo, California

Jessica Djuric, San Luis Coastal Unified School District, San Luis Obispo, California

SESSION 1208 **OCC 204**
STRAND 5 **MIDDLE (6–8)**

Changing School Culture: New Teachers Learning to Facilitate High-Quality Mathematics Instruction

A study of three middle-school mathematics teachers showed that those teachers committed to student-centered instruction were able to learn to facilitate it even in teacher-centered school cultures, where teachers with less belief in student-centered instruction were able to change their practice in response to school-based pressure and support.

Emily Yanisko, Urban Teacher Center, Baltimore, Maryland

Deena Khalil, Howard University School of Education, Washington, District of Columbia

SESSION 1209 **OCC 205**
STRAND 3 **SECONDARY (6–12)**

Develop Mathematical Practices Through the Lens of Anti-Bias Education: Persevering While Problem Solving in Your World

This interactive session will explore the four goals of Anti-Bias Education (ABE) and provide ready-to-use examples of CCSSM-aligned lessons. We will discuss the importance of developing sociomathematical norms in the classroom and brainstorm ways to embed the four ABE goals in your current leadership roles within schools and classrooms.

Diane Rogers, Kalamazoo Regional Educational Service Area, Portage, Michigan

Danielle Seabold, Kalamazoo Regional Educational Service Agency, Portage, Michigan

Michelle Wilson-Banks, Phoenix High School, Kalamazoo, Michigan

SPONSOR SHOWCASE

SESSION 1210 **OCC 206**
STRAND 1 **GENERAL**

Optimize Blended Learning Environments and Professional Development

Learn about a research-proven process for optimizing blended learning environments. Find out what Stanford research reveals about the qualities of Professional Development (PD) that lead to real change in classrooms. See how a revolutionary platform provides 24/7 on-demand PD experiences that move the needle.

Jason Green, Redbird Advanced Learning, Oakland, California

TECHNOLOGY SHOWCASE

SESSION 1211 **OCC 207**
STRAND 4 **ELEMENTARY (K–5)**

Leveraging the Power of Technology in Inquiry Based Learning

Technology and inquiry based learning are not mutually exclusive! Students come to school with mathematical ideas about numbers, shapes, measurements, patterns, and data. Learn how technologies in *Investigations 3* and the Pearson System of Courses can be applied to support students as they build on those ideas.

Kurt Whited, National Math Specialist, Pearson, Chandler, Arizona

10:45 AM–11:45 AM CONT...

SESSION 1212 **OCC 208**
STRAND 1 **SECONDARY (6–12)**

Looking Carefully at Curriculum Alignment: Collaborating with Teacher Leaders to Make Good Choices About Curriculum

Tools are available to examine curriculum alignment but what does it take to use these tools to make judgments about curriculum materials? K–12 Teacher Leader Mathematics Alignment Workgroups met to carefully examine curriculum materials for cognitive demand, balance of rigor, and mathematical practice standards. What lessons did we learn?

Anurupa Ganguly, New York City Public Schools, New York, New York

Linda Davenport, Boston Public Schools, Boston, Massachusetts

Andrew Richman, Boston University, Boston, Massachusetts

Leslie Dietiker, Boston University, Boston, Massachusetts

SESSION 1213 **OCC 210/11**
STRAND 2 **INTERMEDIATE (3–5)**

D3: Diving Deeper Into Decimals

How do you build a strong understanding of decimals so that computation makes sense? What is involved in teaching decimals that will ensure student concept attainment? Participants will discover and play games to see how place value, estimation, and an understanding of decimal notation build a strong foundation that leads to accurate computation.

Randi Blue, Howard County Public School System, Ellicott City, Maryland

Kelly Krownapple, Howard County Public School System, Ellicott City, Maryland

SESSION 1214 **OCC 212**
STRAND 1 **MIDDLE (6–8)**

The San Francisco Unified School District (SFUSD) Mathematics Teaching Toolkit: Changing the Practice Along with the Content

Successful implementation of the CCSSM is as dependent on *practice* as it is on *content*. Changing the content is easy, but changing the practice can be hard. SFUSD has taken a dual approach towards implementing the CCSSM: creating its CCSSM-aligned Core Curriculum for content and its Mathematics Teaching Toolkit for the practices.

Glenn Kenyon, San Francisco Unified School District, San Francisco, California

Kathy Bradley, San Francisco Unified School District, San Francisco, California

SESSION 1215 **CALIFORNIA**
STRAND 1 **GENERAL**

Making It Work! Aligning Mathematical IEP Goals with the Standards for Mathematical Practice (SMP)

How are needs of struggling learners and students with IEPs addressed in mathematics classrooms? Howard County schools use a transformative tool created in partnership with mathematics and special education teachers and leaders. Learn how one tool has shifted IEP goals from low-level skills to high-cognitive-demand processes. A tool that unites us!

Joyce Agness, Howard County Public School System, Columbia, Maryland

Kym Craig, Howard County Public School System, Columbia, Maryland

Bill Barnes, Howard County Public School System, Ellicott City, Maryland

SESSION 1216 **OAKLAND**
STRAND 2 **GENERAL**

Bridging Coaching Conversations to Classroom Practice: Maximizing Your Coaching Impact

Coaching conversations have the most impact when they actually change a teacher's classroom practice. A significant challenge for coaches is to give the right feedback to support improved instructional practices and increases in student learning. This session illustrates tools and strategies to help coaches empower the teachers they support.

Joanie Funderburk, Student Achievement Partners, New York, New York

Kyle Falting, Louisiana Department of Education, Baton Rouge, Louisiana

SESSION 1217 **SKYLINE**
STRAND 5 **GENERAL**

Expanding Teachers' Knowledge Through Long-Term Collaborative Professional Development: The Case of Algebra

This session includes an overview of a four-year professional development (PD) program developed to increase students' algebra achievement in an urban district. Results focus on the impact of the PD on teachers' content and pedagogical knowledge. Specific PD activities and the significant role of the university-district partnership will be explored.

Babette Benken, California State University, Long Beach, California

12:15 PM–1:15 PM

MAJOR PRESENTATION

SESSION 1401 **GRAND BALLROOM EFGH**
STRAND 3 **GENERAL**

Student Voices—Let Them be Heard

Besides being an equity issue, why is it important for all student voices to be heard? What does that look like? How do we create an environment where students have the opportunity to share their thinking, and their peers have time to ask questions or give them critical feedback? If you're curious, please join us so we can discuss this issue and hear YOUR voices, thoughts, and ideas.

José Franco, WestEd, Oakland, California

Presider, **Gretchen Muller**, NCSM 2016 Local Arrangements Chair, Kentfield, California

José Franco, as Co-Director of WestEd's Math Pathways & Pitfalls, helps to develop professional learning online modules and disseminate materials that support teaching practices to improve students' mathematics achievement and academic language development. A former K–6 bilingual teacher, Franco has conducted numerous presentations on family involvement, equity, mathematics education, and second language acquisition.

SESSION 1402 **GRAND BALLROOM ABC**
STRAND 2 **MIDDLE (6–8)**

Coaching for Success: Get Ready (Learning Targets), Get Set (Intentional Listening), Go! (Feedback)

We will explore three critical aspects of instruction in which coaches can have a positive impact: Helping teachers develop expertise in identifying clear learning targets; listening intentionally to students in order to assess their understanding; and providing feedback that encourages learning.

Jeane Joyner, Meredith College, Raleigh, North Carolina

SESSION 1403 **JUNIOR BALLROOM 1–2**
STRAND 1 **GENERAL**

The Life-Changing Magic of Tidying the Mathematics Curriculum

Is "setting up a proportion" really a topic? Phil Daro argues that a proportion is really just an equation—and we already teach students to set up and solve equations. In this presentation, I will continue Daro's theme and provide additional examples of clutter that we can do without.

Jason Zimba, Student Achievement Partners, New York, New York

SESSION 1404 **JUNIOR BALLROOM 3–4**
STRAND 2 **PRIMARY (PK–2)**

Fluency Based on Conceptual Understanding with Multi-Digit Addition and Subtraction: What Mathematics Do Coaches Need to Know?

This session will provide opportunities for coaches to examine the mathematical ideas that underlie common strategies for adding and subtracting multi-digit numbers, including representations such as number lines, manipulatives and diagrams that students can use to keep their conceptual understanding connected to the computational approaches.

Virginia Bastable, Mount Holyoke College, South Hadley, Massachusetts

SESSION 1405 **OCC 201**
STRAND 3 **GENERAL**

Teaching for Social Justice in Mathematics

An important way to enhance student's mathematics experiences is to assist teachers in developing and implementing equity-based lessons that also have social justice goals. These lessons must engage students while taking into account their racial, cultural, linguistic, and socioeconomic communities. We will discuss best practices.

Linda Fulmore, Independent Consultant, Cave Creek, Arizona

Kristopher Childs, University of Central Florida, Orlando, Florida

Pat Baltzley, Lisa Scott Mathematics Education Consulting, LLC, Billings, Montana

SESSION 1406 **OCC 202**
STRAND 1 **GENERAL**

Changing Mathematical Mindset of Students, Teachers, Families, and the Community

High expectations and the belief that all students can learn mathematics are critical to student success. Learn how our district is continuing the work of changing mindsets to create a successful climate for all students. Strategies and resources for working not only with students and teachers but also families and the community will be shared.

Samantha Wuttig, Fairbanks North Star Borough School District, Fairbanks, Alaska

Michelle Daml, Fairbanks North Star Borough School District, Fairbanks, Alaska

12:15 PM–1:15 PM CONT...

SESSION 1407 **OCC 203**
STRAND 5 **HIGH SCHOOL (9–12)**

Reclaiming Lost Ground: Research-Based Interventions for Underprepared Algebra Students

Students who do not succeed in Algebra I do not have the same choices and life chances as those who do. We will share a comprehensive extended-time approach to helping underprepared students succeed in Algebra I the first time, integrating strategies from literacy, social psychology, and special education with mathematics content.

Kathi Cook, Charles A. Dana Center, The University of Texas, Austin, Texas

Anne Joyoprayitno, Charles A. Dana Center, The University of Texas, Austin, Texas

SESSION 1408 **OCC 204**
STRAND 4 **HIGH SCHOOL (9–12)**

Open Educational Resources (OER) That Promote High Levels of Engagement and Student Thinking!

In the digital age a movement to create and provide open educational resources (OER) that are freely available has begun. One such resource authored by the Mathematics Vision Project (MVP) is OER, well focused, balanced, rigorous and full of high-quality tasks that fit together to promote meaningful progressions of learning.

Travis Lemon, Mathematics Vision Project, Lehi, Utah

SESSION 1409 **OCC 205**
STRAND 2 **ELEMENTARY (K–5)**

Videos of Classroom Discourse and Interviews to Develop Teacher Understanding of Number Sense and Reasoning

Improving teacher knowledge of number sense and quantitative reasoning is a pressing need. This session will show how simple videos of one-on-one interviews of students and classroom discussions can be used to develop this knowledge. These videos help teachers improve their ability to assess student understanding and ask better questions.

Andrew Clark, Portland Public Schools (retired), Portland, Oregon

Genevieve Collura, New York City Public Schools, Brooklyn, New York

SESSION 1410 **OCC 206**
STRAND 1 **ELEMENTARY (K–5)**

Maximizing Learning or Missing Opportunities: Helping Teachers Foster Algebra Readiness

The Operations and Algebraic Thinking progression states, "Linking equations to concrete materials, drawings, and other representations of problem situations affords a deep and flexible understanding of the building blocks of algebra." This session supports leaders in developing ways of thinking that underlie both arithmetic and algebra.

Amy Mayfield, Math Solutions, Sausalito, California

Lu Ann Weynand, Math Solutions, Sausalito, California

SESSION 1411 **OCC 207**
STRAND 4 **ELEMENTARY (K–5)**

Documenting and Disseminating Effective Teacher Leadership Practices in a Digital Age

How can we document professional development projects and disseminate them to a broader audience? Learn how we use an online learning community to share and support long-term sustainability of our work with mathematics teacher leaders. Engage with digital learning galleries that also broaden access to effective teacher leadership practices.

Alison Whittington, University of Chicago, CEMSE, Chicago, Illinois

Angela Schieffer, Center for Elementary Mathematics and Science Education, University of Chicago, Chicago, Illinois

Debbie Leslie, The University of Chicago, Chicago, Illinois

SESSION 1412 **OCC 208**
STRAND 4 **MIDDLE (6–8)**

Multiple Modalities—Show What You Know in More Than One Way

Too often our children label themselves and specialize to narrowly define what they can and cannot do. Technology used appropriately helps learners "grasp the mathematics," but how are we coaching learners to show what they know? We will take a dual approach to building conceptual understanding using technology and sketch noting for comprehension.

Jill Gough, Trinity School, Atlanta, Georgia

SESSION 1413 **OCC 210/11**
STRAND 5 **MIDDLE (6–8)**

Expeditionary Math: Learning to be a Mathematician Through Adventures

When we expand our classrooms to include locations such as the hardware store, the grocery store, the zoo, the hockey rink, and the art gallery the opportunities for developing in-depth knowledge and understanding of key mathematical concepts are endless. In these environments, students learn mathematics by being mathematicians.

Glenys MacLeod, University of Manitoba, Winnipeg, Manitoba, Canada

12:15 PM–1:15 PM CONT...

SESSION 1414 **OCC 212**
STRAND 3 **ELEMENTARY (K–5)**

Girls and STEM: Are They Not Going In, or Are We Pushing Them Out?

During their early years, many girls develop the belief that they aren't good at mathematics—even when they do just as well as their male counterparts. Why is this? We will examine the existing research on external gender biases in education, and discusses best practices for ensuring girls aren't made to feel that mathematics "isn't for them."

Leigh Mingle, Reasoning Mind, Houston, Texas

SESSION 1415 **CALIFORNIA**
STRAND 4 **HIGH SCHOOL (9–12)**

Probing Student Understanding and Assessing for Learning in a Technology-Rich Classroom

In this hands-on session, we will use digital resources and technology to encourage, elicit, and monitor responses to questions designed to probe and assess student understanding of mathematical concepts. We will view strategies to make students' thinking more visible, and use technology as a tool to inform and adjust instructional "next steps."

Ruth Casey, Teachers Teaching with Technology, Frankfort, Kentucky

Margaret Bambrick, University High School, Orange City, Florida

SESSION 1416 **OAKLAND**
STRAND 1 **ELEMENTARY (K–5)**

Implementing Lesson Study: Obstacles and Challenges Identified by Emerging Teacher Leaders

Lesson Study is a professional development (PD) model that facilitates the instructional change process. To support the sustainability of our PD project, we trained 30 emerging teacher leaders who then implemented Lesson Study in their schools. In this session, we will share their outcomes, including obstacles faced and lessons learned.

Alyson Lischka, Middle Tennessee State University, Murfreesboro, Tennessee

Angela Barlow, Middle Tennessee State University, Murfreesboro, Tennessee

Kristin Hartland, Middle Tennessee State University, Murfreesboro, Tennessee

James Willingham, Middle Tennessee State University, Murfreesboro, Tennessee

SESSION 1417 **SKYLINE**
STRAND 3 **GENERAL**

California State University (CSU) Summer Algebra Institute Project: Culturally-Based Program Development and Evaluation

The Summer Algebra Institute (SAI) is a university-community collaboration comprising California's higher education systems and multi-site partnerships with faith-based organizations in Northern and Southern California. The aim of the project is to expand the college pipeline of African-American middle school students.

Kyndall Brown, California Mathematics Project, University of California, Los Angeles, California

Rehema Gray, California State University, Long Beach, California

Jacqueline Mimms, California State University, Bakersfield, California

1:30 PM–2:30 PM

MAJOR PRESENTATION

SESSION 1501 **GRAND BALLROOM EFGH**
STRAND 4 **GENERAL**

Beyond Relevance and Real World: Talking with Teachers About Engagement in Mathematics

National surveys have found huge majorities of mathematics teachers concerned with the lack of student interest in their classes. How do we help teachers help their students to enjoy mathematics? What are characteristics of classes where students are learning and interested? We will discuss the myths and realities of student engagement in mathematics.

Dan Meyer, Desmos, San Francisco, California

Presider, **Sharon Rendon**, NCSM Membership and Marketing Chair, Summerset, South Dakota

Dr. 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 mathematics education and is currently the Chief Academic Officer at Desmos where he explores and develops the future of math textbooks. He speaks internationally and was named one of Tech & Learning's 30 Leaders of the Future.

SPOTLIGHT SPEAKER

SESSION 1502 **GRAND BALLROOM ABC**
STRAND 3 **GENERAL**

Supporting Students in Agency, Identity, and Authority

Recent research stresses the importance of students being owners of their learning, developing positive disposition towards mathematics, shifting their beliefs to a growth mind-set and engaging in high cognitive mathematical discourse. We'll examine how to foster class culture to enable students to develop agency, identity, and authority.

David Foster, Silicon Valley Mathematics Initiative, Morgan Hill, California

Presider, **Donna Karsten**, NCSM Volunteer Coordinator, Halifax, Nova Scotia, Canada

SESSION 1503 **JUNIOR BALLROOM 1–2**
STRAND 1 **ELEMENTARY (K–5)**

What Every Mathematics Leader Needs to Know About Cultivating Numerical Fluency

This session for mathematics leaders will discuss the answer to the common teacher question: "How do I teach number facts so that students know their facts with fluency without using timed tests?"

Patsy Kanter, Mathematics Consultant, New Orleans, Louisiana

Steve Leinwand, American Institutes for Research, Washington, District of Columbia

SESSION 1504 **JUNIOR BALLROOM 3–4**
STRAND 1 **MIDDLE (6–8)**

The Marriage of Functions and Algebra in the CCSSM Era

This session will explore how functions and algebra emerge as a coherent strand in problem-centered curricula. In these curricula, the Standards for Mathematical Practice, classroom discourse, and NCTM's Teaching Practice play prominent roles. The potential for student learning and the role of leaders will be discussed.

Elizabeth Phillips, Michigan State University, East Lansing, Michigan

SESSION 1505 **OCC 201**
STRAND 2 **GENERAL**

Coaching Teachers on the use of Mathematical Talk

Mathematics coaches are often asked to help classrooms teachers use "mathematical talk" or productive mathematical discussions in their classes. This session will focus on coaching strategies for helping classroom teachers facilitate discussions in which students talk about their own reasoning and critique the reasoning of others.

Nancy Anderson, Milton Academy, Milton, Massachusetts

Will Crissman, Milton Academy, Milton, Massachusetts

Jin Lee, Milton Academy, Milton, Massachusetts

SESSION 1506 **OCC 202**
STRAND 1 **MIDDLE (6–8)**

Open Educational Resources (OER): Designing Teacher Professional Learning Around High-Quality Curricular Materials

Open Educational Resources are here! These free, high-quality curricular materials include tasks, unit blueprints, and complete curricula with PLC session plans. This session will include a short overview of some research-based materials and describe how instructional leaders and teachers are using these materials to support professional learning.

Kate Nowak, Illustrative Mathematics, Tucson, Arizona

1:30 PM–2:30 PM CONT...

SESSION 1507 **OCC 203**
STRAND 3 **MIDDLE (6–8)**

Access and Production for English Learners—What's the Role of Mathematical Diagrams?

Supporting access to mathematical opportunities and production of mathematical work and talk is essential for English learners. Explore how integrating language support with mathematical diagramming can aid both access and production. Hear how these strategies are used in a coaching program and consider how to support your teachers.

Johannah Nikula, Education Development Center, Waltham, Massachusetts

Harold Asturias, Lawrence Hall of Science, University of California, Berkeley, California

Pamela Buffington, Education Development Center, Gardiner, Maine

SESSION 1508 **OCC 204**
STRAND 5 **ELEMENTARY (K–5)**

Bridging Mathematics Specialist Research and Practice

In this session we will examine current research on mathematics specialists including an overview of their: 1) varied roles and responsibilities, and 2) influence on student and teacher learning and classroom practice. We will engage participants in discussions regarding implications for this research on their schools and districts.

Nicole Rigelman, Portland State University, Portland, Oregon

Maggie McGatha, University of Louisville, Louisville, Kentucky

SESSION 1509 **OCC 205**
STRAND 3 **SECONDARY (6–12)**

Modeling Where It Matters Most: Disrupting the Pattern of Endless Algebra

For students, mathematics courses still operate as sorting devices, particularly at the 6–12 level. Drawing upon our own research, we will show how modeling—developed from cultural artifacts—can disrupt the gate-keeping effects of algebra, re-awakening students and solidifying key understandings.

Kara Imm, Math in the City, New York, New York

Brittney Cook, The Urban Assembly School for Law and Justice, Brooklyn, New York

SPONSOR SHOWCASE

SESSION 1510 **OCC 206**
STRAND 2 **ELEMENTARY (K–5)**

Rich Mathematical Tasks: Familiar Resources to Meet the Challenges of a New Era

Paths to Problem Solving and *The Super Source* are both excellent resources for rich mathematical tasks. Learn how these resources, which may already be in your district, can be used to support engaging mathematics instruction that focuses on conceptual understanding. These resources can revitalize the use of manipulatives in classrooms.

Linda Gojak, Mathematics Consultant, Willowick, Ohio

Sara Moore, ETA hand2mind, Vernon Hills, Illinois

TECHNOLOGY SHOWCASE

SESSION 1511 **OCC 207**
STRAND 4 **ELEMENTARY (K–5)**

The Power of Open Curriculum: Get Hands on with LearnZillion

One million teachers use LearnZillion's K–8 math curriculum. This task-based, digital curriculum helps teachers facilitate mathematics talk, productive struggle, and conceptual understanding. In this session, you will learn how LearnZillion's curriculum, assessment, and professional development solution goes further than a textbook ever could.

Meghan Hearn, Math Instructional Expert, LearnZillion, Washington, DC

Colette Chambers, Regional Account Director, LearnZillion, Washington, DC

SESSION 1512 **OCC 208**
STRAND 2 **INTERMEDIATE (3–5)**

Raise the Demand: Deepen the Learning

This interactive session uses the Standards for Mathematical Practice to frame an understanding of the cognitive demand that tasks require and explores ways to raise the demand through questioning strategies. Practical ways for coaches to support 3–5 teachers as they plan effective lessons will be shared.

Kit Norris, Consultant, Southborough, Massachusetts

Sarah Schuhl, Solution Tree, Bloomington, Indiana

1:30 PM–2:30 PM CONT...

SESSION 1513 **OCC 210/11**
STRAND 2 **ELEMENTARY (K–5)**

"I'm Not Really a Math Person"—Coaching Strategies for Elementary Teachers Who Have Been Turned Off Mathematics

Teachers' attitudes about mathematics impact students' learning and beliefs. We'll explore coaching techniques and tasks that helped an entire staff transform their associations with mathematics and greatly improve their teaching. Building-wide, "I'm not really a math person," has been replaced by, "I have to tell you what happened in math today!"

Tracy Zager, Stenhouse Publishers, Portland, Maine

SESSION 1514 **OCC 212**
STRAND 5 **SECONDARY (6–12)**

Engaging Teachers in Mathematical Practices in a Statistics Professional Development

The CCSSM, MET II, and the Statistical Education of Teachers report (Franklin et al, 2015) all note that there is a large need in preparing teachers to teach statistics. We give findings from a statistics professional development course and draw comparisons on how the Standards for Mathematical Practice may be used differently in statistics.

Christina Eubanks-Turner, Loyola Marymount University, Los Angeles, California

Anna Bargagliotti, Loyola Marymount University, Los Angeles, California

SESSION 1515 **CALIFORNIA**
STRAND 4 **GENERAL**

Engaging Teachers in Online Professional Learning: Collaborating in an Online Space to Impact Teacher Practices

How can we use an online space to enact high quality professional learning? We will share our work implementing professional development based on Orchestrating Productive Mathematics Discussions (Smith & Stein, 2011) using a web conferencing platform. Session participants will reflect on our successes and challenges to gain insight into online professional learning.

Cynthia Callard, University of Rochester, Rochester, New York

Cynthia Carson, Warner School of Education, Rochester, New York

Genie Foster, University of Rochester, Rochester, New York

SESSION 1516 **OAKLAND**
STRAND 1 **GENERAL**

Preparation for Ambitious Teaching: Necessary but Not Sufficient—Building Teacher Leadership Capacity from the Beginning

Increasing complexities of classroom practice and policies that de-professionalize teaching necessitate preparing beginning teachers to contribute both inside and beyond their classrooms. Experience the work of a voluntary community of 1st- and 2nd-year mathematics teachers to accelerate their trajectory towards leadership in mathematics education.

Peg Cagle, Los Angeles Unified School District and Vanderbilt University, Los Angeles, California and Nashville, Tennessee

SESSION 1517 **SKYLINE**
STRAND 4 **HIGH SCHOOL (9–12)**

Slow Mathematics: Looking for Meaning Before the Procedure

How might we leverage technology to build procedural fluency from conceptual understanding while teaching our learners to ask better questions? How do we facilitate opportunities to look for regularity in repeated reasoning? What if we encourage sketch noting to show connections? Come experience learning through the lens of the Slow Mathematics Movement.

Jennifer Wilson, Rankin County School District, Brandon, Mississippi

2:45 PM–3:45 PM

MAJOR PRESENTATION

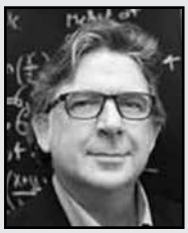
SESSION 1601 — **GRAND BALLROOM EFGH**
STRAND 5 — **HIGH SCHOOL (9–12)**

Achieving Curricular Coherence in High School with the CCSSM

What does coherence mean in high school? It means tying seemingly disparate techniques together under overarching principles, such as structure in algebra or transformations in geometry. In this talk I will give some examples from the CCSSM, with illustrative tasks that the audience can work on.

William McCallum, Illustrative Mathematics, Tucson, Arizona

Presider, **Linda Griffith**, NCSM S2 Regional Director, Conway, Arkansas



Dr. William McCallum is a University Distinguished Professor of Mathematics at the University of Arizona. In 2005 he received the Director's Award for Distinguished Teaching Scholars from the National Science Foundation. In 2006 he founded the Institute for Mathematics and Education at the University of Arizona, and is currently its director. In 2009–2010 he was one of the lead writers for the CCSSM.

SPOTLIGHT SPEAKER

SESSION 1602 — **GRAND BALLROOM ABC**
STRAND 2 — **GENERAL**

Coaching for Cognitive Dissonance: Using Classroom Video as a Catalyst for Change

Explore an environment to support changing teachers' practices within schools and districts by creating disequilibrium using classroom videos. This session demonstrates that to support deep conceptual understanding, teachers need to see the difference between their current practice and those needed by the Standards for Mathematical Practice.

Juli Dixon, University of Central Florida, Orlando, Florida

Presider, **Mona Toncheff**, NCSM 2nd Vice President, Phoenix, Arizona

SESSION 1603 — **JUNIOR BALLROOM 1–2**
STRAND 1 — **ELEMENTARY (K–5)**

PLC Roundtable: Implementing Principles to Actions in Your PLC

Participants will engage in a live Professional Learning Community. This community will collaboratively discuss ways to incorporate principles and practices from *Principles to Actions*. The PLC process, ideas, and activities will connect directly with classroom practices. Colleagues/teams are encouraged to come to this session together.

Beth Kobett, Stevenson University, Stevenson, Maryland

Delise Andrews, Lincoln Public Schools, Lincoln, Nebraska

SESSION 1604 — **JUNIOR BALLROOM 3–4**
STRAND 4 — **SECONDARY (6–12)**

Statistics and Probability: Implementing the CCSSM Vision and Spirit

The CCSSM's vision of statistics is about reasoning from data and recognizing variability in the process. A coherent development of distribution, center, and spread leads to inference and decisions based on statistical thinking. How do we help teachers make this vision a reality in their classrooms and how can interactive dynamic technology help?

Wade Ellis, West Valley Community College, Saratoga, California

Gail Burrill, Michigan State University, East Lansing, Michigan

SESSION 1605 — **OCC 201**
STRAND 5 — **INTERMEDIATE (3–5)**

Using Mathematics Education Research to Develop Fraction Concepts: Integrating Learning Progressions and Formative Assessment

Participants will examine the Ongoing Assessment Project (OGAP) that draws on findings and recommendations in mathematics education research in the development of fraction concepts and fluency, and integrates formative assessment and learning progressions. OGAP is used in Alabama, Vermont, New Hampshire, Nebraska, Philadelphia, and Michigan.

Marjorie Petit, Marge Petit Consulting, Moretown, Vermont

Robert Laird, University of Vermont, Burlington, Vermont

2:45 PM–3:45 PM CONT...

SESSION 1606 **OCC 202**
STRAND 2 **GENERAL**

Coaching Teachers' Planning for Mathematical-Practice-Focused Instructional Routines: A Vehicle for Developing Practice

Instructional routines can be used to develop students' use of the Standards for Mathematical Practice, but this involves some specific planning strategies for teachers. We'll focus on specific ways that coaches can support teachers in this planning process to focus on some key instructional decisions that lead to effective use of these routines.

Grace Kelemanik, Boston Teacher Residency Program, Boston, Massachusetts

Amy Lucenta, Boston Teacher Residency Program, Boston, Massachusetts

SESSION 1607 **OCC 203**
STRAND 1 **GENERAL**

Leading Change: Professional Development (PD) Moves That Promote New Ways of Thinking, Learning, and Teaching

Meaningful PD opportunities provide time for participants to develop pedagogical content knowledge while reflecting on practice. But teachers want to walk out the door with "activities they can use tomorrow." Join us as we examine strategic PD moves that customize and enhance presentations while layering classroom tasks with deep adult learning.

Kimberly Rimbey, Rodel Foundation of Arizona, Scottsdale, Arizona

SESSION 1608 **OCC 204**
STRAND 2 **ELEMENTARY (K–5)**

Unit Planning as an Approach for Professional Learning

The shift to CCSSM amplifies the need to develop mathematical knowledge for teaching. Engaging teams in the unit planning process builds teacher knowledge in a relevant, meaningful and timely context. We will consider teacher, coach, and administrator perspectives as we examine a protocol, structures, and resources for investing in this approach.

Molly Daley, Evergreen Public Schools, Vancouver, Washington

Tawny Malone, Evergreen Public Schools, Vancouver, Washington

SESSION 1609 **OCC 205**
STRAND 1 **MIDDLE (6–8)**

Cultivating Teacher-Leaders by Helping Them Serve Students with Disabilities

Teaching techniques for supporting and empowering students with learning disabilities, including those with Asperger's, will be discussed. Embracing teacher-leader strategies will strengthen collegial bonds while working collaboratively to assimilate these best practices into your own classroom in order to serve this special population.

Debbie Gochenaur, Shippensburg University, Shippensburg, Pennsylvania

SESSION 1610 **OCC 206**
STRAND 3 **GENERAL**

Neurodiversity and Mathematics: A Radical Rethinking of Children with Disabilities in Inquiry Mathematics Classrooms

The time has come to challenge deficit thinking about disability and mathematics. Learn about neurodiversity (educating through strengths rather than deficits), explore digital resources that provide access to research that supports including children with disabilities in mathematical inquiry, and participate in activities to shift teacher perspectives.

Rachel Lambert, Chapman University, Orange, California

TECHNOLOGY SHOWCASE

SESSION 1611 **OCC 207**
STRAND 4 **GENERAL**

Defining a Model Mathematics Classroom in Physical and Virtual Schools

Best instructional practice for teaching and learning has focused on teacher and student behaviors observable in classrooms. Math Solutions has worked to define the model mathematics classroom, capturing these behaviors in our Instructional Practices Inventory. This session will explore the model virtual classroom based on what we know about face-to-face teaching and learning. First 20 participants will receive *Faster Isn't Smarter, Messages about Math, Teaching and Learning in the 21st Century*, 2nd Edition, by Cathy L. Seeley.

Patricia Clark, Math Solutions, Sausalito, California

Marji Freeman, Math Solutions, Sausalito, California

2:45 PM–3:45 PM CONT...

SESSION 1612 **OCC 208**
STRAND 4 **GENERAL**

Cultivating an Online Mathematical Community: Changing Professional Learning so It Matches the Way We Live

By cultivating an online mathematical community, leaders encourage a school culture of communication and collaboration. In this session, we will consider the necessary conditions and structures to collaborate in professional learning with teachers. Leaders develop an action plan to leverage current resources fostering a rich online learning community.

Mary Mitchell, Math Solutions, Sausalito, California

Jennifer Chintala, Math Solutions, Sausalito, California

SESSION 1613 **OCC 210/11**
STRAND 3 **HIGH SCHOOL (9–12)**

How do we Help Underrepresented Minority Students Reach Their Potential in Mathematics?

Learn how implementing the CCSSM can help underrepresented minority students be successful in completing college prep mathematics classes. Explore how a problem-based unit can pique students' interest in mathematics, help them develop problem-solving skills, and also help them practice basic skills they may not have yet mastered.

Lisa Miller, Napa Valley Unified School District, Napa, California

SESSION 1614 **OCC 212**
STRAND 2 **GENERAL**

Intentional Coaching and Planning: Integrating Practices into Content Instruction

Are you a coach who leads professional learning on integrating practices and content? Do you encourage intentional planning for instruction leveraging the Standards for Mathematical Practice? This session will explore how the freely available resources on InsideMathematics.org support your efforts in planning and facilitating coaching sessions.

Ann Roman, Charles A. Dana Center, The University of Texas, Austin, Texas

Katey Arrington, Charles A. Dana Center, The University of Texas, Austin, Texas

SESSION 1615 **CALIFORNIA**
STRAND 2 **SECONDARY (6–12)**

On Your Mark! Get Set! Go! Danielson, the Standards for Mathematical Practice (SMP), and Formative Assessment Racing Hand in Hand

The rule of three says when things come in threes, they are more effective. Participants will make connections among the domains in Danielson's Framework, the SMP, and Formative Assessment strategies. Through active engagement, participants will discover the potential implications for improving teacher capacity and raising student achievement.

Tammy Rudolph, Baltimore County Public Schools, Towson, Maryland

Leslie Johnson, Baltimore County Public Schools, Towson, Maryland

Maria Everett, Baltimore County Public Schools, Towson, Maryland

SESSION 1616 **OAKLAND**
STRAND 5 **SECONDARY (6–12)**

A Framework for Building Procedural Fluency on a Foundation of Conceptual Understanding

The Comprehensive Mathematics Instruction Framework, developed by the Brigham Young University Public School Partnership, highlights the relationships between conceptual, procedural and representational understanding. The components of the framework—Teaching Cycle, Learning Cycle, and Continuum of Understanding—will be described and illustrated.

Scott Hendrickson, Brigham Young University, Provo, Utah

Sterling Hilton, Brigham Young University, Provo, Utah

SESSION 1617 **SKYLINE**
STRAND 1 **SECONDARY (6–12)**

Leading Change with a Growth Mindset

Leaders who lead with a growth mindset also influence and change the mindsets of staff. Explore how to apply growth mindset research to change efforts, infusing leadership moves for change with growth mindset practices. Emily Diehl brings 7 years experience as a program improvement coach to the conversation, providing examples from K–12 schools.

Emily Diehl, Mindset Works, Walnut, California

HOT TOPICS CONVERSATION CAFÉ

3:00 PM–3:45 PM

SESSION 1620 **FOYER EXHIBIT HALL WEST**
STRAND 1 **GENERAL**

HOT TOPICS I

TABLE 1 Lucy West, Metamorphosis Teaching Learning Communities, will discuss how to have a positive impact within your sphere of influence—no matter your role or title!

TABLE 2 Swapna Mukhopadhyay, Portland State University, will discuss equity, access, and relevance.

TABLE 3 Chris Shore, Temecula Valley Unified School District, will discuss how we teach grade level content and address gaps in prerequisite knowledge at the same time.

4:00 PM–5:00 PM

MAJOR PRESENTATION

SESSION 1701 **GRAND BALLROOM EFGH**
STRAND 3 **GENERAL**

From Individual to Collective Action in Improving our Students' Mathematical Achievement

So many of us become teachers because we want to nurture our students' academic and social development and thus contribute to the betterment of our society. But in an environment of accountability for only narrow dimensions of learning, time for working on our broader goals is hard to come by. I argue that only through vibrant communities of practice and in activities that allow us to work collectively to realize our most fundamental hopes can we improve our students' life chances and address the longstanding barriers to equity in our school systems.

Uri Treisman, Charles A. Dana Center, The University of Texas, Austin, Texas

Presider, **Denise Brady**, NCSM Awards Chair, Carunna, Michigan

Dr. Philip Uri Treisman is professor of mathematics and of public affairs at The University of Texas at Austin. He is

the founder and executive director of the University's Charles A. Dana Center, an organized research unit of the College of Natural Sciences. His research and professional interests span mathematics and science education, education policy, social and developmental psychology, and community service and volunteerism.

SPOTLIGHT SPEAKER

SESSION 1702 **GRAND BALLROOM ABC**
STRAND 5 **INTERMEDIATE (3–5)**

Supporting the CCSSM NF Learning Progression and Avoiding Errors by Using the Standards for Mathematical Practice (SMP)

Common errors known from research that students make with fractions will be discussed. Participants will make research-based mathematical drawings to support understanding by all students to overcome such errors. They will discuss videos of students explaining fraction computation and discuss the SMP in action in these situations.

Karen Fuson, Northwestern University, Fallbrook, California

Presider, **Carol Matsumoto**, NCSM Affiliate Chair, Winnipeg, Manitoba, Canada

SESSION 1703 **JUNIOR BALLROOM 1–2**
STRAND 4 **MIDDLE (6–8)**

Distance Learning for Teachers: Adventuring into Online Mathematics Professional Development (PD)

Our challenge—helping teachers in 23 states apply cognitive design principles in their mathematics curriculum. Our solution—venturing into online PD for mathematics teachers. See examples of teacher learning activities and hear how teachers valued the experience. We'll share lessons learned and engage attendees in sharing of ideas and experiences.

Catherine Carroll, WestEd, Redwood City, California

SESSION 1704 **JUNIOR BALLROOM 3–4**
STRAND 5 **GENERAL**

Fraction Number Talks: Moving Beyond Telling

We will look at Fraction Number Talks as a vehicle for shifting teacher beliefs about teaching and learning fractions from a procedural approach to one that focuses on making relationships to build understanding. Classroom videos will be used to analyze student strategies and misconceptions in the area of fractions.

Sherry Parrish, Author and Consultant, Birmingham, Alabama

Ann Dominick, University of Alabama at Birmingham, Birmingham, Alabama

4:00 PM–5:00 PM CONT...

SESSION 1705 **OCC 201**
STRAND 5 **SECONDARY (6–12)**

Growth Mindset Interventions Yield BIG Dividends

Mindset makes a big difference in students' belief that they can and need to learn mathematics. In response to the many teaching experiences that do not promote mathematical reasoning and efficacy, one high school teacher chose to provide mindset interventions that made a significant impact on herself as an educator and on her students.

Tina Westwood, Northeastern Nevada Regional Professional Development Group, Elko, Nevada

Cathi Cracraft, White Pine County School District, Ely, Nevada

SESSION 1706 **OCC 202**
STRAND 4 **ELEMENTARY (K–5)**

A Picture + Technology = Understanding x 10

Tape Diagrams, Bar Models, and other pictorial representations sit at the intersection of CCSSM, problem solving and technology! Come solve problems from the simple to the complex, and investigate a web-based program and iPad app that will help anyone incorporate this practical and visual problem-solving strategy into their classrooms.

Cassandra Turner, Cassandra Turner & Associates, Fort Collins, Colorado

Lauri Susi, Conceptua Math, Petaluma, California

SESSION 1707 **OCC 203**
STRAND 2 **SECONDARY (6–12)**

High School Coaching Model: Building Bridges Between Coaching and a PLC Culture

With the rigorous demands of new standards and assessments, how can high school mathematics coaches make connections between teaching and learning and collaborative team actions? We will explore the coaching model for an urban district to ensure continual learning for adults and students, and share tools for coaching collaborative teacher teams.

Kris Cunningham, Phoenix Union High School District, Phoenix, Arizona

Jeanette Scott, Phoenix Union High School District, Phoenix, Arizona

SESSION 1708 **OCC 204**
STRAND 1 **ELEMENTARY (K–5)**

Leaders Who Never Stop Learning: Using Research and Reflection to Develop Effective Professional Development (PD)

This session is about two educators leading a district's multi-year implementation of PD focused on improving students' number sense. We will share the research and thinking behind our job-embedded, sustained PD design. Participants will view video clips, engage with number sense activities, and discuss our PD logic model.

Jessica Shumway, Utah State University, Logan, Utah

Julie Everett, Kearney Public Schools, Kearney, Nebraska

SESSION 1709 **OCC 205**
STRAND 3 **HIGH SCHOOL (9–12)**

Yes, They Can! Supporting English Learners in Doing Meaningful Mathematics

All students are mathematical thinkers and learners. To make this a classroom reality, systematic supports must be in place for both mathematical content and language. We will discuss how to scaffold content without reducing the cognitive demand, and how to support discussion so all students are engaged in the Standards for Mathematical Practice.

Barbara Kuehl, Mathematics Vision Project, Salt Lake City, Utah

SESSION 1710 **OCC 206**
STRAND 3 **MIDDLE (6–8)**

Teaching Mathematical Argumentation Equitably in Urban Districts

Researchers and practitioners have collaborated to find new ways to meet the needs of diverse learners in addressing CCSSM Practice 3: • improvisational activities to support productive norms, meeting the socio-emotional learning needs of underserved youth in argumentation. • technology-based curriculum and structures supporting justification.

Jennifer Knudsen, SRI International, Menlo Park, California

Harriette Stevens, Consultant & Mathematics Educator, San Francisco, California

Teresa Lara-Meloy, SRI International, Menlo Park, California

4:00 PM–5:00 PM CONT...

TECHNOLOGY SHOWCASE

SESSION 1711 **OCC 207**
STRAND 2 **GENERAL**

Finally! A Coaching Framework That's Actually About the Mathematics

Looking to improve feedback for mathematics teachers? Experience the power of the Mathematical Quality of Instruction (MQI) instrument in focusing discussions of mathematics instruction and guiding teachers' growth. The MQI is a CCSSM-aligned, mathematics-specific rubric from Harvard University. Learn how our MQI video-based, virtual coaching helps teachers improve.

Samantha R. Booth, MQI Coaching, Cambridge, Massachusetts

Claire Gogolen, MQI Coaching, Cambridge, Massachusetts

Kirk Walters, American Institutes for Research, Washington, DC

SESSION 1712 **OCC 208**
STRAND 2 **GENERAL**

Techniques That Support Struggling and Novice Teachers

This interactive session will include conversations about and illustrations of research-based and proven strategies that assist novice and struggling mathematics teachers to develop effective communication skills, implement concept-based curricula, use formative assessment strategies, and participate in communities of practice.

Richard Parr, Rice University, Houston, Texas

SESSION 1713 **OCC 210/11**
STRAND 3 **SECONDARY (6–12)**

Secondary Course Sequences: San Francisco and Oakland Partnering Across the Bay Bridge

Math leaders from San Francisco and Oakland collaborated for 18 months around a secondary course sequence aligned with CCSSM. With SERP partners Harold Asturias and Phil Daro, both districts developed board policy approved unanimously by their respective boards. Hear what we've learned about policy, programs, teacher learning, and public outreach.

Phil Tucher, Oakland Unified School District, Oakland, California

Lizzy Hull Barnes, San Francisco Unified School District, San Francisco, California

Phil Daro, SERP and Pearson, Berkeley, California

Harold Asturias, Lawrence Hall of Science, University of California, Berkeley, California

SESSION 1714 **OCC 212**
STRAND 2 **SECONDARY (6–12)**

Coaching High School Number Talks: Moving Beyond Experimentation to a More Targeted, Strategic, and Purposeful Approach

This session is for coaches and teacher leaders who want to support secondary mathematics instruction through the use of number talks. We will learn how one community, through coaching, designed number talks that connected to their instructional units, strengthened classroom discourse, and made mathematical connections explicit for students.

Crystal Lancour, Colonial School District, New Castle, Delaware

Jennifer Trievel, Colonial School District, New Castle, Delaware

SESSION 1715 **CALIFORNIA**
STRAND 1 **GENERAL**

How Coaches and Principals Work Together to Create Opportunities to Talk About Teaching and Learning

Imagine having opportunities for teachers to come together regularly to engage in rich conversations about teaching and learning. This session explores how coaches and principals organize schools that support professional dialogue among teachers that promotes professional growth. We discuss impactful learning designs and leadership practices.

Melinda Knapp, Oregon State University-Cascades, Bend, Oregon

Lynsey Gibbons, Boston University, Boston, Massachusetts

SESSION 1716 **OAKLAND**
STRAND 1 **GENERAL**

Improving Assessment Literacy for Students, Parents, Educators, and Policymakers with Five Essential Understandings

Explore best practices for effective assessment in terms of five key principles: linking test purposes to appropriate decisions, variations in test quality, accuracy of test scores, valid uses of assessment data, and fairness. Participants will work in teams to apply the principles to describe and evaluate assessment conditions and outcomes.

Angela Broaddus, University of Kansas, Lawrence, Kansas

SESSION 1717 **SKYLINE**
STRAND 2 **INTERMEDIATE (3–5)**

Making Sense of Mathematics for Teaching: Leading with Content

We collaboratively model an approach to mathematics professional development that is focused on empowering teachers to make sense of mathematics through targeted tasks and that leads with content in the foreground and process in the background. Participants will explore selecting powerful mathematics tasks and applying learning progressions.

Thomasenia Adams, University of Florida, Gainesville, Florida

Juli Dixon, University of Central Florida, Orlando, Florida

Edward Nolan, Montgomery County Public Schools, Rockville, Maryland

5:15 PM–5:45 PM

CONFERENCE ORIENTATION—FIRST TIMERS SESSION

SESSION 1802 **GRAND BALLROOM ABC**
STRAND 1 **GENERAL**

What's it All About? An Orientation for Those New to the NCSM Annual Conference

This is a repeat of the morning session for those who are new to the NCSM Annual Conference. Participants will network with others, review the structure of the conference, explore the different conference options, set personal priorities and goals, and work on a personal plan of what to do and where to go during the conference.

Sharon Rendon, NCSM Membership and Marketing Chair, Summerset, South Dakota

MEETING

SESSION 1803 **JUNIOR BALLROOM 1–2**
STRAND 1 **GENERAL**

Regional Directors and State Team Leaders

This meeting of the appointed NCSM State Team Leaders and NCSM Regional Directors will focus on the critical work of NCSM for 2016–2017. In particular we will discuss future plans for state and provincial meetings, Regional Leadership Seminars, and professional development ideas using new NCSM products. This meeting is for invited team leaders.

Bill Barnes, NCSM E2 Regional Director, Ellicot City, Maryland

MONDAY RECEPTION

5:30 PM–7:00 PM

SESSION 1918 **TICKET REQUIRED** **EXHIBIT HALL WEST**

Monday Night Reception

Math Teachers Press is celebrating its 35th anniversary publishing the manipulative based Moving with Math program for PK–High School. Our focus continues to be our commitment to help students succeed in mathematics using the CRA method of instruction with screening and progress monitoring. Our classroom roots have made us an Rtl leader providing a blended learning program that incorporates "Best Practices" and today's technology to meet the needs of students, teachers and administrators.

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NOTES

BUILDING BRIDGES BETWEEN LEADERSHIP AND LEARNING MATHEMATICS

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Tuesday, April 12, 2016

5:30 PM

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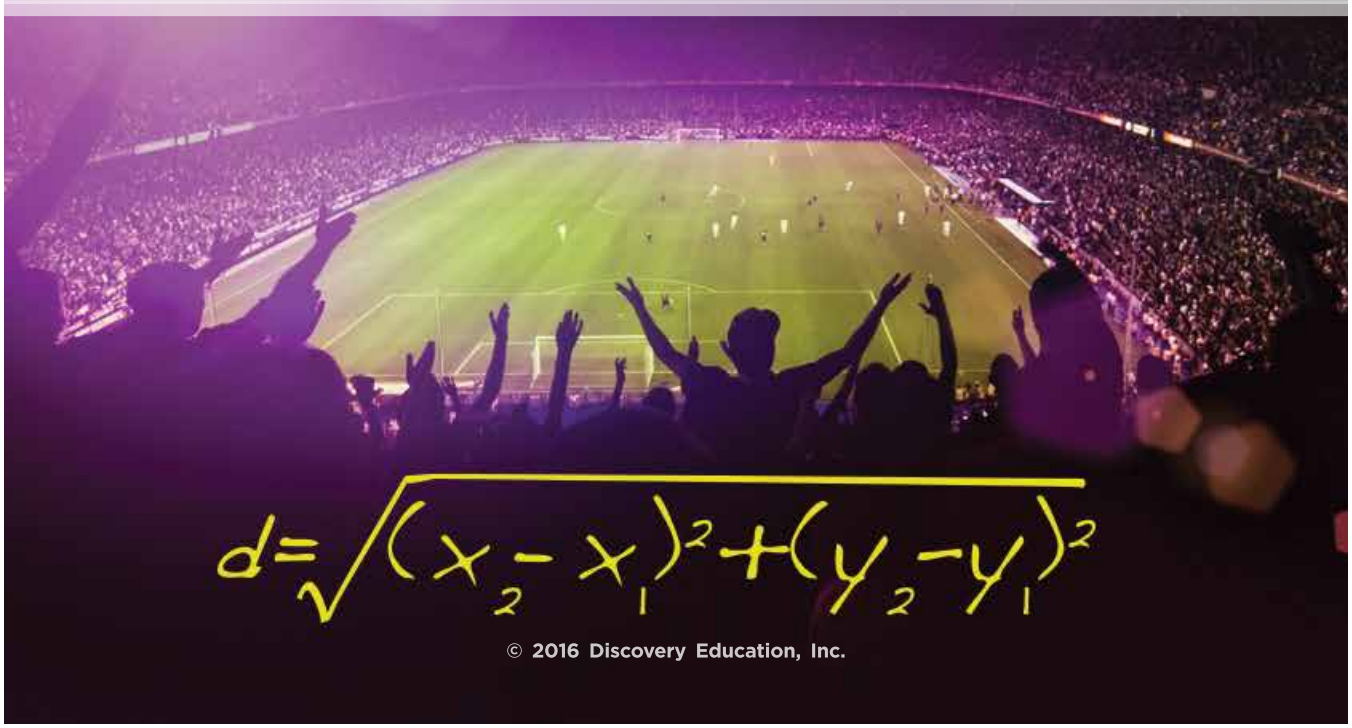

PROGRAM SUMMARY INFORMATION FOR TUESDAY, APRIL 12

See page 5 for Conference Strand descriptions.

NOTES

TUESDAY SUMMARY

7:00–8:00: Session 2018: Breakfast (ticket required), Exhibit Hall West, Sponsored by *McGraw Hill*

	Grand Ballroom EFGH	Grand Ballroom ABC	Junior Ballroom 1–2	Junior Ballroom 3–4	OCC 201	OCC 202
8:15–9:15	**Session 2101** Strand 1, General ***Staley,*** *NCSM Vision 2020—Mathematics Education Leadership for the Future*	**Session 2102** Strand 3, General ***Cossey, Mayfield-Ingram,*** *Support Novice Teachers to be Culturally Empathetic*	**Session 2103** Strand 2, Elementary (K–5) ***Fennell, Kobett, Wray,*** *Flipped Professional Development: Sustaining and Supporting Mathematics Specialists/Instructional Leaders*	**Session 2104** Strand 1, Middle (6–8) ***Grant, Trevino,*** *Envisioning Classrooms of Empowered and Mathematically Proficient Students*	**Session 2105** Strand 2, Middle (6–8) ***Gordon,*** *Lessons Learned Developing Coaching Strategies for Task Rigor, Relevance, and Richness*	**Session 2106** Strand 2, Elementary (K–5) ***Cleveland, Cheatham, Johnson, Starr,*** *Leading a Learning Lab: A Visit is Worth a Thousand Words*
10:00–11:00	**Session 2201** Strand 1, General ***Seeley,*** *Visibly and Invisibly Helping Every Teacher Help Every Student Achieve*	**Session 2202** Strand 5, General ***Larson,*** *A Brief History of Mathematics Education: Lessons for Today's Leaders*	**Session 2203** Strand 4, General ***Griffith,*** *A Tool for Selecting and Implementing a 3-Act Mathematical Modeling Task*	**Session 2204** Strand 5, General ***Hickman,*** *Smarter Balanced-Making Connections: Eliciting to Acting on Evidence*	**Session 2205** Strand 2, Primary (PK–2) ***Columba,*** *Strategies to Support the Standards for Mathematical Practice Through Mathematical Discourse*	**Session 2206** Strand 4, Middle (6–8) ***Trievel, Igo,*** *Ready for an Upgrade? Using Blended Learning to Enhance Professional Development and Student Learning*
	FOYER EXHIBIT HALL WEST 10:15–11:00	**Session 2220** General ***HOT TOPICS II*** ***Kanold, Brown, Newsom, Steele***				
11:15–12:15	**Session 2301** Strand 3, General ***Mukhopadhyay,*** *Mathematics for All*	**Session 2302** Strand 5, Secondary (6–12) ***Brown, Newsom,*** *Supporting Educators in Applying Psychology and Learning Sciences Research in Classrooms*	**Session 2303** Strand 2, General ***McGatha, Bay-Williams,*** *Building a Bridge Between Coaching Skills and Teaching ELLs*	**Session 2304** Strand 1, Primary (PK–2) ***Sutton,*** *Achieving Mathematical Fact Fluency! Every Administrator's Responsibility!*	**Session 2305** Strand 3, Secondary (6–12) ***Barnes, Carranza,*** *Fighting the Good Fight: Standing up for Equity in Mathematics*	**Session 2306** Strand 4, College ***Tanner,*** *The Evolution of Online Learning from a Teacher's and Student's Perspective*

12:30–2:00: Session 2418: Luncheon (ticket required), Exhibit Hall West, Sponsored by *Texas Instruments*

2:15–3:15	**Session 2501** Strand 5, General ***Ball,*** *Learning to See, Connect With, and Build Students' Resources*	**Session 2502** Strand 4, Middle (6–8) ***Confrey, Jones, Hennessey, Shah,*** *Linking Digital Diagnostic Assessments to Indicators on Learning Trajectories to Meet Students' Diverse Needs*	**Session 2503** Strand 1, General ***Martin, Fennell,*** *Moving Principles to Actions: Curriculum and Technology*	**Session 2504** Strand 1, Secondary (6–12) ***Ani,*** *Real-World Applications, in Theory and in Practice*	**Session 2505** Strand 4, Secondary (6–12) ***Gray,*** *Building Bridges Between Mathematical Tasks and Digital Resources*	**Session 2506** Strand 2, Elementary (K–5) ***Charney, Maxfield,*** *Guided Planning: Forming a Keystone Habit*
3:30–4:15					**Session 2605** ***Zimmermann,*** *NCSM Regional Caucus: Central Region 1*	**Session 2606** ***Akwaji-Anderson,*** *NCSM Regional Caucus: Central Region 2*
4:30–5:15			**Session 2705** Strand 1, General ***Staley, Manon,*** *NCSM Annual Business Meeting and State of the Organization Report*			

5:30–7:00: Session 2818: Reception (ticket required), Exhibit Hall West, Sponsored by *Discovery Education*

TUESDAY SUMMARY

7:00–8:00: Session 2018: Breakfast (ticket required), Exhibit Hall West, Sponsored by *McGraw Hill*

	OCC 203	OCC 204	OCC 205	OCC 206	OCC 207	OCC 208
8:15–9:15	**Session 2107** Strand 4, Middle (6–8) ***Rinehart,*** *Rethinking Ratios and Proportional Relationships: Implications for Teacher Leaders*	**Session 2108** Strand 5, General ***Arrington,*** *Formative Assessment: Practical Solutions That Leverage Promising Practices from Research*	**Session 2109** Strand 1, Elementary (K–5) ***Antill, Null,*** *Using Cognitively Guided Instruction in Children's Mathematics to Promote Student Thinking and Conceptual Understanding*	**Session 2110** Strand 5, General ***Parrish, Dominick,*** *Number Talks: Fractions, Decimals, and Percentages* **SPONSOR SHOWCASE**	**Session 2111** Strand 4, Middle (6–8) ***Wilson, Gough,*** *Connecting Concepts in Grades 6–8* **TECHNOLOGY SHOWCASE**	**Session 2112** Strand 1, General ***Briars,*** *Supporting Teachers in Building Procedural Fluency from Conceptual Understanding*
10:00–11:00	**Session 2207** Strand 3, Secondary (6–12) ***LaVoie, Martin, Foster,*** *Supporting All Learners in a Common Core Classroom: A Focus on Reasoning and Language Development in 6–12 Mathematics*	**Session 2208** Strand 1, General ***DuPree,*** *Principal's Toolkit: Leadership Resulting in Effective CCSSM Implementation*	**Session 2209** Strand 5, Elementary (K–5) ***Zeller,*** *Fraction! Fraction! Learn All About 'Em: Professional Development (PD) Research Results and Building Schema Through Problem Solving*	**Session 2210** Strand 4, Secondary (6–12) ***Tomlinson, Doran,*** *Creating an Authentic Blended Experience*	**Session 2211** Strand 2, General ***Gough, Wilson,*** *From Standards to Practice: Leading Teachers to Improve Student Understanding Through Formative Assessment* **TECHNOLOGY SHOWCASE**	**Session 2212** Strand 1, General ***Mills, Briars,*** *Adopting New Math Books? Start the Process by Selecting a Newly Updated Textbook Analysis Toolkit to Inform Your Work!*
11:15–12:15		**Session 2308** Strand 4, High School (9–12) ***Hartwig,*** *Merging the CCSSM with 21st Century STEM: Effective Integration and Cross-Curricular Alignment*	**Session 2309** Strand 5, College ***Philhower,*** *Supporting Secondary Mathematics Pre-Service Teachers in Developing Their Own Formative Assessment Practices*	**Session 2310** Strand 5, General ***Hearn, Chambers,*** *The Struggle is Real: Bringing Authentic Opportunities for Productive Struggle* **SPONSOR SHOWCASE**	**Session 2311** Strand 4, Elementary (K–5) ***Pittock,*** *Online Personalized Learning: Understand, Apply, and Create with Redbird Mathematics* **TECHNOLOGY SHOWCASE**	**Session 2312** Strand 1, General ***Mitchell, Kepner, Leinwand, Briars, Mills, Greenes, Gojak,*** *Ross Taylor Past Presidents Session: Speed Chats Exploring Critical Leadership Issues and Solutions*

12:30–2:00: Session 2418: Luncheon (ticket required), Exhibit Hall West, Sponsored by *Texas Instruments*

2:15–3:15	**Session 2507** Strand 5, Secondary (6–12) ***Bonner, Chavez, Carmona, Zuflacht, Saygin, Travis,*** *Empowering Teacher Leaders Through Innovative Professional Development: The South Texas STEM Center*		**Session 2509** Strand 1, General ***Brady,*** *Assessment Literacy–What Leaders Really Need to Know*	**Session 2510** Strand 4, General ***Burgess, Murawski, Fierle,*** *Supporting Student Learning Through iTunes Course Development: Finding the Conceptually Based Resources*	**Session 2511** Strand 4, Intermediate (3–5) ***McGinley,*** *Using Adaptivity to Personalize Homework in Grades 3–5* **TECHNOLOGY SHOWCASE**	**Session 2512** Strand 3, Middle (6–8) ***Hakansson,*** *Equity and Excellence: Understanding Ratios and Proportional Reasoning*
3:30–4:15	**Session 2607** ***Libfeld,*** *NCSM Regional Caucus: Eastern Region 1*	**Session 2608** ***Barnes,*** *NCSM Regional Caucus: Eastern Region 2*	**Session 2609** ***Crocker,*** *NCSM Regional Caucus: Southern Region 1*	**Session 2610** ***Griffith,*** *NCSM Regional Caucus: Southern Region 2*	**Session 2611** ***Staley,*** *NCSM International Caucus* **Session 2612** ***Garneau,*** *NCSM Regional Caucus: Canadian Region*	**Session 2613** ***Drickey,*** *NCSM Regional Caucus: Western Region 2*

5:30–7:00: Session 2818: Reception (ticket required), Exhibit Hall West, Sponsored by *Discovery Education*

TUESDAY SUMMARY

7:00–8:00: Session 2018: Breakfast (ticket required), Exhibit Hall West, Sponsored by *McGraw Hill*

	OCC 210/11	OCC 212	California	Oakland	Skyline
8:15–9:15	**Session 2113** Strand 1, General ***Thomas, Shahbaz,*** *Professional Learning Communities: A Catalyst for Sustaining Exemplary Mathematics Teachers in High Need Schools*	**Session 2114** Strand 2, General ***Filmore, Seitz,*** *Mathematics Education Trust (MET) Grants and Scholarships: What They Are, How to Apply*	**Session 2115** Strand 4, General ***Khalsa, Garneau, Kutach, Mills,*** *Leading in the Digital Landscape Part I: Leveraging Technology to Enhance Professional Learning (PL)*	**Session 2116** Strand 2, Intermediate (3–5) ***Ray-Riek,*** *Practicing the Five Practices: Coaching Teachers to Use Student Work in Planning*	**Session 2117** Strand 4, General ***Flynn, Szymaszek,*** *Live Virtual Lesson Studies: Connecting Teachers and Classrooms for Professional Learning*
10:00–11:00	**Session 2213** Strand 2, Intermediate (3–5) ***Fetter,*** *The Whole Problem-Solving Process: Traversing the Chasms Between Thinking, Talking, Writing, and Typing Mathematics*	**Session 2214** Strand 4, Middle (6–8) ***Jones, Confrey, Hennessey, Shah,*** *Looking for Student Thinking in Middle Grades Data and Statistics*	**Session 2215** Strand 5, General ***Ball, Shaughnessy, Garcia, Selling,*** *(How) Can Video be Used to Support Teacher Learning?*	**Session 2216** Strand 2, Primary (PK–2) ***Paskal, Flynn, Sandberg, Starkey,*** *Coaching: Maximizing the Learning of Mathematics in the Early Years*	**Session 2217** Strand 4, General ***Ziegler, Brown, Richards,*** *Creating and Supporting an Online Professional Learning Community (PLC) of K–12 Mathematics Teachers*
11:15–12:15	**Session 2313** Strand 4, High School (9–12) ***England,*** *Using Technology to Foster the Standards for Mathematical Practice (SMP): More Than Using Tools Strategically*	**Session 2314** Strand 2, High School (9–12) ***Riser, Reitemeyer, Corrozi, Young,*** *Problem-Based Learning of Mathematics: Coaching for Productive Struggle and Making Key Ideas and Connections Explicit*	**Session 2315** Strand 5, Middle (6–8) ***Vicich, Strom,*** *Professional Development That Empowers Teachers to Implement the Standards for Mathematical Practice with a Focus on Problem Solving*	**Session 2316** Strand 4, Secondary (6–12) ***Ristroph, Cook,*** *Using Technology to Explore Probabilistic Simulations*	**Session 2317** Strand 2, Secondary (6–12) ***Gale,*** *Coaching for Rigor: Essential Elements*

12:30–2:00: Session 2418: Luncheon (ticket required), Exhibit Hall West, Sponsored by *Texas Instruments*

2:15–3:15	**Session 2513** Strand 3, General ***Toncheff, Barnes,*** *Four Keys to Effective Mathematics Leadership*	**Session 2514** Strand 2, Middle (6–8) ***Guthrie, Kent,*** *Promoting Rich Mathematical Discourse Through Teacher Support*	**Session 2515** Strand 2, Intermediate (3–5) ***Sherman, Kennedy,*** *Coaching the Standards for Mathematical Practice (SMP): Supporting Teachers Through Rich Mathematical Tasks*	**Session 2516** Strand 4, General ***Vedova, Pittock,*** *Lessons Learned: Meeting the Needs of all Students*	**Session 2517** Strand 2, Secondary (6–12) ***Seitz, Erickson,*** *Great Tasks: The Pleasure and Luxury of Being Wrong in Mathematics!*
3:30–4:15	**Session 2614** ***Gilliam,*** *NCSM Regional Caucus: Western Region 1*	**Session 2615** ***Mills,*** *NCSM Past-President Caucus*			

5:30–7:00: Session 2818: Reception (ticket required), Exhibit Hall West, Sponsored by *Discovery Education*

TUESDAY SESSIONS BY STRAND

STRAND 1: CULTIVATING LEADERSHIP IN A TIME OF CHANGE

SESSION	LOCATION	TIME
2018	EXHIBIT HALL WEST	7:00–8:00
2101	GRAND BALLROOM EFGH	8:15–9:15
2104	JUNIOR BALLROOM 3–4	8:15–9:15
2109	OCC 205	8:15–9:15
2112	OCC 208	8:15–9:15
2113	OCC 210/11	8:15–9:15
2201	GRAND BALLROOM EFGH	10:00–11:00
2208	OCC 204	10:00–11:00
2212	OCC 208	10:00–11:00
2220	FOYER EXHIBIT HALL WEST	10:15–11:00
2304	JUNIOR BALLROOM 3–4	11:15–12:15
2312	OCC 208	11:15–12:15
2418	EXHIBIT HALL WEST	12:30–2:00
2503	JUNIOR BALLROOM 1–2	2:15–3:15
2504	JUNIOR BALLROOM 3–4	2:15–3:15
2509	OCC 205	2:15–3:15
2705	JUNIOR BALLROOM 1–2	4:30-5:15
2818	EXHIBIT HALL WEST	5:30–7:00

STRAND 2: COACHING THAT MATTERS

SESSION	LOCATION	TIME
2103	JUNIOR BALLROOM 1–2	8:15–9:15
2105	OCC 201	8:15–9:15
2106	OCC 202	8:15–9:15
2114	OCC 212	8:15–9:15
2116	OAKLAND	8:15–9:15
2205	OCC 201	10:00–11:00
2211	OCC 207	10:00–11:00
2213	OCC 210/11	10:00–11:00
2216	OAKLAND	10:00–11:00
2303	JUNIOR BALLROOM 1–2	11:15–12:15
2314	OCC 212	11:15–12:15
2317	SKYLINE	11:15–12:15
2506	OCC 202	2:15–3:15
2514	OCC 212	2:15–3:15
2515	CALIFORNIA	2:15–3:15
2517	SKYLINE	2:15–3:15

STRAND 3: ADVANCING THE SOCIAL JUSTICE CONVERSATION

SESSION	LOCATION	TIME
2102	GRAND BALLROOM ABC	8:15–9:15
2207	OCC 203	10:00–11:00
2301	GRAND BALLROOM EFGH	11:15–12:15
2305	OCC 201	11:15–12:15
2512	OCC 208	2:15–3:15
2513	OCC 210/11	2:15–3:15

STRAND 4: ENHANCING MATHEMATICS EDUCATION IN THE DIGITAL AGE

SESSION	LOCATION	TIME
2107	OCC 203	8:15–9:15
2111	OCC 207	8:15–9:15
2115	CALIFORNIA	8:15–9:15
2117	SKYLINE	8:15–9:15
2203	JUNIOR BALLROOM 1–2	10:00–11:00
2206	OCC 202	10:00–11:00
2210	OCC 206	10:00–11:00
2214	OCC 212	10:00–11:00
2217	SKYLINE	10:00–11:00
2306	OCC 202	11:15–12:15
2308	OCC 204	11:15–12:15
2311	OCC 207	11:15–12:15
2313	OCC 210/11	11:15–12:15
2316	OAKLAND	11:15–12:15
2502	GRAND BALLROOM ABC	2:15–3:15
2505	OCC 201	2:15–3:15
2510	OCC 206	2:15–3:15
2511	OCC 207	2:15–3:15
2516	OAKLAND	2:15–3:15

STRAND 5: SHARING RESEARCH THAT INFORMS MATHEMATICS EDUCATION

SESSION	LOCATION	TIME
2108	OCC 204	8:15–9:15
2110	OCC 206	8:15–9:15
2202	GRAND BALLROOM ABC	10:00–11:00
2204	JUNIOR BALLROOM 3–4	10:00–11:00
2209	OCC 205	10:00–11:00
2215	CALIFORNIA	10:00–11:00
2302	GRAND BALLROOM ABC	11:15–12:15
2309	OCC 205	11:15–12:15
2310	OCC 206	11:15–12:15
2315	CALIFORNIA	11:15–12:15
2501	GRAND BALLROOM EFGH	2:15–3:15
2507	OCC 203	2:15–3:15

TUESDAY BREAKFAST

7:00 AM–8:00 AM
TICKET REQUIRED

SESSION 2018
STRAND 1

EXHIBIT HALL WEST
GENERAL

Lead from the Middle: Empowering Your Teams Through Times of Change

School districts and the organizations that support them are going through extraordinary amounts of change. In this session, Christine Willig, President of McGraw-Hill Education K–12, reveals tested approaches to driving transformation. Anyone can lead from any chair and any position, and true change will happen by releasing that power in your organization. Lead from the middle!

Christine Willig, President of McGraw-Hill Education K–12

Sponsored by

Mc Graw Hill Education

8:15 AM–9:15 AM

MAJOR PRESENTATION

SESSION 2101 **GRAND BALLROOM EFGH**
STRAND 1 **GENERAL**

NCSM Vision 2020—Mathematics Education Leadership for the Future

How Might We change the teaching and learning of mathematics so that our students no longer grow up to tell about their negative experiences in mathematics class. I am sure each of us can share a story...“Math didn’t make sense to me” or “I was never good at math.” Now is the time for us—mathematics education leaders—to change the conversation from one where our students’ mathematical journey “ends” with a sense of hopelessness. Now is the time that the mathematics education leadership community unites to ensure that all students have access to high quality mathematics learning experiences; all students achieve at high levels and grow academically; all students are engaged in mathematics that is meaningful, relevant, and accessible; all students graduate college and career-ready; and all students are prepared to contribute to society as mathematically literate citizens. Join us as we answer the question: “How Might We—the NCSM membership—chart a course to change the future?”

John W. Staley, NCSM President, Towson, Maryland

Presider, **Kristopher J. Childs**, NCSM Associate Newsletter Editor, Lubbock, Texas

Dr. John W. Staley, President of NCSM, currently serves as the Director of Mathematics Pre-K–12 for Baltimore County Public schools. During his career he has presented at state, national, and international conferences; served on many committees and tasks forces; and conducted workshops and professional development sessions on a variety of topics. He also received the Presidential Award for Excellence in Teaching Mathematics and Science. Most importantly, he truly believes that ALL students can be successful in mathematics.

SPOTLIGHT SPEAKER

SESSION 2102 **GRAND BALLROOM ABC**
STRAND 3 **GENERAL**

Support Novice Teachers to be Culturally Empathetic

We will explore two critical questions for coaches: “How do we teach each child well in a racist nation?” and “How can each teacher improve her or his leadership for equity?” Using a teacher residency model we will consider implementation of equity-based practices to strengthen mathematical learning.

Ruth Cossey, Mills College, Oakland, California

Karen Mayfield-Ingram, Lawrence Hall of Science, University of California, Berkeley, California

Presider, **Gretchen Muller**, NCSM 2016 Local Arrangements Chair, Kentfield, California

SESSION 2103 **JUNIOR BALLROOM 1–2**
STRAND 2 **ELEMENTARY (K–5)**

Flipped Professional Development: Sustaining and Supporting Mathematics Specialists/Instructional Leaders

Using an adaptation of the flipped classroom, this session will present a model for “flipping professional development” using examples from the Guiding Principles of Principles to Actions that address the ongoing support needed to sustain elementary mathematics specialists/instructional leaders.

Francis (Skip) Fennell, McDaniel College, Westminster, Maryland

Beth Kobett, Stevenson University, Stevenson, Maryland

Jon Wray, Howard County Public School System, Ellicott City, Maryland

SESSION 2104 **JUNIOR BALLROOM 3–4**
STRAND 1 **MIDDLE (6–8)**

Envisioning Classrooms of Empowered and Mathematically Proficient Students

Powerful student learning requires active engagement. Let’s discuss what it means and looks like to empower all students through rich mathematical experiences in learning environments that promote student Agency, Authority, and Identity as defined in TRU Math. Classroom video and student work examples are used to provoke conversation among leaders.

Yvonne Grant, Portland Middle School, Portland, Michigan

Emma Trevino, San Francisco Unified School District, San Francisco, California

8:15 AM–9:15 AM CONT...

SESSION 2105 **OCC 201**
STRAND 2 **MIDDLE (6–8)**

Lessons Learned Developing Coaching Strategies for Task Rigor, Relevance, and Richness

Coaching strategies to augment rigor, relevance, and richness of teachers' tasks will be presented. How to implement tasks using innovative technology, CueThink, will also be shared and participants will role play to experience the process. The session take-aways include coaching protocols, sample "makeovers," and OER resources to reference.

Norma Gordon, CueThink, North Reading, Massachusetts

SESSION 2106 **OCC 202**
STRAND 2 **ELEMENTARY (K–5)**

Leading a Learning Lab: A Visit is Worth a Thousand Words

Come learn how one district created a learning lab classroom where teachers could see Number Talks, Cognitively Guided Instruction, and other best practices in action. We will discuss the logistics of how the learning lab worked, as well as the key role coaches played in the process.

Leandra Cleveland, Bentonville Public Schools, Bentonville, Arkansas

Amy Cheatham, Bentonville Public Schools, Bentonville, Arkansas

Melissa Johnson, Bentonville Public Schools, Bentonville, Arkansas

Mona Starr, Bentonville Public Schools, Bentonville, Arkansas

SESSION 2107 **OCC 203**
STRAND 4 **MIDDLE (6–8)**

Rethinking Ratios and Proportional Relationships: Implications for Teacher Leaders

An interactive discussion will focus on a technology-leveraged approach for teaching ratios, bringing coherence across grades to "tough to teach/tough to learn" content. The session will consider the shifts necessary to develop real understanding of proportions, the research behind the shifts, and the role of teacher leaders in making this happen.

Michelle Rinehart, Region 18 Education Service Center, Midland, Texas

SESSION 2108 **OCC 204**
STRAND 5 **GENERAL**

Formative Assessment: Practical Solutions That Leverage Promising Practices from Research

Are you trying to implement formative assessment to improve student achievement? What does the research say, and how do we turn promising practices from research into practical solutions for busy teachers? This session will consider how a comprehensive formative assessment process leads to classroom climate shifts and improved student achievement.

Katey Arrington, Charles A. Dana Center, The University of Texas, Austin, Texas

SESSION 2109 **OCC 205**
STRAND 1 **ELEMENTARY (K–5)**

Using Cognitively Guided Instruction in Children's Mathematics to Promote Student Thinking and Conceptual Understanding

This session will assist K–5 teachers in understanding how children's mathematical thinking develops and reflecting on how to help children build upon their natural problem solving strategies. Participants will learn how students approach various problem types and how teachers can use this knowledge to probe for deeper conceptual understanding.

Julie Antill, Southeast Regional Professional Development Center, Cape Girardeau, Missouri

Linda Null, Southeast Regional Professional Development Center, Cape Girardeau, Missouri

SPONSOR SHOWCASE

SESSION 2110 **OCC 206**
STRAND 5 **GENERAL**

Number Talks: Fractions, Decimals, and Percentages

The use of Number Talks to develop efficient, accurate, and flexible computation strategies with rational numbers will be explored. We will look at common student-invented strategies based on the CCSSM and the use of the Standards for Mathematical Practice.

Sherry Parrish, Author and Consultant, Birmingham, Alabama

Ann Dominick, University of Alabama at Birmingham, Birmingham, Alabama

8:15 AM–9:15 AM CONT...

TECHNOLOGY SHOWCASE

SESSION 2111 **OCC 207**
STRAND 4 **MIDDLE (6–8)**

Connecting Concepts in Grades 6–8

New standards require us to think differently about how we teach mathematics. In this session, we will explore interactive lessons and instructional strategies that help students connect their thinking across grade levels to build a deeper understanding of mathematics.

Jennifer Wilson, Rankin County School District, Brandon, Mississippi

Jill Gough, Trinity School, Atlanta, Georgia

PRESIDENTS EXCHANGE

SESSION 2112 **OCC 208**
STRAND 1 **GENERAL**

Supporting Teachers in Building Procedural Fluency from Conceptual Understanding

Connecting procedures with conceptual understanding facilitates learning and retention of procedures and applying them appropriately. Yet, doing so is challenging for many teachers. This session examines effective strategies and resources to support teachers in developing fluency from conceptual understanding and common pitfalls to avoid.

Diane Briars, National Council of Teachers of Mathematics, Reston, Virginia

PRESIDENTS EXCHANGE

SESSION 2113 **OCC 210/11**
STRAND 1 **GENERAL**

Professional Learning Communities: A Catalyst for Sustaining Exemplary Mathematics Teachers in High Need Schools

Professional Learning Communities (PLC) play multifaceted roles by providing sources of ongoing instructional support for teachers. Using engaging images and video clips, we share characteristics of an online PLC as we explore the influence of the PLC on the retention of exemplary mathematics teachers in high need schools.

Christine Thomas, Georgia State University and the Association of Mathematics Teacher Educators, Atlanta, Georgia

Rabia Shahbaz, Gwinnett Public Schools, Suwanee, Georgia

SESSION 2114 **OCC 212**
STRAND 2 **GENERAL**

Mathematics Education Trust (MET) Grants and Scholarships: What They Are, How to Apply

Don't miss out! The Mathematics Education Trust supports teachers with funds for materials, lesson development, conferences, courses, professional development, technology, in-service, and action research. Learn what's available and how to apply. You'll also hear tips for choosing the most appropriate award for you and enhancing your chances to win.

Linda Fulmore, Independent Consultant, Cave Creek, Arizona

Richard Seitz, Seitz Innovations, Helena, Montana

SESSION 2115 **CALIFORNIA**
STRAND 4 **GENERAL**

Leading in the Digital Landscape Part I: Leveraging Technology to Enhance Professional Learning (PL)

Join us to preview NCSM's latest professional learning resource, the *It's Time App*. The app is a blended-learning tool, designed to move PL experiences flexibly and powerfully into today's digital landscape. It allows leaders to analyze district readiness in key areas, learn about and share related information, and make action plans to raise the bar.

Arjan Khalsa, Conceptua Math, Petaluma, California

Marc Garneau, District Education Centre–Ed. Services, Surrey, British Columbia, Canada

Kelly Kutach, Texas Instruments, Dallas, Texas

Valerie L. Mills, NCSM Immediate Past-President, Ypsilanti, Michigan

SESSION 2116 **OAKLAND**
STRAND 2 **INTERMEDIATE (3–5)**

Practicing the Five Practices: Coaching Teachers to Use Student Work in Planning

One of the most productive ways teachers can collaborate is to look at student work in order to facilitate productive mathematical discussions. This work is best when it happens just in time to use the work the next day. We'll practice the practice of sequencing and discuss how coaches can support teachers to use student work as they plan together.

Max Ray-Riek, The Math Forum, National Council of Teachers of Mathematics, Swarthmore, Pennsylvania

8:15 AM–9:15 AM CONT...

SESSION 2117 **SKYLINE**
STRAND 4 **GENERAL**

Live Virtual Lesson Studies: Connecting Teachers and Classrooms for Professional Learning

Engaging in lesson study is a powerful form of professional development but not always easy to do within one school. The virtual lesson study model connects many teachers in real time, using existing classroom technology. Learn how to replicate this model to enhance the teaching and learning of mathematics for you and your colleagues.

Michael Flynn, Mount Holyoke College, South Hadley, Massachusetts

Jan Szymaszek, Smith College Campus School, Northampton, Massachusetts

10:00 AM–11:00 AM

MAJOR PRESENTATION

SESSION 2201 **GRAND BALLROOM EFGH**
STRAND 1 **GENERAL**

Kay Gilliland Equity Lecture: Visibly and Invisibly Helping Every Teacher Help Every Student Achieve

Our educational system won't be a success until and unless we embrace the notion that every single student deserves the opportunity to become a powerful mathematical thinker. Let's think together about the strategies and actions it takes for that to happen and the role of leaders in initiating, nurturing, supporting, and sustaining changes that will last over time

Cathy Seeley, Charles A. Dana Center, The University of Texas (retired), Austin, Texas

Presider, **Denise Brady**, NCSM Awards Chair, Carunna, Michigan

Dr. Cathy Seeley has been a mathematics teacher, K–12 district mathematics coordinator and K–12 Texas State Director of Mathematics. From 1999 to 2001 she taught mathematics (in French) as a Peace Corps volunteer in Burkina Faso. Dr. Seeley served as President of NCTM from 2004–2006 and is the author of Faster Isn't Smarter—Messages About Math, Teaching, and Learning in the 21st Century (2009/2015) and Smarter Than We Think—More Messages About Math, Teaching, and Learning in the 21st Century (2014). She recently retired as a Senior Fellow at the Charles A. Dana Center and continues to write, speak and consult.

SPOTLIGHT SPEAKER

SESSION 2202 **GRAND BALLROOM ABC**
STRAND 5 **GENERAL**

A Brief History of Mathematics Education: Lessons for Today's Leaders

Arguments concerning what and how to teach mathematics today are not new. If we are to make progress we must stop recycling the same old arguments. This session will examine implications from the past for your work as a leader today as you strive to constructively engage parents and the public in order to improve student learning.

Matt Larson, Lincoln Public Schools, Lincoln, Nebraska

Presider, **Donna Karsten**, NCSM Volunteer Coordinator, Halifax, Nova Scotia, Canada

SESSION 2203 **JUNIOR BALLROOM 1–2**
STRAND 4 **GENERAL**

A Tool for Selecting and Implementing a 3–Act Mathematical Modeling Task

Many mathematics educators are sharing the 3-Act Mathematical Modeling Task with the mathematics education community online. NCSM has posted on the web a new tool to help mathematics education leaders and teachers select and implement a task. Participants will explore using the tool and discuss strategies for sharing the tool with teachers.

Linda Griffith, NCSM S2 Regional Director, Conway, Arkansas

SESSION 2204 **JUNIOR BALLROOM 3–4**
STRAND 5 **GENERAL**

Smarter Balanced-Making Connections: Eliciting to Acting on Evidence

We'll look at several Smarter Balanced summative test questions, along with the field-test data from these items, in order to use that information to inform instruction.

Judy Hickman, Smarter Balanced Assessment Consortium, Los Angeles, California

SESSION 2205 **OCC 201**
STRAND 2 **PRIMARY (PK–2)**

Strategies to Support the Standards for Mathematical Practice Through Mathematical Discourse

Explore strategies that mathematics coaches can use in professional development and classrooms for structuring and guiding young learners in discourse with children's literature as the springboard. Participants will examine strategies such as PEER, Wh-prompts, CROWD, and a Reader's Guide to engage young children in purposeful discussions.

Lynn Columba, Lehigh University, Bethlehem, Pennsylvania

10:00 AM–11:00 AM CONT...

SESSION 2206 **OCC 202**
STRAND 4 **MIDDLE (6–8)**

Ready for an Upgrade? Using Blended Learning to Enhance Professional Development and Student Learning

How do you take core fundamentals from Powerful Problem Solving (Ray, 2013), *Principles to Actions*, and Boaler's YouCubed and transfer them to a blended learning environment? We will share our journey of utilizing technology to enhance professional development for teachers and transforming student learning in the classroom.

Jennifer Trievel, Colonial School District, New Castle, Delaware

Erin Igo, Colonial School District, New Castle, Delaware

SESSION 2207 **OCC 203**
STRAND 3 **SECONDARY (6–12)**

Supporting All Learners in a Common Core Classroom: A Focus on Reasoning and Language Development in 6–12 Mathematics

Meeting the needs of mathematics teachers supporting ELL students' learning of mathematics and the ESOL teacher supporting students' learning of language through mathematics requires a team effort. Learn about a professional learning experience and engage in tasks that highlight the importance of teacher collaboration to meet the needs of students.

Jane LaVoie, University of Rochester, Rochester, New York

Stephanie Martin, University of Rochester, Rochester, New York

Genie Foster, University of Rochester, Rochester, New York

SESSION 2208 **OCC 204**
STRAND 1 **GENERAL**

Principal's Toolkit: Leadership Resulting in Effective CCSSM Implementation

This presentation focuses on resources that principals and other school site leaders can use in order to implement the CCSSM instructional shifts of focus, coherence, and rigor at their school sites. The expectations of the CCSSM are attainable once school leaders provide opportunities for teachers to learn the content in a meaningful way.

Jared DuPree, Teacher Created Materials, Huntington Beach, California

SESSION 2209 **OCC 205**
STRAND 5 **ELEMENTARY (K–5)**

Fractions! Fractions! Learn All About 'Em: Professional Development (PD) Research Results and Building Schema Through Problem Solving

Experience a research-based instructional sequence on fraction concepts to increase teachers' content knowledge, instructional practices, and student engagement. Learn a PD structure that supports implementing rigorous, CCSSM-aligned problem solving. Teacher reflections, analysis of student work, and changes in teacher effectiveness will be shared.

Erich Zeller, MIND Research Institute, Irvine, California

SESSION 2210 **OCC 206**
STRAND 4 **SECONDARY (6–12)**

Creating An Authentic Blended Experience

Collaborative classroom? Check. Computer lab? Check. A connected class and lab experience? This workshop will give you the tools to create a cohesive mathematical environment for students.

Janet Tomlinson, Carnegie Learning, Pittsburgh, Pennsylvania

Stephanie Doran, Carnegie Learning, Pittsburgh, Pennsylvania

TECHNOLOGY SHOWCASE

SESSION 2211 **OCC 207**
STRAND 2 **GENERAL**

From Standards to Practice: Leading Teachers to Improve Student Understanding Through Formative Assessment

How do you lead teachers to think beyond today's lesson plan and connect to the learning goals for their students? We'll discuss how to monitor and respond to student feedback in order to move toward those goals. Learn valuable tips for integrating teaching practices, questioning strategies and technology into your own training with teachers.

Jill Gough, Trinity School, Atlanta, Georgia

Jennifer Wilson, Rankin County School District, Brandon, Mississippi

10:00 AM–11:00 AM CONT...

SESSION 2212 **OCC 208**
STRAND 1 **GENERAL**

Adopting New Math Books? Start the Process by Selecting a Newly Updated Textbook Analysis Toolkit to Inform Your Work!

We will explore the updated NCSM/NCTM Curriculum Analysis Toolkit developed under the direction of the Council of Chief State School Officers. New supporting resources include: *Look For* guides to focus users on critical textbook features and *Textbook Analysis Professional Learning Activities* to build a shared vision of effective textbook design.

Valerie L. Mills, NCSM Immediate Past-President, Ypsilanti, Michigan

Diane Briars, National Council of Teachers of Mathematics, Reston, Virginia

SESSION 2213 **OCC 210/11**
STRAND 2 **INTERMEDIATE (3–5)**

The Whole Problem-Solving Process: Traversing the Chasms Between Thinking, Talking, Writing, and Typing Mathematics

High-stakes tests are just one time we expect students to read a problem on the computer and then type an answer. It's easy to lose sight of the phases involved in the process of producing a finished product. We'll look at samples that highlight this issue and strategies to support moving from thinking to talking to writing to typing.

Annie Fetter, The Math Forum, National Council of Teachers of Mathematics, Swarthmore, Pennsylvania

SESSION 2214 **OCC 212**
STRAND 4 **MIDDLE (6–8)**

Looking for Student Thinking in Middle Grades Data and Statistics

We will describe how we designed indicators of student learning in the SUDDS Learning Map by analyzing examples of student-invented procedures for middle grades data and statistics. These indicators drove the development of innovative diagnostic assessment tools designed to help teachers see and understand student learning across time.

Ryan Jones, North Carolina State University, Raleigh, North Carolina

Jere Confrey, North Carolina State University, Raleigh, North Carolina

Margaret Hennessey, North Carolina State University, Raleigh, North Carolina

Meetal Shah, North Carolina State University, Raleigh, North Carolina

SESSION 2215 **CALIFORNIA**
STRAND 5 **GENERAL**

(How) Can Video be Used to Support Teacher Learning?

Video records of teaching have become broadly available and are increasingly popular for use in teacher development. We will offer a framework for selecting among the types of videos available (e.g., Teaching Channel, participants' own teaching) and protocols for using videos to support teacher learning of mathematics and teaching practices.

Deborah Ball, University of Michigan, Ann Arbor, Michigan

Meghan Shaughnessy, University of Michigan, Ann Arbor, Michigan

Nicole Garcia, University of Michigan, Ann Arbor, Michigan

Sarah Kate Selling, University of Michigan, Ann Arbor, Michigan

SESSION 2216 **OAKLAND**
STRAND 2 **PRIMARY (PK–2)**

Coaching: Maximizing the Learning of Mathematics in the Early Years

In this session you will be engaged in exploring effective coaching strategies and the research on using mathematics coaches in the early learning classroom and their impact on changing instructional practice and improving student achievement. We will also identify the roles and responsibilities of coaches and building communities of practice.

Alison Paskal, WestEd, Center for Early Learning, STEM, USA, Emeryville, California

Kylie Flynn, WestEd, Center for Early Learning, STEM, USA, Emeryville, California

Lisa Sandberg, WestEd, Center for Early Learning, STEM, USA, Emeryville, California

Prentice Starkey, WestEd, Center for Early Learning, STEM, USA, Emeryville, California

SESSION 2217 **SKYLINE**
STRAND 4 **GENERAL**

Creating and Supporting an Online Professional Learning Community (PLC) of K–12 Mathematics Teachers

We will discuss design features of a statewide online course for in-service teachers that enabled them to come together as a PLC focused on improving their mathematics teaching practices. Teachers worked on implementing tasks that promote reasoning and problem solving. Strategies and structures for supporting high functioning PLCs will be shared.

Jeff Ziegler, Brookhill Institute of Mathematics, Waukesha, Wisconsin

Sara Brown, Brookhill Institute of Mathematics, Waukesha, Wisconsin

Paige Richards, Brookhill Institute of Mathematics, Waukesha, Wisconsin

HOT TOPICS CONVERSATION CAFÉ

10:15 AM–11:00 AM

SESSION 2220 **FOYER EXHIBIT HALL WEST**
STRAND 1 **GENERAL**

Hot Topics II

TABLE 1 Tim Kanold, Consultant, will discuss achieving equity through the lens of a professional learning community culture.

TABLE 2 Lisa Brown, Charles A. Dana Center, The University of Texas, and **Brian Newsom,** Charles A. Dana Center, The University of Texas, will discuss promoting growth mindsets among teachers.

TABLE 3 Michael Steele, University of Wisconsin, will discuss sensible approaches to acceleration and compression, moving beyond tracking.

11:15 AM–12:15 PM

MAJOR PRESENTATION

SESSION 2301 **GRAND BALLROOM EFGH**
STRAND 3 **GENERAL**

Mathematics for All

In Principles and Standards for School Mathematics, NCTM provided a grand vision of mathematics for all. This phrase soon became a popular slogan. Although a worthy premise, in this session I will critically interrogate it in terms of both equity and access. Primarily the focus will be to develop an understanding of whose mathematics is foregrounded and valorized, and whose funds of knowledge are left out. I will share ideas on shifting to mathematics of all as a premise for learning, teaching, and curriculum design.

Swapna Mukhopadhyay, Portland State University, Portland, Oregon

Presider, **Kristopher J. Childs**, NCSM Associate Newsletter Editor, Lubbock, Texas

Swapna Mukhopadhyay, Ph.D., a professor in the Department of Curriculum and Instruction at Portland State University, is a mathematics educator focusing on issues of critical mathematics education and cultural diversity. Born and raised in Calcutta (Kolkata), Dr. Mukhopadhyay received her doctorate from Syracuse University, and has been at Portland State University since 2002. She promotes pedagogy that seeks to link school mathematics to the lived experience of children, their families, and their communities and to prepare students to become citizens who can use mathematics as a tool to critically examine issues of importance to themselves, to their communities, and to humankind. Her work includes two co-edited volumes, Culturally Responsive Mathematics Education (Routledge, 2009), and Alternative ways of Knowing (in) Mathematics (Sense Publishers, 2012).

11:15 AM–12:15 PM CONT...

SPOTLIGHT SPEAKER

SESSION 2302 **GRAND BALLROOM ABC**
STRAND 5 **SECONDARY (6–12)**

Supporting Educators in Applying Psychology and Learning Sciences Research in Classrooms

As leaders, how can we engage teachers in studying and applying the latest findings from psychology and the learning sciences? In what ways can we connect this research to their everyday classroom routines, the Standards for Mathematical Practice, and students' social-emotional learning competencies? Explore these questions and promising practices.

Lisa Brown, Charles A. Dana Center, The University of Texas, Austin, Texas

Brian Newsom, Charles A. Dana Center, The University of Texas, Austin, Texas

Presider, **Shawn Towle**, NCSM Web Editor, Falmouth, Maine

SESSION 2303 **JUNIOR BALLROOM 1–2**
STRAND 2 **GENERAL**

Building a Bridge Between Coaching Skills and Teaching ELLs

Listening and paraphrasing are considered essential coaching skills. Similarly, when teachers employ these skills with ELLs they can better understand student thinking, and therefore, support student learning. Join us to learn and practice these skills that can be dually purposed for coaching and teaching.

Maggie McGatha, University of Louisville, Louisville, Kentucky

Jennifer Bay-Williams, University of Louisville, Louisville, Kentucky

SESSION 2304 **JUNIOR BALLROOM 3–4**
STRAND 1 **PRIMARY (PK–2)**

Achieving Mathematical Fact Fluency! Every Administrator's Responsibility!

Kim Sutton has lead many schools and districts nationally to achieving mathematical fact fluency. Come and be inspired by her motivating style of using music, dance, and practical ideas for achieving this realistic goal! Assist teachers in setting up a plan for mathematical fact fluency with addition and subtraction. Leave with ready-to-go ideas!

Kim Sutton, Math Consultant, Arcata, California

SESSION 2305 **OCC 201**
STRAND 3 **SECONDARY (6–12)**

Fighting the Good Fight: Standing up for Equity in Mathematics

San Francisco has worked for two years to develop and implement a board policy that detracks mathematics classes through the end of 10th grade. Through research from the field and attention to our data we have framed this as a social justice issue and an instructional opportunity. Hear the superintendent and curriculum leaders reflect on our experiences.

Lizzy Hull Barnes, San Francisco Unified School District, San Francisco, California

Richard Carranza, San Francisco Unified School District, San Francisco, California

PRESIDENTS EXCHANGE

SESSION 2306 **OCC 202**
STRAND 4 **COLLEGE**

The Evolution of Online Learning from a Teacher's and Student's Perspective

Technology has certainly been evolving during the span of this instructor's nearly 40-year teaching career. Be prepared to participate in this discussion of what used to be, what is, and what may happen in the future from both a teacher's and student's point of view. Come and share your experiences as well!

Jane Tanner, Onondaga Community College, Syracuse, New York

SESSION 2308 **OCC 204**
STRAND 4 **HIGH SCHOOL (9–12)**

Merging the CCSSM with 21st Century STEM: Effective Integration and Cross–Curricular Alignment

By incorporating 21st century Web 2.0 Skills, students can discover, analyze and create STEM projects, demonstrating how scientific applications are developed from algebraic fundamentals. Conceptual understanding reaches synthesis as students publish their work, creating a wiki or web page to share with mathematics or science students and teachers.

Peg Hartwig, Discovery Education, Marshfield, Wisconsin

11:15 AM–12:15 PM CONT...

SESSION 2309 **OCC 205**
STRAND 5 **COLLEGE**

Supporting Secondary Mathematics Pre-Service Teachers in Developing Their Own Formative Assessment Practices

This presentation is based on a study focused on pre-service teachers (PSTs) developing formative assessment practices. I will share data on how methods courses helped PSTs develop their knowledge and ability to implement formative assessment practices in their classrooms. Participants will engage in discussion about ways to support PSTs.

Joanne Philhower, Michigan State University, East Lansing, Michigan

SPONSOR SHOWCASE

SESSION 2310 **OCC 206**
STRAND 5 **GENERAL**

The Struggle is Real: Bringing Authentic Opportunities for Productive Struggle

We all know that productive struggle is critical to creating powerful learning experiences and to effective teaching. This is easier said than done. Join us for a hands-on workshop to learn about productive struggle for your students. You will leave with practical ideas and tools to help you create opportunities for authentic productive struggle.

Meghan Hearn, Math Instructional Expert, LearnZillion, Washington, DC

Colette Chambers, Regional Account Director, LearnZillion, Washington, DC

TECHNOLOGY SHOWCASE

SESSION 2311 **OCC 207**
STRAND 4 **ELEMENTARY (K–5)**

Online Personalized Learning: Understand, Apply, and Create with Redbird Mathematics

Experience the CCSSM native mathematics learning environment that personalizes on a key-stroke by key-stroke basis for your students. See how STEM themes and projects inspire students to synthesize the mathematics they understand as they create solutions to STEM problems.

Janet Pittock, Redbird Advanced Learning, Oakland, California

SESSION 2312 **OCC 208**
STRAND 1 **GENERAL**

Ross Taylor Past Presidents Session: Speed Chats Exploring Critical Leadership Issues and Solutions

Participants will have the opportunity to work with former NCSM Presidents on a number of current critical leadership issues. Speed chats offer participants an opportunity to explore a range of ideas and possible solutions to benefit everyday leadership challenges in support of new and experienced leaders at all levels.

Suzanne Mitchell, Arkansas State University, Jonesboro, Arkansas

Henry Kepner, University of Wisconsin, Milwaukee, Wisconsin

Steve Leinwand, American Institutes for Research, Washington, DC

Diane Briars, National Council of Teachers of Mathematics, Reston, Virginia

Valerie L. Mills, NCSM Immediate Past-President, Ypsilanti, Michigan

Carole Greenes, Arizona State University, Tempe, Arizona

Linda Gojak, Mathematics Consultant, Willowick, Ohio

SESSION 2313 **OCC 210/11**
STRAND 4 **HIGH SCHOOL (9–12)**

Using Technology to Foster the Standards for Mathematical Practice (SMP): More Than Using Tools Strategically

Developing students' abilities in the SMP requires purposeful planning. Technology provides a tool in which students can explore mathematics, develop reasoning abilities, and problem solve through rich tasks. This session examines rich tasks and provides strategies that support teacher focus on explicit instruction in practices.

Katie England, Montgomery County Public Schools, Rockville, Maryland

11:15 AM–12:15 PM CONT...

SESSION 2314 **OCC 212**
STRAND 2 **HIGH SCHOOL (9–12)**

Problem-Based Learning of Mathematics: Coaching for Productive Struggle and Making Key Ideas and Connections Explicit

This session will feature high school teacher leaders, coaches, and a high school administrator committed to problem-based learning. The team will share data and content-focused coaching video illustrating Hiebert and Grouws' two research-based teaching principles, promoting productive struggle and making key ideas and connections explicit.

Jamila Riser, Delaware Mathematics Coalition, Dover, Delaware

Michael Reitemeyer, Red Clay School District, Wilmington, Delaware

Robin Corrozi, Cape Henlopen High School, Lewes, Delaware

Michael Young, Cape Henlopen High School, Lewes, Delaware

SESSION 2315 **CALIFORNIA**
STRAND 5 **MIDDLE (6–8)**

Professional Development That Empowers Teachers to Implement the Standards for Mathematical Practice with a Focus on Problem Solving

This session will explore an effective professional development model for improving teachers' and students' problem-solving behaviors. Topics will include promoting classroom discourse, shifting to a student-centered classroom, and teacher and student resources. Preliminary results of the Arizona Mathematics Partnership NSF grant will be shared.

James Vicich, Scottsdale Community College, Scottsdale, Arizona

April Strom, Scottsdale Community College, Scottsdale, Arizona

SESSION 2316 **OAKLAND**
STRAND 4 **SECONDARY (6–12)**

Using Technology to Explore Probabilistic Simulations

Standards require students to use simulations to find compound probabilities in 7th grade. In high school, students use simulations to determine model accuracy, develop a margin of error, and decide if differences between parameters are significant. We will explore computer-based simulations using freely available software and a commercial product.

Ingrid Ristroph, Charles A. Dana Center, The University of Texas, Austin, Texas

Kathi Cook, Charles A. Dana Center, The University of Texas, Austin, Texas

SESSION 2317 **SKYLINE**
STRAND 2 **SECONDARY (6–12)**

Coaching for Rigor: Essential Elements

The CCSSM call for rigor. How do we coach teachers to make it happen? What are the classroom dimensions that matter for learning? We will examine successful models for coaching from SVMI and TRU Math that support teachers to behave their way into shifting practices. Coaching instruments shared also provide guidance for PLC conversations.

Mardi Gale, WestEd, Redwood City, California

TUESDAY LUNCHEON

12:30 PM–2:00 PM

TUESDAY LUNCH (TICKET REQUIRED)

SESSION 2418 **EXHIBIT HALL WEST**
STRAND 1 **GENERAL**

Leading Teachers to Impact Student Learning

As mathematics leaders, we wear many hats as we procure and provide leadership and learning opportunities for mathematics educators in our schools. How can we continue to advance this critical work? How can we help teachers transform into teacher leaders as they continue to make mathematics more relevant, meaningful, and accessible for more students? What can we do in our own professional growth to impact how students learn and understand mathematics? In this session, we will look at the roles mathematics supervisors play in leading the conversation about leveraging technology, resources, and best practices in support of effective learning.

Michelle Rinehart, Region 18 Education Service Center, Midland, Texas

Sponsored by

Texas Instruments

VISIT US AT BOOTH #201

11th Annual Presentation of the Iris Carl Travel Grants

Iris Carl was an international leader in mathematics education, an NCSM Past-President, and a Glenn Gilbert Award recipient, who worked tirelessly to support other mathematics education leaders. NCSM honors her through the presentation of the NCSM Iris Carl Travel Grant.

NCSM established the Iris Carl Mathematics Leadership Fund, within the NCSM Charitable Trust, which endows the Grant. As long as there are sufficient funds, NCSM will annually provide up to three Iris Carl Grant Awards for Travel to eligible NCSM members to attend the NCSM Annual Conference.

The fund continues to grow through generous contributions. A special collection will be made during today's luncheon. Make your check out to NCSM Charitable Trust. Cash will be accepted and donors are encouraged to enclose contact information. NCSM will mail a thank you letter suitable for use in informing the IRS that no goods or services were provided in return for the contribution.

The Iris Carl Travel Grant application and criteria can be found at mathedleadership.org. Applications are being accepted through December 1, 2016, for the 2017 Award.

2016 Grant Recipients

Bonnie Angel
Elijay, Georgia

Rachel Fielhauer
Newark, Ohio

Patty Kelly
Springfield, Vermont

2:15 PM–3:15 PM

MAJOR PRESENTATION

SESSION 2501 **GRAND BALLROOM EFGH**
STRAND 5 **GENERAL**

Learning to See, Connect With, and Build Students' Resources

Teaching effectively depends on building on students' strengths and using what they already know and can do to support their development. However, it is not always easy to see what students bring, especially when working across the many differences of culture, race, language, age, gender identity, and national origin that can exist between teachers and students. A paradox is that, without knowing mathematics well, teachers can easily not notice children's mathematical ideas and practices, yet teachers' knowledge can also obscure from view children's different ways of approaching and thinking about math. In this presentation, we will explore ways in which teachers can sharpen their ability to see and hear their students' mathematical strengths and resources.

Deborah Ball, University of Michigan, Ann Arbor, Michigan

Presider, **Sandie Gilliam**, NCSM W1 Regional Director, Colorado Springs, Colorado

Dr. Deborah Loewenberg Ball is the William H. Payne Collegiate Professor in education at the University of Michigan, and an Arthur F. Thurnau Professor. She currently serves as dean of the School of Education and as director of TeachingWorks. She taught elementary school for more than 15 years, and continues to teach mathematics to elementary students every summer. Ball serves on the National Science Board and the Mathematical Sciences Research Institute Board of Trustees, and chairs the Spencer Foundation Board of Directors.

2:15 PM–3:15 PM

SPOTLIGHT SPEAKER

SESSION 2502 **GRAND BALLROOM ABC**
STRAND 4 **MIDDLE (6–8)**

Linking Digital Diagnostic Assessments to Indicators on Learning Trajectories to Meet Students' Diverse Needs

Students and teachers often rely on data from assessments that measure mastery of isolated content pieces instead of a student's progress on a learning trajectory. The SUDDS diagnostic assessments and reporting system, with a learning map, help students reflect on their learning and, with teachers, engage in instructional planning.

Jere Confrey, North Carolina State University, Raleigh, North Carolina

Ryan Jones, North Carolina State University, Raleigh, North Carolina

Margaret Hennessey, North Carolina State University, Raleigh, North Carolina

Meetal Shah, North Carolina State University, Raleigh, North Carolina

Presider, **David McKillop,** NCSM Historian, Truro, Nova Scotia, Canada

SESSION 2503 **JUNIOR BALLROOM 1–2**
STRAND 1 **GENERAL**

Moving Principles to Actions: Curriculum and Technology

In *Principles to Actions*, NCTM sets forth five principles describing essential elements of effective school mathematics programs. This session focuses on specific actions that support the Curriculum and Tools and Technology Principles through a set of professional learning resources designed to support teachers and other stakeholders.

W. Gary Martin, Auburn University, Auburn, Alabama

Francis (Skip) Fennell, McDaniel College, Westminster, Maryland

SESSION 2504 **JUNIOR BALLROOM 3–4**
STRAND 1 **SECONDARY (6–12)**

Real-World Applications, in Theory and in Practice

How have video games changed over time? How many people should you date before you propose? Can you really trust your memory? In this presentation, we'll engage in authentic (real-world) and cognitively rigorous activities for secondary math classrooms, and discuss how to use them to foster a culture of conversation and critical thinking.

Karim Ani, Mathalicious, Founder, Austin, Texas

SESSION 2505 **OCC 201**
STRAND 4 **SECONDARY (6–12)**

Building Bridges Between Mathematical Tasks and Digital Resources

Ever hear students ask, "Why do we need to learn this?" Mathematical tasks that are both meaningful and relevant to students' experiences help answer this question before it is even asked. In this session, we will explore ways to help teachers select powerful digital resources to invite student exploration into rich, meaningful mathematical tasks.

Paul Gray, Cosenza & Associates, LLC, Dallas, Texas

SESSION 2506 **OCC 202**
STRAND 2 **ELEMENTARY (K–5)**

Guided Planning: Forming a Keystone Habit

Team planning is a "keystone habit" that gains traction as teachers begin to recognize how the benefits ripple into their instruction. Short, focused time spent studying content and curriculum builds confidence and promotes responsive teaching. Participants will learn guided planning protocols that will elevate the rewards of regular team planning.

Cristina Charney, North Thurston Public Schools, Lacey, Washington

Janeal Maxfield, North Thurston Public Schools, Lacey, Washington

SESSION 2507 **OCC 203**
STRAND 5 **SECONDARY (6–12)**

Empowering Teacher Leaders Through Innovative Professional Development: The South Texas STEM Center

This session will report on the development, implementation, and initial findings of the South Texas STEM Center, a collaborative professional development program that centers on culturally responsive, problem-based teaching strategies. We will discuss the program structure and present findings related to teacher beliefs, practice, and outcomes.

Emily Bonner, University of Texas at San Antonio, San Antonio, Texas

Oscar Chavez, University of Texas at San Antonio, San Antonio, Texas

Guadalupe Carmona, University of Texas at San Antonio, San Antonio, Texas

Marta Zuflacht, University of Texas at San Antonio, San Antonio, Texas

Can Saygin, University of Texas at San Antonio, San Antonio, Texas

Betty Travis, University of Texas at San Antonio, San Antonio, Texas

2:15 PM–3:15 PM CONT...

SESSION 2509 **OCC 205**
STRAND 1 **GENERAL**

Assessment Literacy—What Leaders Really Need to Know

The Michigan Assessment Consortium created Assessment Literacy Standards for individuals affected by student assessments. Standards for teachers, administrators, and policymakers serve as a foundation from which we come to understand what assessment literacy means and the role and purpose of comprehensive, balanced, quality assessment systems.

Denise Brady, Shiawassee Regional Educational Service District, Corunna, Michigan

SESSION 2510 **OCC 206**
STRAND 4 **GENERAL**

Supporting Student Learning Through iTunes Course Development: Finding the Conceptually Based Resources

Pennsylvania has begun developing iTunes U Courses for Mathematics ranging from Kindergarten to Algebra II. Finding resources (apps, videos, activities) that support conceptual understanding is challenging. Come hear what resources we have found to support this level of understanding as well as how we have incorporated content-creation apps.

Michele Burgess, Allegheny Intermediate Unit, Homestead, Pennsylvania

Corinne Murawski, Allegheny Intermediate Unit, Homestead, Pennsylvania

Michael Fierle, Math & Science Collaborative, Pittsburgh, Pennsylvania

TECHNOLOGY SHOWCASE

SESSION 2511 **OCC 207**
STRAND 4 **INTERMEDIATE (3–5)**

Using Adaptivity to Personalize Homework in Grades 3–5

Personalized. Differentiated. Adaptive. These are just some of the words used to describe many of the different tools and approaches in education. Learn how *enVisionmath2.0* is using adaptivity to save teachers time while making homework and practice more meaningful for students.

Deb McGinley, National Math Specialist, Pearson, Chandler, Arizona

2:15 PM–3:15 PM CONT...

PRESIDENT'S EXCHANGE

SESSION 2512 **OCC 208**
STRAND 3 **MIDDLE (6–8)**

Equity and Excellence: Understanding Ratios and Proportional Reasoning

We want *all* students to develop mathematical proficiency in using ratios and proportional reasoning. For this to occur, we must address the language needs of students, particularly English learners, and address our own understanding of ratios and proportional reasoning, thus focusing on equity and excellence. Be prepared to do some mathematics!

Susie Hakansson, TODOS: Mathematics for ALL, Tempe, Arizona

SESSION 2513 **OCC 210/11**
STRAND 3 **GENERAL**

Four Keys to Effective Mathematics Leadership

During this collaborative session, leaders will investigate four tenets of effective district leadership. Leaders will work together to examine tools and resources designed to improve mathematics teaching and learning, build leadership capacity, and empower students and families as equal partners.

Mona Toncheff, NCSM 2nd Vice President, Phoenix, Arizona

Bill Barnes, Howard County Public School System, Ellicott City, Maryland

SESSION 2514 **OCC 212**
STRAND 2 **MIDDLE (6–8)**

Promoting Rich Mathematical Discourse Through Teacher Support

How do we support teachers in engaging students in rich mathematical discourse? Come learn about the purposeful pedagogy model designed to engage, assess, plan, and evaluate students' understandings of core mathematical ideas. We will share engaging tasks, strategies to enhance discourse, and resources that are ready to use with your teachers.

Tammy Guthrie, Springdale Public Schools, Springdale, Arkansas

Laura Kent, University of Arkansas, Fayetteville, Arkansas

SESSION 2515 **CALIFORNIA**
STRAND 2 **INTERMEDIATE (3–5)**

Coaching the Standards for Mathematical Practice (SMP): Supporting Teachers Through Rich Mathematical Tasks

The SMP are central to doing and teaching mathematics, yet can be hard to articulate. We will stage a "fishbowl" demonstration to model how rich mathematical tasks can serve as a vehicle for supporting and assessing teacher knowledge and use of the practices.

Diana Sherman, University of Michigan, Ann Arbor, Michigan

Dave Kennedy, Shippensburg University, Shippensburg, Pennsylvania

SESSION 2516 **OAKLAND**
STRAND 4 **GENERAL**

Lessons Learned: Meeting the Needs of all Students

Making the rigor and coherence of the CCSSM reality in a classroom of real students is a challenge. Learn how teachers at the Mandell School met the challenge using a combination of asynchronous learning, whole class instruction, small groups, and technology. Explore how to integrate these components into your classroom.

Tiffany Della Vedova, Mandell School, New York, New York

Janet Pittock, Redbird Advanced Learning, Oakland, California

SESSION 2517 **SKYLINE**
STRAND 2 **SECONDARY (6–12)**

Great Tasks: The Pleasure and Luxury of Being Wrong in Mathematics!

What tasks are your teachers taking on in their Professional Learning Communities (PLC)? We examine characteristics of powerful PLC models that engage teachers in exciting discourse on how to improve student talk. Teachers then offer learners opportunities to experience cognitive dissonance and create, examine, and correct wrong strategies.

Richard Seitz, Seitz Innovations, Helena, Montana

David Erickson, University of Montana, Missoula, Montana

CAUCUSES, TUESDAY 3:30 PM–4:15 PM

The caucus provides opportunities for you to connect, network and celebrate regional success with fellow leaders. Your NCSM Regional Director and state/provincial leaders will share information on NCSM initiatives, national/provincial issues, and future events. There will be door prizes...we look forward to seeing you at the caucus.

SESSION 2605 **OCC 201**

NCSM Regional Caucus: Central Region 1

Gwen Zimmermann, NCSM C1 Regional Director, Lincolnshire, Illinois

SESSION 2606 **OCC 202**

NCSM Regional Caucus: Central Region 2

Comfort Akwaji-Anderson, NCSM C2 Regional Director, Iowa City, Iowa

SESSION 2607 **OCC 203**

NCSM Regional Caucus: Eastern Region 1

Suzanne Libfeld, NCSM E1 Regional Director, Bronx, New York

SESSION 2608 **OCC 204**

NCSM Regional Caucus: Eastern Region 2

Bill Barnes, NCSM E2 Regional Director, Ellicot City, Maryland

SESSION 2609 **OCC 205**

NCSM Regional Caucus: Southern Region 1

Deborah Crocker, NCSM S1 Regional Director, Boone, North Carolina

SESSION 2610 **OCC 206**

NCSM Regional Caucus: Southern Region 2

Linda Griffith, NCSM S2 Regional Director, Conway, Arkansas

SESSION 2611 **OCC 207**

NCSM International Caucus

John W. Staley, NCSM President, Towson, Maryland

SESSION 2612 **OCC 207**

NCSM Regional Caucus: Canadian Region

Marc Garneau, NCSM Canadian Regional Director, Surrey, British Columbia, Canada

SESSION 2613 **OCC 208**

NCSM Regional Caucus: Western Region 2

Nancy Drickey, NCSM W2 Regional Director, McMinnville, Oregon

SESSION 2614 **OCC 210/11**

NCSM Regional Caucus: Western Region 1

Sandie Gilliam, NCSM W1 Regional Director, Colorado Springs, Colorado

SESSION 2615 **OCC 212**

NCSM Past-President Caucus

Valerie L. Mills, NCSM Immediate Past-President, Ypsilanti, Michigan

TUESDAY SESSIONS

4:30 PM–5:15 PM

MEETING

SESSION 2705 **JUNIOR BALLROOM 1–2**
STRAND 1 **GENERAL**

NCSM Annual Business Meeting and State of the Organization Report

NCSM President John W. Staley will present the State of the Organization, including our Annual Membership and Financial Reports. John will describe the progress on the 2015–2016 initiatives, positions papers, and other strategic priorities for the next year. New NCSM Affiliates will receive their certificates. All members are welcome and encouraged to attend to learn about opportunities for getting involved in NCSM.

John W. Staley, NCSM President, Towson, Maryland

Jon Manon, NCSM Treasurer, Newark, Delaware

TUESDAY RECEPTION

RECEPTION

5:30 PM–7:00 PM

SESSION 2818 **TICKET REQUIRED** **EXHIBIT HALL WEST**
STRAND 1 **GENERAL**

Join us for a ticketed reception. Discovery Education is the global leader in standards-based digital content for K–12 classrooms, transforming teaching and learning with award-winning digital textbooks, multimedia content, professional development, assessment tools, and the largest professional learning community of its kind. Discovery Education partners with districts, states and like-minded organizations to captivate students, empower teachers, and transform classrooms with customized solutions, such as the recently released Math Techbook, that accelerate academic achievement. Discovery Education's services are available not only in half of all U.S. schools, but in half of all English primary schools, numerous institutes of higher learning, and in 50 countries around the world. To learn more about Discovery Education, visit www.discoveryeducation.com.

Patrick Vennebush, Discovery Education, Silver Spring, MD

Jennifer O'Brien, Discovery Education, Silver Spring, MD

Matt Monjan, Discovery Education, Silver Spring, MD

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NOTES

BUILDING BRIDGES BETWEEN LEADERSHIP AND LEARNING MATHEMATICS

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MATH in PRACTICE

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WHAT
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— *5th Grade Teacher, Elementary School, Fresno USD, CA*

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PROGRAM SUMMARY INFORMATION FOR WEDNESDAY, APRIL 13

See page 5 for Conference Strand descriptions.

NOTES

WEDNESDAY SUMMARY

7:30–8:30: Session 3018, Strand 1, General: Breakfast (ticket required), Exhibit Hall West, Sponsored by *Pearson*

	Grand Ballroom EFGH	Grand Ballroom ABC	Junior Ballroom 1–2	Junior Ballroom 3–4	OCC 201	OCC 202
8:45–9:45	**Session 3101** Strand 1, General ***Kanold,*** *The Secret to Leading Sustainable Change: Vision, Focus, Feedback, and Action!*	**Session 3102** Strand 2, Elementary (K–5) ***Tang,*** *Critical Connections*	**Session 3103** Strand 1, Secondary (6–12) ***Silbey,*** *Demonstrating Understanding of Algebraic Concepts*	**Session 3104** Strand 1, General ***Davenport, Ganguly,*** *Using Curriculum Alignment Tools to Support Administrator Learning About the Expectations of the CCSSM*	**Session 3105** Strand 5, Intermediate (3–5) ***Gilbertson, Smith, Satyam, He,*** *Fraction Division Using Hands-On Measurement Models*	**Session 3106** Strand 2, General ***Kobiela, Jackson, Lin, Clark, Din, Parker,*** *Who Coaches the Coach? Supporting Coaches in Developing Teachers' Ambitious Mathematics Teaching Practices*
10:00–11:00	**Session 3201** Strand 3, General ***Strutchens,*** *Moving Principles into Actions: Access and Equity*	**Session 3202** Strand 5, Intermediate (3–5) ***Russell,*** *Productive Lingering: Elementary Students Learn About Structure of the Operations Through Representation-Based Arguments*	**Session 3203** Strand 5, High School (9–12) ***Dillon, Boston,*** *NCTM's Principles to Action Toolkit: Promoting Productive Struggle*	**Session 3204** Strand 1, Elementary (K–5) ***Ramirez, Moore,*** *Leveraging STEM to Strengthen Mathematics Instruction*	**Session 3205** Strand 2, Elementary (K–5) ***Farrell, Feige, Welsh,*** *Trilingual: Supporting Teachers Whose Students are Learning Through Three Languages*	**Session 3206** Strand 2, Primary (PK–2) ***Allen,*** *It's all About the Task!*
11:15–12:15	**Session 3301** Strand 3, General ***Mayfield-Ingram, Martin, Aguirre,*** *Understanding Identity and Agency in Mathematics Teaching and Learning: Working with Teachers to Cultivate Equity-Based Classroom Practices*	**Session 3302** Strand 1, General ***Kaplinsky,*** *How to Create a Mathematics Teacher Specialist Network*	**Session 3303** Strand 5, Primary (PK–2) ***Murphy,*** *Teaching Mathematics with Intent: The Power of Intentional Instruction Strategies in Early Mathematics Classrooms*	**Session 3304** Strand 3, Elementary (K–5) ***Dockterman,*** *Early Mathematics Intervention: Catching up Sooner is Better*	**Session 3305** Strand 5, Middle (6–8) ***Carson, Philhower, Ray,*** *What Do They Need? Supporting Middle School Teachers' Professional Development (PD) Needs for Implementing the Common Core*	**Session 3306** Strand 4, Middle (6–8) ***Vennebush,*** *Empowering Teachers to Teach Modeling with Technology*

12:30–2:00: Session 3418: Luncheon Ticket Required, Exhibit Hall West, Sponsored in part by *DreamBox Learning*

2:15–3:15	**Session 3501** Strand 1, Elementary (K–5) ***Burns,*** *Helping Develop Leaders Through Sharing Lessons I've Learned from Classroom Teaching*	**Session 3502** Strand 5, Elementary (K–5) ***Schifter,*** *Noticing Structure, Attending to Precision: Grades 2–5 Students Articulate Generalizations About the Operations*	**Session 3503** Strand 1, Secondary (6–12) ***Mark, Spencer, Martin, Nikula,*** *What's Hard for Teachers About the Standards for Mathematical Practice (SMP)?*	**Session 3504** Strand 4, High School (9–12) ***Harris,*** *Using Exemplar Teaching Videos in Algebra Professional Development*	**Session 3505** Strand 4, Middle (6–8) ***Weimar,*** *How do we Focus on Thinking, Rather than Thoughts?*	**Session 3506** Strand 2, Secondary (6–12) ***Ray, Grant, Phillips, Edson,*** *Decomposing the Daily Practice of Formative Assessment: A Framework for Mathematics Teachers and Instructional Leaders*
3:30–4:30	**Session 3601** Strand 4, General ***Honey,*** *Irresistible Learning*	**Session 3602** Strand 1, Elementary (K–5) ***Schielack, Chancellor, Riley, Hart,*** *Create a Math-a-Rama Experience: A Low-Cost, Low-Stress Process for Introducing Classroom Teachers to Teacher Leadership*	**Session 3603** Strand 1, General ***Akwaji-Anderson, Fletcher, Goodman-Orcutt, Gray, Igo, Khalsa, Lucenta, Vilson, Zaharopol, Zimba,*** *Ignite! We'll Enlighten You and We'll Make It Quick*	**Session 3604** Strand 1, General ***Leinwand,*** *Practical Suggestions for Recasting our Homework Policies and Practices*	**Session 3605** Strand 2, Elementary (K–5) ***DiBrienza, Lambert, Imm,*** *Coaching with Number Strings: Deepening Teachers' Mathematics and Pedagogy*	**Session 3606** Strand 2, Elementary (K–5) ***Gibbons, Lind,*** *Coaching Teachers Through Focusing on Student Thinking*

WEDNESDAY SUMMARY

7:30–8:30: Session 3018, Strand 1, General: Breakfast (ticket required), Exhibit Hall West, Sponsored by *Pearson*

	OCC 203	OCC 204	OCC 205	OCC 206	OCC 207	OCC 208
8:45–9:45	**Session 3107** Strand 1, General ***Luebeck, Cobbs, Scott,*** *Symposium on Montana Mathematics Teaching: A Broad-Spectrum Effort to Examine, Celebrate and Improve K–12 Mathematics Education*	**Session 3108** Strand 2, Elementary (K–5) ***Cameron, West,*** *Feedback as a Fractal*	**Session 3109** Strand 4, General ***Schoff, Narang,*** *A Distance-Delivery Model for Teaching and Learning the SMP: Theory, Experience and Practice*	**Session 3110** Strand 3, Secondary (6–12) ***Short, Vierra, Silva,*** *Developing the Standards for Mathematical Practice (SMP) with Special Needs and Other At-Risk Students*	**Session 3111** Strand 4, Elementary (K–5) ***Zimolzak, Porter, Buethe, Ryan,*** *Using Technology in Powerful Ways: Effective Technology Integration to Promote Student Growth*	**Session 3112** Strand 5, General ***Milou,*** *Challenges in Mathematics Education: A Call to Action*
10:00–11:00	**Session 3207** Strand 4, General ***Kutach, Garneau, Khalsa, Mills,*** *Leading in the Digital Landscape Part II: Professional Learning Content Leaders and Teachers Need to Leverage Technology*	**Session 3208** Strand 1, Secondary (6–12) ***Novak,*** *Growing Mathematics Leaders: Building Capacity in a Time of Change*	**Session 3209** Strand 4, Secondary (6–12) ***Edson, Thomas,*** *Supporting Teachers in Bridging Levels of Classroom Mathematical Discourse Using Digital Technologies*	**Session 3210** Strand 2, General ***Coe,*** *The Expanding Endeavor to EQuIP Educators: The Latest Updates, Opportunities, and Resources*	**Session 3211** Strand 2, Middle (6–8) ***Lancour, Banham,*** *Coaching Through PLCs: Focusing on Teacher Talk About Data to Strengthen Discussions and Design Targeted Interventions*	**Session 3212** Strand 4, High School (9–12) ***Surdovel,*** *Using Robots to Teach Mathematics*
11:15–12:15	**Session 3307** Strand 2, General ***Guarino, Beltramini, Cole, Farmer, Gray, Rumsey,*** *Virtual Lesson Studies: Expanding the Reach of Coaching*	**Session 3308** Strand 2, Elementary (K–5) ***Atkins,*** *Creating a Language-Rich Mathematics Class*	**Session 3309** Strand 4, Secondary (6–12) ***Reardon,*** *Transformational Geometry–Immediate Interactive Investigations–Engaging Activities iPad, Handheld, Computer Software*	**Session 3310** Strand 2, Secondary (6–12) ***Burrill,*** *Implementing Principles to Actions: Facilitating Meaningful Mathematical Discourse*	**Session 3311** Strand 2, Intermediate (3–5) ***DePaul,*** *Designing High-Quality Professional Learning on Fractions: Rethinking the Meaning of the Numerator and Denominator*	**Session 3312** Strand 1, General ***DeMille, Lane, Munoz,*** *Leadership to Bridge Learning for SPED, ELL, and All Students Who May Struggle with the CCSSM*

12:30–2:00: Session 3418: Luncheon Ticket Required, Exhibit Hall West, Sponsored in part by *DreamBox Learning*

2:15–3:15	**Session 3507** Strand 5, High School (9–12) ***Matsuura, Sword, Gates, Cuoco, Stevens,*** *From the Classroom to Assessment and Back Again*	**Session 3508** Strand 1, General ***Lain,*** *Three Keys to Choosing and Using Instructional Materials to Improve Students' Success*	**Session 3509** Strand 4, General ***Swarthout, Bohan,*** *Creating Digital Conduits for Innovative Mathematics Leadership and Learning*	**Session 3510** Strand 2, Elementary (K–5) ***Rak, Cartier, Taylor,*** *Resources That Support Successful Coaching*	**Session 3511** Strand 2, Intermediate (3–5) ***Maxfield, Charney,*** *The Power of Context—Solving Real World Problems Is the Entry, Not the Exit, to Mathematics*	**Session 3512** Strand 1, Middle (6–8) ***Gauthier,*** *Ours IS the Reason Why! STOP Invert and Multiply!*
3:30–4:30	**Session 3607** Strand 1, General ***Cameron, Taylor,*** *Using Constructive Feedback to Develop Leadership Teams*	**Session 3608** Strand 2, Secondary (6–12) ***Maxwell, Riser, Becker,*** *Designing Effective Collaborations Around Learning (DECAL): How One Small Change Improved Student Learning*		**Session 3610** Strand 1, General ***Thompson, Stevens, Peyser, Sharlow, Osterbuhr,*** *A Blueprint to Build a Solid Foundation*		**Session 3612** Strand 5, Elementary (K–5) ***Selling, Shaughnessy, Garcia, O'Neill,*** *Concluding Mathematics Discussion: What do Novice Teachers do and How Can we Support all Teachers' Practices?*

WEDNESDAY SUMMARY

7:30–8:30: Session 3018, Strand 1, General: Breakfast (ticket required), Exhibit Hall West, Sponsored by *Pearson*

	OCC 210/11	OCC 212	California	Oakland	Skyline
8:45–9:45	**Session 3113** Strand 5, General ***Naizer,*** *A Review of Research on the Integration of Mathematics and Science: Independent Subjects to STEM*	**Session 3114** Strand 3, General ***Liu, Town, Lam,*** *Building a Social Justice Mathematics Educator Community of Practice*	**Session 3115** Strand 5, General ***Mills, Silver, Strutchens, Burton, Audrict,*** *Findings from the NCSM/AMTE Joint Task Force on Formative Assessment (FA): Two New Powerful Lenses on a Familiar Topic*	**Session 3116** Strand 4, High School (9–12) ***Sadler, Luberoff,*** *Social Chatter That Matters—Digital Networking in Today's Mathematics Classroom*	**Session 3117** Strand 2, Middle (6–8) ***Hulbert, Abele-Austin,*** *Gone are the Days of "Who Wants to Share?" Coaching Teachers to Select and Sequence Student Work*
10:00–11:00	**Session 3213** Strand 4, General ***Hudson, Fennell, Herlth, Nur, SanGiovanni,*** *How to Empower Productive Engagement in the Digital Age: Cultivating Deep Understanding and Critical Mathematical Practices*	**Session 3214** Strand 5, Secondary (6–12) ***Cirillo, Pelesko,*** *Supporting Secondary Teachers' Conceptions of Mathematical Modeling*	**Session 3215** Strand 3, General ***Barnes, Wray,*** *What do Students Say About Equity in the Mathematics Classrooms?*	**Session 3216** Strand 1, General ***Lomax, Lewis,*** *Learning, Planning, and Teaching Together: Designing Job-Embedded Professional Development*	**Session 3217** Strand 1, Secondary (6–12) ***Gould, Bush,*** *A Reflective Learner Journey from Slide Rule to iPad*
11:15–12:15	**Session 3313** Strand 1, General ***Trevino, Torres, Bradley, Kenyon,*** *What is the Evidence Telling us About Student Discourse?*	**Session 3314** Strand 3, General ***Davidenko,*** *The Mathematics Classroom as a Forum to Discuss Historical Events and Connect with Current Social Justice Issues*	**Session 3315** Strand 1, High School (9–12) ***Jain, Tomkiel,*** *All Hands on Deck: System Level Leadership in Support of Response to Intervention (RtI)*	**Session 3316** Strand 4, Elementary (K–5) ***Schrock, Seitz, Pugalee, Norris,*** *Using NCSM's Great Tasks in the Digital Age*	**Session 3317** Strand 2, General ***Beske, Funderburk,*** *Supporting Teachers in Effective Planning and Teaching of CCSSM Aligned Lessons*

12:30–2:00: Session 3418: Luncheon Ticket Required, Exhibit Hall West, Sponsored in part by *DreamBox Learning*

2:15–3:15	**Session 3513** Strand 1, General ***Verners, Hamada, Hernandez,*** *Maintaining the Momentum Toward Full Implementation of the CCSSM—A Principal's Perspective*	**Session 3514** Strand 1, Elementary (K–5) ***Resnick, Druitt, Fetzer, Wilson,*** *Finally! Giving Students a Voice in Mathematics Classrooms*	**Session 3515** Strand 2, Secondary (6–12) ***Shore, Lione, Scarfone,*** *A Mathematical Coaching Package*	**Session 3516** Strand 5, Elementary (K–5) ***Wiley,*** *Structure Versus Pedagogy: The Impact of a Flipped Classroom Model of Instruction on Elementary Mathematics Students*	**Session 3517** Strand 2, Middle (6–8) ***Chu, Hamburger,*** *Collaborative Coaching Across Diverse Contexts: Professional Learning for Teachers of English Language Learners*
3:30–4:30	**Session 3613** Strand 2, Middle (6–8) ***Gavin, Sheffield,*** *Helping Your Teachers Prepare Students for Algebra in Middle School: Filling in the Gaps*	**Session 3614** Strand 4, High School (9–12) ***Douglas,*** *Increasing Coherence in High School Mathematics*		**Session 3616** Strand 3, Intermediate (3–5) ***Gray, Steele,*** *Who is Mathematics Talk Good For?*	

STRAND 1: CULTIVATING LEADERSHIP IN A TIME OF CHANGE

SESSION	LOCATION	TIME
3018	EXHIBIT HALL WEST	7:30–8:30
3101	GRAND BALLROOM EFGH	8:45–9:45
3103	JUNIOR BALLROOM 1–2	8:45–9:45
3104	JUNIOR BALLROOM 3–4	8:45–9:45
3107	OCC 203	8:45–9:45
3204	JUNIOR BALLROOM 3–4	10:00–11:00
3208	OCC 204	10:00–11:00
3216	OAKLAND	10:00–11:00
3217	SKYLINE	10:00–11:00
3302	GRAND BALLROOM ABC	11:15–12:15
3312	OCC 208	11:15–12:15
3313	OCC 210/11	11:15–12:15
3315	CALIFORNIA	11:15–12:15
3418	EXHIBIT HALL WEST	12:30-2:00
3501	GRAND BALLROOM EFGH	2:15–3:15
3503	JUNIOR BALLROOM 1–2	2:15–3:15
3508	OCC 204	2:15–3:15
3512	OCC 208	2:15–3:15
3513	OCC 210/11	2:15–3:15
3514	OCC 212	2:15–3:15
3602	GRAND BALLROOM ABC	3:30–4:30
3603	JUNIOR BALLROOM 1–2	3:30–4:30
3604	JUNIOR BALLROOM 3–4	3:30–4:30
3607	OCC 203	3:30–4:30
3610	OCC 206	3:30–4:30

STRAND 2: COACHING THAT MATTERS

SESSION	LOCATION	TIME
3102	GRAND BALLROOM ABC	8:45–9:45
3106	OCC 202	8:45–9:45
3108	OCC 204	8:45–9:45
3117	SKYLINE	8:45–9:45
3205	OCC 201	10:00–11:00
3206	OCC 202	10:00–11:00
3210	OCC 206	10:00–11:00
3211	OCC 207	10:00–11:00
3307	OCC 203	11:15–12:15
3308	OCC 204	11:15–12:15
3310	OCC 206	11:15–12:15
3311	OCC 207	11:15–12:15
3317	SKYLINE	11:15–12:15
3506	OCC 202	2:15–3:15
3510	OCC 206	2:15–3:15
3511	OCC 207	2:15–3:15
3515	CALIFORNIA	2:15–3:15
3517	SKYLINE	2:15–3:15
3605	OCC 201	3:30–4:30
3606	OCC 202	3:30–4:30
3608	OCC 204	3:30–4:30
3613	OCC 210/11	3:30–4:30

STRAND 3: ADVANCING THE SOCIAL JUSTICE CONVERSATION

SESSION	LOCATION	TIME
3110	OCC 206	8:45–9:45
3114	OCC 212	8:45–9:45
3201	GRAND BALLROOM EFGH	10:00–11:00
3215	CALIFORNIA	10:00–11:00
3301	GRAND BALLROOM EFGH	11:15–12:15
3304	JUNIOR BALLROOM 3–4	11:15–12:15
3314	OCC 212	11:15–12:15
3616	OAKLAND	3:30–4:30

STRAND 4: ENHANCING MATHEMATICS EDUCATION IN THE DIGITAL AGE

SESSION	LOCATION	TIME
3109	OCC 205	8:45–9:45
3111	OCC 207	8:45–9:45
3116	OAKLAND	8:45–9:45
3207	OCC 203	10:00–11:00
3209	OCC 205	10:00–11:00
3212	OCC 208	10:00–11:00
3213	OCC 210/11	10:00–11:00
3306	OCC 202	11:15–12:15
3309	OCC 205	11:15–12:15
3316	OAKLAND	11:15–12:15
3504	JUNIOR BALLROOM 3–4	2:15–3:15
3505	OCC 201	2:15–3:15
3509	OCC 205	2:15–3:15
3601	GRAND BALLROOM EFGH	3:30–4:30
3614	OCC 212	3:30–4:30

STRAND 5: SHARING RESEARCH THAT INFORMS MATHEMATICS EDUCATION

SESSION	LOCATION	TIME
3018	EXHIBIT HALL WEST	7:30–8:30
3105	OCC 201	8:45–9:45
3112	OCC 208	8:45–9:45
3113	OCC 210/11	8:45–9:45
3115	CALIFORNIA	8:45–9:45
3202	GRAND BALLROOM ABC	10:00–11:00
3203	JUNIOR BALLROOM 1–2	10:00–11:00
3214	OCC 212	10:00–11:00
3303	JUNIOR BALLROOM 1–2	11:15–12:15
3305	OCC 201	11:15–12:15
3502	GRAND BALLROOM ABC	2:15–3:15
3507	OCC 203	2:15–3:15
3516	OAKLAND	2:15–3:15
3612	OCC 208	3:30–4:30

WEDNESDAY BREAKFAST

7:30 AM–8:30 AM

SESSION 3018
STRAND 5

TICKET REQUIRED

EXHIBIT HALL WEST
GENERAL

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.

Zachary Champagne, Florida Center for Research in Science, Technology, Engineering, and Mathematics (FCR-STEM) at Florida State University, Jacksonville, Florida

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8:45 AM–9:45 AM

MAJOR PRESENTATION

SESSION 3101 **GRAND BALLROOM EFGH**
STRAND 1 **GENERAL**

The Secret to Leading Sustainable Change: Vision, Focus, Feedback, and Action!

The leadership role of central office leader, school site administrator, instructional coach, or department chair is daunting and thrilling! Your effort to become great at three aspects of your leadership work: vision, focus, and feedback will serve you and those you lead to produce high-quality work and improved student achievement every day!

Tim Kanold, Consultant, Chicago, Illinois

Presider, **Bill Barnes**, NCSM E2 Regional Director, Ellicot City, Maryland

Dr. Tim Kanold, an award-winning educator, author, and consultant, is former superintendent of Adlai E. Stevenson High School District 125, a model professional learning community district in Lincolnshire, Illinois. He currently presents leadership training for school administrators on behalf of Solution Tree and mathematics curriculum, instruction, and assessment workshops for NCTM and NCSM.

SPOTLIGHT SPEAKER

SESSION 3102 **GRAND BALLROOM ABC**
STRAND 2 **ELEMENTARY (K–5)**

Critical Connections

Teaching students to make sense of problems may be the single most important thing we can do. But what exactly does that look like? Join us as we make surprising connections between part-whole models, comparison word problems and simultaneous equations. Mathematics is amazing when it actually makes sense!

Greg Tang, Greg Tang Math, Belmont, Massachusetts

Presider, **Lynn Columba**, NCSM Newsletter Editor, Bethlehem, Pennsylvania

SESSION 3103 **JUNIOR BALLROOM 1–2**
STRAND 1 **SECONDARY (6–12)**

Demonstrating Understanding of Algebraic Concepts

Other than following a series of prescribed steps, how can students show they have deep conceptual understanding? First, you'll explore one algebraic concept that connects ideas and demonstrates true understanding. Then, leader actions and thought processes applying to daily instruction will be shared. Every student can fully understand algebra!

Robyn Silbey, Robyn Silbey Professional Development, Gaithersburg, Maryland

SESSION 3104 **JUNIOR BALLROOM 3–4**
STRAND 1 **GENERAL**

Using Curriculum Alignment Tools to Support Administrator Learning About the Expectations of the CCSSM

How can tools designed to examine curriculum alignment also be used to help administrators explore the expectations of the CCSSM? Learn what happened when school administrators met to examine cognitive demand, balance of rigor, and the Standards for Mathematical Practice in order to better understand what to look for during mathematics instruction.

Linda Davenport, Boston Public Schools, Boston, Massachusetts

Anurupa Ganguly, New York City Public Schools, New York, New York

SESSION 3105 **OCC 201**
STRAND 5 **INTERMEDIATE (3–5)**

Fraction Division Using Hands-On Measurement Models

In this session we will collaboratively explore hands-on spatial measurement (length, area, volume) activities for professional development and classroom use to support conceptual understanding of division of fractions. We will also discuss connections to the CCSSM and research related to the understanding of these concepts.

Nicholas Gilbertson, Michigan State University, East Lansing, Michigan

John Smith, Michigan State University, East Lansing, Michigan

V. Satyam, Michigan State University, East Lansing, Michigan

Jia He, Michigan State University, East Lansing, Michigan

SESSION 3106 **OCC 202**
STRAND 2 **GENERAL**

Who Coaches the Coach? Supporting Coaches in Developing Teachers' Ambitious Mathematics Teaching Practices

In this session, we will share our work in developing a coaching learning community that supported coaches to establish and lead teacher learning communities. Participants will view and discuss videos of the coaching activities and will receive suggestions for creating and facilitating both types of learning communities.

Marta Kobiela, McGill University, Montreal, Quebec, Canada

Kara Jackson, University of Washington, Seattle, Washington

Terry Lin, McGill University, Montreal, Quebec, Canada

Peter Clark, Sir Wilfrid Laurier School Board, Rosemère, Quebec, Canada

Saba Din, Sir Wilfrid Laurier School Board, Rosemère, Quebec, Canada

Zachary Parker, McGill University, Montreal, Quebec, Canada

8:45 AM–9:45 AM CONT...

SESSION 3107 **OCC 203**
STRAND 1 **GENERAL**

Symposium on Montana Mathematics Teaching: A Broad-Spectrum Effort to Examine, Celebrate and Improve K–12 Mathematics Education

Montana's SuMMiT is an assembly of university mathematics educators, faculty from two-year, tribal, and private colleges, and K–12 mathematics leaders. Learn how this diverse network builds capacity for outstanding pre-service and in-service professional learning through collaborative planning and sharing of programs, projects, and research.

Jennifer Luebeck, Montana State University, Bozeman, Montana

Georgia Cobbs, University of Montana, Missoula, Montana

Lisa Scott, Lisa Scott Mathematics Education Consulting, LLC, Billings, Montana

SESSION 3108 **OCC 204**
STRAND 2 **ELEMENTARY (K–5)**

Feedback as a Fractal

For coaches, giving feedback is essential for improving teacher practice. For students, teacher feedback is critical for improving learning. Is there a correlation between the two? In this session, we share specific feedback tools that can be used by content coaches and teachers to improve teaching and learning.

Antonia Cameron, Metamorphosis Teaching Learning Communities, New York, New York

Lucy West, Metamorphosis Teaching Learning Communities, New York, New York

SESSION 3109 **OCC 205**
STRAND 4 **GENERAL**

A Distance-Delivery Model for Teaching and Learning the SMP: Theory, Experience, and Practice

We will share methods used in a distance-delivered course to enhance teacher implementation of the Standards for Mathematical Practice through professional development. Using video samples of student behavior, the audience will actively participate in the analysis and reflection practices from our course.

Sandy Schoff, Anchorage School District (retired), Anchorage, Alaska

Deborah Narang, University of Alaska Anchorage, Anchorage, Alaska

SESSION 3110 **OCC 206**
STRAND 3 **SECONDARY (6–12)**

Developing the Standards for Mathematical Practice (SMP) with Special Needs and Other At–Risk Students

Developing the SMP with special needs and other at-risk students can be challenging. Learn about classroom strategies used effectively in classrooms to meet this challenge, and hear from teachers and professional development and support providers about using rich mathematical tasks with appropriate supports to develop the SMP.

James Short, Ventura County Office of Education, Camarillo, California

Vicki Vierra, California State University Channel Islands, Camarillo, California

Jennifer Silva, Moorpark High School, Moorpark, California

SESSION 3111 **OCC 207**
STRAND 4 **ELEMENTARY (K–5)**

Using Technology in Powerful Ways: Effective Technology Integration to Promote Student Growth

Many teachers have access to technology, but struggle to infuse available technology into mathematics instruction in ways that deepen student thinking and impact student growth. In this interactive session, we will share how we use educational research to model effective technology integration strategies in our development of school leaders.

Amanda Zimolzak, University of Chicago, CEMSE, Chicago, Illinois

Denise Porter, University of Chicago, CEMSE, Chicago, Illinois

Sara Buethe, Big Shoulders Fund, Chicago, Illinois

Jenna Ryan, St. Margaret of Scotland School, Chicago, Illinois

SESSION 3112 **OCC 208**
STRAND 5 **GENERAL**

Challenges in Mathematics Education: A Call to Action

In recent years, politicians, the business community, and the Council of Chief State School Officers, amongst others have impacted the mathematics education conversation. This session will look at the challenges we face in mathematics education from the CCSSM, to teacher evaluation, to testing and provide talking points and research to take back the conversation.

Eric Milou, Rowan University, Glassboro, New Jersey

8:45 AM–9:45 AM CONT...

PRESIDENTS EXCHANGE

SESSION 3113 **OCC 210/11**
STRAND 5 **GENERAL**

A Review of Research on the Integration of Mathematics and Science: Independent Subjects to STEM

Numerous models have been offered describing the integration of mathematics and science. Words such as integrated, coordinated, interdisciplinary, thematic and other terms have been used with the acronym STEM now being popular. The session will provide an overview of published research related to such integration.

Gil Naizer, School Science and Mathematics Association, Commerce, Texas

SESSION 3114 **OCC 212**
STRAND 3 **GENERAL**

Building a Social Justice Mathematics Educator Community of Practice

Join a discussion about one county's effort to build a community of social justice mathematics educators, examining the process as well as outcomes for teachers and students. Participants will look at the conditions of their site and identify an entry point for mathematics education that has equity and social justice as an explicit lens and outcome.

Celine Liu, Alameda County Office of Education, Hayward, California

James Town, Alameda County Office of Education, Hayward, California

Juwen Lam, Alameda County Office of Education, Hayward, California

SESSION 3115 **CALIFORNIA**
STRAND 5 **GENERAL**

Findings from the NCSM/AMTE Joint Task Force on Formative Assessment (FA): Two New Powerful Lenses on a Familiar Topic

Join us as we first explore the critical role that FA plays sitting quietly inside popular instructional frameworks & approaches such as Discourse, Cognitively Guided Instruction, learning progressions, etc. Next, we will consider an opportunity to use FA as a cohering thread across seemingly diverse PL efforts to deepen teacher growth over time.

Valerie L. Mills, NCSM Immediate Past-President, Ypsilanti, Michigan

Edward A. Silver, University of Michigan, Ann Arbor, Michigan

Marilyn Strutchens, Auburn University, Auburn, Alabama

Megan Burton, Auburn University, Auburn, Alabama

Wanda Audrict, Executive Director-Mathematics Programs, Stone Mountain, Georgia

SESSION 3116 **OAKLAND**
STRAND 4 **HIGH SCHOOL (9–12)**

Social Chatter That Matters–Digital Networking in Today's Mathematics Classroom

Come discuss ways to promote student interaction and dialogue through innovative technology. Learn how to implement social learning tactics to deepen understanding and support the Standards for Mathematical Practice. Leaders will come away with positive practices on engaging students in virtual collaboration and optimizing the power of mathematical conversations.

Kim Sadler, College Board, New York, New York

Eli Luberoff, Desmos, San Francisco, California

SESSION 3117 **SKYLINE**
STRAND 2 **MIDDLE (6–8)**

Gone are the Days of "Who Wants to Share?" Coaching Teachers to Select and Sequence Student Work

Using the research-based OGAP (Ongoing Assessment Project) learning progression for proportional reasoning, participants will experience intentionally selecting and sequencing student work to make a variety of effective solution strategies available to students. Through sequencing they will facilitate student movement along a learning progression.

Beth Hulbert, Barre Supervisory School District, Barre, Vermont

Mary Abele-Austin, Chittenden East Supervisory Union, Richmond, Vermont

10:00 AM–11:00 AM

MAJOR PRESENTATION

SESSION 3201 **GRAND BALLROOM EFGH**
STRAND 3 **GENERAL**

Moving Principles into Actions: Access and Equity

In *Principles to Actions*, NCTM sets forth a vision to support the goal of ensuring the mathematical success of all students. This session introduces professional learning resources designed to support teachers and other stakeholders as they strive to achieve the vision outlined in the Access and Equity Principle.

Marilyn Strutchens, Auburn University, Auburn, Alabama

Presider, **Linda Fulmore**, NCSM Position Papers Editor, Cave Creek, Arizona

Dr. Marilyn Stutchens is a Mildred Cheshire Fraley Distinguished Professor of Mathematics Education in the Department of Curriculum and Teaching at Auburn University, Auburn, Alabama where she serves as coordinator for the secondary mathematics education program. She has served as AMTE President (2011–13) and is a member of the AMTE/NCSM Joint Task Force on Formative Assessment. A major theme of her work is linking research to practice and practice to research. Her goal has been to conduct research that illuminates what happens in the classroom in order to effect positive change. All of her work shows the importance of hearing the voices of the key constituents involved in the mathematics education of students and the school, societal, and race/ethnicity factors that influence students' achievement.

SPOTLIGHT SPEAKER

SESSION 3202 **GRAND BALLROOM ABC**
STRAND 5 **INTERMEDIATE (3–5)**

Productive Lingering: Elementary Students Learn About Structure of the Operations Through Representation-Based Argument

Too often representations are passed over quickly, as if what they illustrate is obvious. What does it look like when grades 2–5 students spend focused time creating, comparing, and analyzing representations in order to understand the structure and behavior of the operations? Video examples from our research will be used to examine these questions.

Susan Jo Russell, TERC, Cambridge, Massachusetts

Presider, **Steve Viktora**, NCSM Nominations Chair, Winnetka, Illinois

SESSION 3203 **JUNIOR BALLROOM 1–2**
STRAND 5 **HIGH SCHOOL (9–12)**

NCTM's Principles to Actions Toolkit: Promoting Productive Struggle

What does productive struggle look like? How can we encourage students to be engaged when success doesn't happen instantly? We will work on a geometry task, look at a video case based on it, and then examine key steps that were used to keep students on task, discussing and moving forward with their learning. (Video and task available through NCTM.)

Fred Dillon, Ideastream/PBS, Cleveland, Ohio

Melissa Boston, Duquesne University, Pittsburgh, Pennsylvania

SESSION 3204 **JUNIOR BALLROOM 3–4**
STRAND 1 **ELEMENTARY (K–5)**

Leveraging STEM to Strengthen Mathematics Instruction

STEM organizes instruction to highlight connections across disciplines. Early STEM instruction is critically important and can be implemented differently in different contexts. We will discuss strategies for supporting STEM implementation and share examples of K–8 applications that strengthen mathematics instruction and highlight the M in STEM.

Nora Ramirez, Nora Ramirez Consulting, Tempe, Arizona

Sara Moore, ETA hand2mind, Vernon Hills, Illinois

SESSION 3205 **OCC 201**
STRAND 2 **ELEMENTARY (K–5)**

Trilingual: Supporting Teachers Whose Students are Learning Through Three Languages

English Language Learners (ELLs) juggle learning through three languages: their first language, English, and the academic language of mathematics. Come share instructional strategies and coaching points specifically designed to support teachers of ELLs during their mathematics lessons.

Molly Farrell, South Western City Schools, Columbus, Ohio

Megan Feige, South Western City Schools, Columbus, Ohio

Lori Welsh, South Western City Schools, Columbus, Ohio

10:00 AM–11:00 AM CONT...

SESSION 3206 **OCC 202**
STRAND 2 **PRIMARY (PK–2)**

It's All About the Task!

Participants will glimpse inside K–2 classrooms to see the impact that coaching cycles, mathematical tasks, small group instruction, lesson debriefs, and formative assessments have on the development of number sense and mathematical reasoning. Video clips, work samples, and interviews will be used to highlight this journey. K–2 tasks are provided.

Loria Allen, Alabama Math, Science and Technology Initiative, University of Alabama, Huntsville, Alabama

SESSION 3207 **OCC 203**
STRAND 4 **GENERAL**

Leading in the Digital Landscape Part II: Professional Learning Content Leaders and Teachers Need to Leverage Technology

Join us to preview NCSM's latest professional learning resource, the *It's TIME App*, designed to provide leaders and their teachers with the knowledge needed to utilize digital resources. We will explore the scope of the two-year development project and the first of several modules in this series: Selecting hardware & software for math classrooms.

Kelly Kutach, Texas Instruments, Dallas, Texas

Marc Garneau, District Education Centre—Ed. Services, Surrey, British Columbia, Canada

Arjan Khalsa, Conceptua Math, Petaluma, California

Valerie L. Mills, NCSM Immediate Past-President, Ypsilanti, Michigan

SESSION 3208 **OCC 204**
STRAND 1 **SECONDARY (6–12)**

Growing Mathematics Leaders: Building Capacity in a Time of Change

The current era of education reform demands that we develop high-quality, effective leaders (It's Time, 2014). In this engaging session, participants will investigate innovative ways to build leadership capacity. Participants will gain access to professional development resources designed to improve mathematics instruction and leadership.

Jenny Novak, Howard County Public School System, Ellicott City, Maryland

SESSION 3209 **OCC 205**
STRAND 4 **SECONDARY (6–12)**

Supporting Teachers in Bridging Levels of Classroom Mathematical Discourse Using Digital Technologies

This session addresses how digital technologies can support teachers in implementing higher levels of mathematical discourse in the classroom. Participants will examine student work, video, and tools to identify opportunities for strengthening classroom mathematical discourse in learning environments that leverage different digital technologies.

Alden Edson, Michigan State University, East Lansing, Michigan

Amanda Thomas, Penn State Harrisburg, Middletown, Pennsylvania

SESSION 3210 **OCC 206**
STRAND 2 **GENERAL**

The Expanding Endeavor to EQuIP Educators: The Latest Updates, Opportunities, and Resources

EQuIP (Educators Evaluating the Quality of Instructional Products) is an initiative to identify high-quality materials aligned to the CCSSM and to help educators evaluate and improve materials. In this interactive session we will provide an overview and outline the growing library of free resources for classroom and training use.

Ted Coe, Achieve, Washington, DC

SESSION 3211 **OCC 207**
STRAND 2 **MIDDLE (6–8)**

Coaching Through PLCs: Focusing on Teacher Talk About Data to Strengthen Discussions and Design Targeted Interventions

This session is for coaches and teacher leaders who work with Professional Learning Communities (PLCs) and want to strengthen data discussions. Participants will engage in activities using a coaching tool that focuses on improving teacher talk about student work in order to identify students' understandings and misconceptions and design targeted interventions.

Crystal Lancour, Colonial School District, New Castle, Delaware

Jennifer Bonham, Colonial School District, New Castle, Delaware

10:00 AM–11:00 AM CONT...

SESSION 3212 **OCC 208**
STRAND 4 **HIGH SCHOOL (9–12)**

Using Robots to Teach Mathematics

Using robots to teach mathematics can help engage students in learning the content and brings a "wow" factor to class. Come to this workshop to see how Manor ISD in Manor, Texas is using robots in classes and experience some learning opportunities as well. Participants will learn how Manor ISD rolled out the use of these robots in mathematics classrooms.

David Surdovel, Manor Independent School District, Manor, Texas

SESSION 3213 **OCC 210/11**
STRAND 4 **GENERAL**

How to Empower Productive Engagement in the Digital Age: Cultivating Deep Understanding and Critical Mathematical Practices

Join the conversation with an insightful panel as we discuss levels of productive engagement with students. The growth of consumer technology has changed student expectations for excitement in mathematics classrooms and with mathematical learning technologies. Learn about digital age strategies and tools that help leaders and teachers deepen student understanding.

Tim Hudson, DreamBox Learning, Bellevue, Washington

Francis (Skip) Fennell, McDaniel College, Westminster, Maryland

Michelle Herlth, San Jose Unified School District, San Jose, California

Laila Nur, Manual Arts Senior High School, Los Angeles, California

John SanGiovanni, Howard County Public School System, Ellicott City, Maryland

SESSION 3214 **OCC 212**
STRAND 5 **SECONDARY (6–12)**

Supporting Secondary Teachers' Conceptions of Mathematical Modeling

We discuss challenges in teaching mathematical modeling and present research-based strategies for supporting teachers to navigate this new and unfamiliar terrain. Through our collaboration with teachers, we offer resources for helping teachers become better modelers and for supporting students in becoming successful modelers.

Michelle Cirillo, University of Delaware, Newark, Delaware

John Pelesko, University of Delaware, Newark, Delaware

SESSION 3215 **CALIFORNIA**
STRAND 3 **GENERAL**

What do Students Say About Equity in the Mathematics Classroom?

In this session, participants will explore strategies for empowering student voice as a catalyst for continuous improvement for a school or district mathematics program. Participants will hear how students describe their experiences in and around the mathematics classroom and regarding issues of equity and cultural proficiency.

Bill Barnes, Howard County Public School System, Ellicott City, Maryland

Jon Wray, Howard County Public School System, Ellicott City, Maryland

SESSION 3216 **OAKLAND**
STRAND 1 **GENERAL**

Learning, Planning, and Teaching Together: Designing Job-Embedded Professional Development

Come discover TEDD.org, an online resource for designing job-embedded professional development. This website offers mathematically rich instructional activities for K–12 students that groups of teachers can try out together. Explore how collaborating around these activities can support professional learning and transform how teachers work together.

Kendra Lomax, University of Washington, Seattle, Washington

Becca Lewis, University of Washington, Seattle, Washington

SESSION 3217 **SKYLINE**
STRAND 1 **SECONDARY (6–12)**

A Reflective Learner Journey from Slide Rule to iPad

Has this been a journey of 180 or 360 degrees? This session will stress the key steps needed to be a reflective learner woven in their stories of 70 years of helping people at thinking mathematically. There will be self and group reflection on: Asking, Listening, Learning. Formative Assessment as a driving force of change will modeled.

Michael Gould, Math Solutions, Sausalito, California

Lisa Bush, Math Solutions, Sausalito, California

11:15 AM–12:15 PM

MAJOR PRESENTATION

SESSION 3301 **GRAND BALLROOM EFGH**
STRAND 3 **GENERAL**

Understanding Identity and Agency in Mathematics Teaching and Learning: Working with Teachers to Cultivate Equity-Based Classroom Practices

This presentation will focus on conceptual tools and equity-oriented practices that support powerful mathematics learning. Key concepts include mathematical identity and mathematical agency. Practices will include: (1) rethinking the identities that we often assign students, (2) designing rigorous mathematics instruction, (3) critically reflecting on the identities that teachers themselves bring to teaching, and (4) partnering with families and communities to promote mathematics learning.

Karen Mayfield-Ingram, Lawrence Hall of Science, University of California, Berkeley, California

Danny Martin, University of Illinois, Chicago, Illinois

Julie Aguirre, University of Washington, Tacoma, Washington

Presider, **Marc Garneau**, NCSM Canadian Regional Director, Surrey, British Columbia, Canada

Dr. Karen Mayfield-Ingram is Associate Director of EQUALS at the Lawrence Hall of Science at the University of California, Berkeley. She is co-editor of the EQUALS Middle School Investigations series and co-author of the FAMILY MATH: The Middle School Years book. She serves as Project Director of the Mathematics Professional Development Institutes (MPDI) funded through the University of California Office of the President.

Dr. Danny Martin is professor of education and mathematics at the University of Illinois at Chicago. His research focuses on understanding the salience of race and identity in black children's mathematical experiences.

Dr. Julie Aguirre is assistant professor of education at the University of Washington-Tacoma. Her work focuses on mathematics teaching and learning, teacher education, and culturally responsive mathematics pedagogy, with a primary goal of strengthening access and advancement in mathematics education for historically marginalized youth.

SPOTLIGHT SPEAKER

SESSION 3302 **GRAND BALLROOM ABC**
STRAND 1 **GENERAL**

How to Create a Mathematics Teacher Specialist Network

We have developed a thriving network of over 140 mathematics teacher specialists from five counties that regularly meets to collaborate and save time by pulling the best ideas from the group. Members state that it is the best ongoing professional development they receive. Learn how to grow one in your area and avoid potential implementation issues.

Robert Kaplinsky, Downey Unified School District, Downey, California

Presider, **Comfort Akwaji-Anderson**, NCSM C2 Regional Director, Iowa City, Iowa

SESSION 3303 **JUNIOR BALLROOM 1–2**
STRAND 5 **PRIMARY (PK–2)**

Teaching Mathematics with Intent: The Power of Intentional Instruction Strategies in Early Mathematics Classrooms

This presentation will demonstrate ways in which supervisors can take a leadership role in working with early level mathematics teachers to develop and implement intentional teaching strategies. Teachers must use their judgment, knowledge, and experience to create learning opportunities that will achieve specific outcomes and goals for their students.

Stuart Murphy, Author, Boston, Massachusetts

SESSION 3304 **JUNIOR BALLROOM 3–4**
STRAND 3 **ELEMENTARY (K–5)**

Early Mathematics Intervention: Catching Up Sooner is Better

Not all students start mathematics with the same innate capacities or environmental experiences. Inequities start early, and gaps expand over time. This session will highlight how to identify critical knowledge and skill gaps in the elementary years, along with ways to build the mathematical reasoning and confidence all students need for long-term success.

David Dockterman, Harvard/Faculty; Houghton Mifflin Harcourt/Chief Architect, Learning Sciences, Boston, Massachusetts

11:15 AM–12:15 PM CONT...

SESSION 3305 **OCC 201**
STRAND 5 **MIDDLE (6–8)**

What do They Need? Supporting Middle School Teachers' Professional Development (PD) Needs for Implementing the Common Core

What PD experiences do teachers need to support their implementation of the CCSSM? We will report on a nation-wide, four-year study of teachers' perceptions of the CCSSM and their PD experiences. We will engage the audience in reflecting on the reported PD experiences and implications for the development of future PD opportunities.

Cynthia Carson, Warner School of Education, Rochester, New York

Joanne Philhower, Michigan State University, East Lansing, Michigan

Amy Ray, Michigan State University, East Lansing, Michigan

SESSION 3306 **OCC 202**
STRAND 4 **MIDDLE (6–8)**

Empowering Teachers to Teach Modeling with Technology

Modeling is an essential outcome and a requirement of the CCSSM (MP.4), yet we rarely engage students appropriately or train teachers effectively. Using models that include turning a book into a movie and recharging a phone, we'll examine strategies for coaching teachers to use modeling tasks and technology as a regular part of instruction.

Patrick Vennebush, Discovery Education, Silver Spring, Maryland

SESSION 3307 **OCC 203**
STRAND 2 **GENERAL**

Virtual Lesson Studies: Expanding the Reach of Coaching

Imagine teachers could watch the lesson they are going to teach, before they teach it. In a virtual lesson study around an Illustrative Math task, a diverse group of educators did just that. Through design, facilitation, observation, and revision, participants engage in the lesson study process and leave with a vision for supporting implementation.

Jody Guarino, Orange County Department of Education, Costa Mesa, California

Jennie Beltramini, Anacortes School District, Anacortes, Washington

Shelbi K. Cole, Smarter Balanced at UCLA, Los Angeles, California

Alicia Farmer, Anacortes School District, Anacortes, Washington

Kristin Gray, Cape Henlopen School District, Lewes, Delaware

Chepina Rumsey, Kansas State University, Manhattan, Kansas

SESSION 3308 **OCC 204**
STRAND 2 **ELEMENTARY (K–5)**

Creating a Language-Rich Mathematics Class

A language-rich mathematics class is an exciting place. Students are describing their thinking, defending their answers, and discussing mathematical ideas. Join us in this interactive session as we examine techniques for supporting teachers in creating a language-rich environment.

Sandy Atkins, Creating AHAs, St. Petersburg, Florida

SESSION 3309 **OCC 205**
STRAND 4 **SECONDARY (6–12)**

Transformational Geometry—Immediate Interactive Investigations—Engaging Activities iPad, Handheld, Computer Software

Students and teachers discover the geometry in 15 seconds! Get hands-on experience: play, investigate, explore, and discover geometric properties. Students will become engaged and interested—quickly and deeply. Obtain a complete unit of materials and see how to implement the activities. Compass, technology, reasoning, and pedagogy are integrated to encourage success.

Tom Reardon, Youngstown State University, Youngstown, Ohio

SESSION 3310 **OCC 206**
STRAND 2 **SECONDARY (6–12)**

Implementing *Principles to Actions:* Facilitating Meaningful Mathematical Discourse

Not all discussions are productive. What should classroom conversations look and sound like to make mathematical reasoning and sense making central? How can teachers establish norms for mathematical talk? What is the role of interactive dynamic technology? Strategies are offered for shaping discussions to help teachers maximize learning experiences for their students.

Gail Burrill, Michigan State University, East Lansing, Michigan

SESSION 3311 **OCC 207**
STRAND 2 **INTERMEDIATE (3–5)**

Designing High-Quality Professional Learning on Fractions: Rethinking the Meaning of the Numerator and Denominator

Participants will be guided through a framework for creating high-quality professional learning experiences as they consider how the meaning of the numerator and denominator can change when fractions are interpreted in different ways.

Debi DePaul, ORIGO Education, St. Charles, Missouri

11:15 AM–12:15 PM CONT...

SESSION 3312 **OCC 208**
STRAND 1 **GENERAL**

Leadership to Bridge Learning for SPED, ELL, and All Students Who May Struggle with the CCSSM

Participants will experience rigorous mathematics proven to work with special education students. Learn how you can lead others to adapt CCSSM lessons to support students with cognitive challenges. Focus will be on the work of mathematics leaders to provide support for equitable learning by ALL students at both elementary and secondary levels.

Dianne DeMille, Dianne's Consultant Services, Anaheim, California

Sherry Lane, Quitman School District, Quitman, Arkansas

Jennifer Munoz, Redlands Unified School District, Redlands, California

SESSION 3313 **OCC 210/11**
STRAND 1 **GENERAL**

What is the Evidence Telling us About Student Discourse?

Using a number of evidence gathering tools gives a more complete picture of what is happening with student learning through discourse. The San Francisco Unified School District will share how we are measuring this through video in comparison to student small measure surveys and teacher interviews, and how teacher and district leaders are using this to design professional development.

Emma Trevino, San Francisco Unified School District, San Francisco, California

Angela Torres, San Francisco Unified School District, San Francisco, California

Kathy Bradley, San Francisco Unified School District, San Francisco, California

Glenn Kenyon, San Francisco Unified School District, San Francisco, California

SESSION 3314 **OCC 212**
STRAND 3 **GENERAL**

The Mathematics Classroom as a Forum to Discuss Historical Events and Connect with Current Social Justice Issues

This session presents the Mendez vs. Westminster case (a precursor of Brown) that led to school desegregation in California in 1947. Analysis of data and graphs and the mathematical ideas in the construction of a timeline of events will help make connections between this case and the current state of the education of minority students.

Susana Davidenko, State University of New York at Cortland, Cortland, New York

SESSION 3315 **CALIFORNIA**
STRAND 1 **HIGH SCHOOL (9–12)**

All Hands on Deck: System Level Leadership in Support of Response to Intervention (RtI)

While there is no shortage of behavioral interventions, few have tackled the need for academic interventions in support of multi-tiered systems of support (MTSS). This presentation shares the work of Adlai E. Stevenson High School and the ongoing cycle of continuous improvement in support of the district's mission toward "Success for Every Student".

Darshan Jain, Adlai E. Stevenson High School, Lincolnshire, Illinois

Valerie Tomkiel, Adlai E. Stevenson High School, Lincolnshire, Illinois

SESSION 3316 **OAKLAND**
STRAND 4 **ELEMENTARY (K–5)**

Using NCSM's Great Tasks in the Digital Age

The Great Tasks provide rich problems to engage students in meaningful mathematics aligned to the CCSSM. Illustrated with classroom examples and examples of innovative technologies, this session will explore how technology supports the Great Tasks in ways that engage and motivate the learner and promote conceptual understanding.

Connie Schrock, Emporia State University, Emporia, Kansas

Richard Seitz, Helena High School, Helena, Montana

David Pugalee, University of North Carolina at Charlotte, Center for Science, Technology, Engineering, and Mathematics (STEM) Education, Charlotte, North Carolina

Kit Norris, Consultant, Southborough, Massachusetts

SESSION 3317 **SKYLINE**
STRAND 2 **GENERAL**

Supporting Teachers in Effective Planning and Teaching of CCSSM Aligned Lessons

Review and reflect on strong mathematical instructional practices using free tools that help coaches support teachers in the planning and teaching of CCSSM-aligned lessons. Explore an extensive video library of mathematics lessons, a lesson planning tool, and professional development modules that together give supervisors of mathematics the tools they need.

Barbara Beske, Student Achievement Partners, New York, New York

Joanie Funderburk, Student Achievement Partners, New York, New York

WEDNESDAY LUNCHEON

12:30 PM–2:00 PM

SESSION 3418
STRAND 1

TICKET REQUIRED

EXHIBIT HALL WEST
GENERAL

From Success to Significance: Strategies for Inspiring Teachers, Supporting Innovation, and Enhancing Your Mathematics Program

This energizing session will inspire mathematics leaders with new ways to think about curriculum, assessment, differentiation, and technology. Learn frameworks for creating experiences that authentically engage students in mathematics practices, understanding the meaning of personalized and blended learning, and considering the implications of digital pedagogy.

Dr. Tim Hudson, Vice President of Learning, DreamBox Learning

Sponsored in part by

dreambox LEARNING

2:15 PM–3:15 PM

MAJOR PRESENTATION

SESSION 3501 **GRAND BALLROOM EFGH**
STRAND 1 **ELEMENTARY (K–5)**

Helping Develop Leaders Through Sharing Lessons I've Learned from Classroom Teaching

In this session, I plan to present how I draw on what I've learned from teaching students and supporting teachers to contribute to developing prospective mathematics leaders. The session will focus on content of the curriculum, understanding how students learn, organizing the classroom to maximize learning, and making assessment integral to instruction.

Marilyn Burns, Math Solutions, Sausalito, California

Presider, **Beverly K. Kimes**, NCSM 1st Vice President and Program Chair, Birmingham, Alabama

Marilyn Burns is one of today's most highly respected mathematics educators. Over the course of more than 50 years, Marilyn has taught children, led in-service sessions, spoken at conferences, contributed to professional journals, written more than a dozen books for children, and created more than 20 professional development resources for teachers and administrators.

SPOTLIGHT SPEAKER

SESSION 3502 **GRAND BALLROOM ABC**
STRAND 5 **ELEMENTARY (K–5)**

Noticing Structure, Attending to Precision: Grades 2–5 Students Articulate Generalizations About the Operations

When students can explore regularity across sets of problems and collaborate to find language that best expresses their ideas, they have opportunity to deepen their understanding of operations that often falls away in the rush to learn to calculate. Print and video examples from classrooms engaged in this process will be discussed.

Deborah Schifter, Education Development Center, Waltham, Massachusetts

Presider, **Patricia Baltzley**, NCSM Leadership Academy and Fall Seminar Director, Gardiner, Montana

SESSION 3503 **JUNIOR BALLROOM 1–2**
STRAND 1 **SECONDARY (6–12)**

What's Hard for Teachers About the Standards for Mathematical Practice (SMP)?

Learn about aspects of the SMP that teachers find challenging and ways to support teacher learning about the SMP. Findings and resources will be shared from an NSF-funded project developing professional development (PD) materials, tested in 20 districts across the country. You will experience and discuss these PD materials.

June Mark, Education Development Center, Waltham, Massachusetts

Deborah Spencer, Education Development Center, Waltham, Massachusetts

Cathy Martin, Denver Public Schools, Denver, Colorado

Johannah Nikula, Education Development Center, Waltham, Massachusetts

SESSION 3504 **JUNIOR BALLROOM 3–4**
STRAND 4 **HIGH SCHOOL (9–12)**

Using Exemplar Teaching Videos in Algebra Professional Development

We will discuss a professional development model where teachers analyze exemplar video of teachers and students during a purposeful sequence of multiple-entry Algebra tasks. The study of these videos facilitates a deep understanding of the mathematics content, student strategies, and high-leverage teacher moves.

Pamela Harris, The University of Texas, Austin, Texas

SESSION 3505 **OCC 201**
STRAND 4 **MIDDLE (6–8)**

How Do We Focus on Thinking, Rather than Thoughts?

Developing mathematical practices may be as important as learning content, but classrooms are largely organized to focus on thoughts, rather than thinking. We will draw on the work of the Math Forum in the Virtual Math Teams project and online problem solving to explore organizing classrooms for a focus on thinking and mathematical practices.

Stephen Weimar, The Math Forum, National Council of Teachers of Mathematics, Swarthmore, Pennsylvania

2:15 PM–3:15 PM CONT...

SESSION 3506 **OCC 202**
STRAND 2 **SECONDARY (6–12)**

Decomposing the Daily Practice of Formative Assessment: A Framework for Mathematics Teachers and Instructional Leaders

This session engages participants in formative assessment resources intended to support teachers in anticipating student strategies and solutions, gathering and analyzing evidence, and adapting instruction. To unpack the complexities of daily formative assessment, we will discuss and reflect on videos of problem-based classrooms.

Amy Ray, Michigan State University, East Lansing, Michigan

Yvonne Grant, Portland Middle School, Portland, Michigan

Elizabeth Phillips, Michigan State University, East Lansing, Michigan

Alden Edson, Michigan State University, East Lansing, Michigan

SESSION 3507 **OCC 203**
STRAND 5 **HIGH SCHOOL (9–12)**

From the Classroom to Assessment and Back Again

Presenters describe how classroom observations informed the construction of an assessment of secondary teachers' algebraic habits of mind and use of the Standards for Mathematical Practice. The assessment is designed for research use and to inform professional development (PD) for teachers. Participants discuss sample items, teacher response data, and how data can inform PD.

Ryota Matsuura, St. Olaf College, Northfield, Minnesota

Sarah Sword, Education Development Center, Inc., Waltham, Massachusetts

Miriam Gates, Education Development Center, Inc., Waltham, Massachusetts

Al Cuoco, Education Development Center, Inc., Waltham, Massachusetts

Glenn Stevens, Boston University, Boston, Massachusetts

SESSION 3508 **OCC 204**
STRAND 1 **GENERAL**

Three Keys to Choosing and Using Instructional Materials to Improve Students' Success

With more than a million materials on the market, educators have too little time to separate the wheat from the chaff. Learn three key strategies for selecting mathematics materials more efficiently and effectively. Participants will leave empowered to make informed choices about which materials will best support teaching and learning of the CCSSM.

Jackie Lain, Independent Instructional Materials Review Service, Austin, Texas

SESSION 3509 **OCC 205**
STRAND 4 **GENERAL**

Creating Digital Conduits for Innovative Mathematics Leadership and Learning

Ready to explore available digital tools? Gain ideas about using technology as a powerful conduit to stream, share, and encourage collaboration, planning, as well as communication connections between teachers and learners of mathematics. Join this interactive session providing examples and results from experiences in professional development and the classroom.

Mary Swarthout, Sam Houston State University, Huntsville, Texas

Susan Bohan, Region 6 Education Service Center, Huntsville, Texas

SESSION 3510 **OCC 206**
STRAND 2 **ELEMENTARY (K–5)**

Resources That Support Successful Coaching

Participants are invited to engage in state resources that one Illinois school district implemented to build capacity and develop mathematics leaders in their 20 schools. Gain information on the researched-based resources from the Illinois State Board of Education that were shared during the schools' professional learning communities.

Sharon Rak, Roosevelt University and ISBE Math Consultant, Chicago, Illinois

Dana Cartier, Illinois State Board of Education, Normal, Illinois

Jan Taylor, Joliet Public Schools District 86, Joliet, Illinois

SESSION 3511 **OCC 207**
STRAND 2 **INTERMEDIATE (3–5)**

The Power of Context—Solving Real World Problems Is the Entry, Not the Exit, to Mathematics

Instructional coaches share how they shifted teachers' perception of contextual word problems as the end goal of mathematics instruction to the starting place. Participants will learn how to support teachers in using the Standards for Mathematical Practice as their road map for using real world problems to support all students in developing mathematical understanding.

Janeal Maxfield, North Thurston Public Schools, Lacey, Washington

Cristina Charney, North Thurston Public Schools, Lacey, Washington

2:15 PM–3:15 PM CONT...

SESSION 3512 **OCC 208**
STRAND 1 **MIDDLE (6–8)**

Ours IS the Reason Why! STOP Invert and Multiply!

We need to stop teaching students only to invert and multiply when dividing fractions. But what do we teach in its place? Come discuss professional learning to help teachers develop pedagogical content knowledge related to division of fractions and think about strategies to extend and sustain teacher learning.

Jason Gauthier, Allegan Area Educational Service Agency, Allegan, Michigan

SESSION 3513 **OCC 210/11**
STRAND 1 **GENERAL**

Maintaining the Momentum Toward Full Implementation of the CCSSM–A Principal's Perspective

The CCSSM has been out since 2010, but the high stakes assessment is still in flux. Curriculum is still in question in many districts. Come join the discussion on how, as leaders, we can continue to move a staff forward in these times of change. Tips and strategies will be shared by two former site principals.

Stephanie Verners, Tulare County Office of Education, Visalia, California

Lori Hamada, AIMS Center for Math & Science Education, Director, Fresno, California

Wendy Hernandez, Central Unified School District, Fresno, California

SESSION 3514 **OCC 212**
STRAND 1 **ELEMENTARY (K–5)**

Finally! Giving Students a Voice in Mathematics Classrooms

How can a student observation form, with calibrated observers, help us identify and increase quality student-to-student discourse? Representatives from a 10-district CCSSM implementation collaborative will share how they are answering this question by building site capacity to consistently collect and use evidence of academic discourse.

Nick Resnick, California Education Partners, San Francisco, California

Emma Druitt, Garden Grove Unified School District, Garden Grove, California

Mikila Fetzer, Sacramento City Unified School District, Sacramento, California

Dianne Wilson, Elk Grove Unified School District, Elk Grove, California

SESSION 3515 **CALIFORNIA**
STRAND 2 **SECONDARY (6–12)**

A Mathematical Coaching Package

Your teachers need more than a mathematics coach; they need a mathematical-coaching program. Learn the comprehensive plan that one district is implementing to deliver to their mathematics teachers the three giant needs: time, resources, and training.

Chris Shore, Temecula Valley Unified School District, Temecula, California

Donna Lione, Temecula Valley Unified School District, Temecula, California

Rebecca Scarfone, Temecula Valley Unified School District, Temecula, California

SESSION 3516 **OAKLAND**
STRAND 5 **ELEMENTARY (K–5)**

Structure Versus Pedagogy: The Impact of a Flipped Classroom Model of Instruction on Elementary Mathematics Students

This presentation highlights the research findings from a study on 112 fifth grade mathematics students and their teachers experiencing mathematics in a flipped classroom model. Quantitative and qualitative findings focused on teacher pedagogy, student conceptual understandings of rational numbers, and issues of equity observed in this study will be discussed.

Bethann Wiley, Winona State University, Winona, Minnesota

SESSION 3517 **SKYLINE**
STRAND 2 **MIDDLE (6–8)**

Collaborative Coaching Across Diverse Contexts: Professional Learning for Teachers of English Language Learners

We have a collaborative coaching model which we implement across diverse contexts educating English Language Learners. We present within-school, whole-district, and cross-school models of collaborative coaching, highlighting the common cycle of planning, observing, and debriefing. We analyze the coach's role in facilitating teacher learning.

Haiwen Chu, WestEd, San Francisco, California

Leslie Hamburger, WestEd, San Francisco, California

3:30 PM–4:30 PM

MAJOR PRESENTATION

SESSION 3601 **GRAND BALLROOM EFGH**
STRAND 4 **GENERAL**

Irresistible Learning

What is it about learning that makes it irresistible? The New York Hall of Science (NYSCI) has a 50-year history of exploring connections between children's inherent curiosity and the creative scientific enterprise. How does a physical space with a strong philosophy of learning expand beyond its own walls and serve and inspire educators everywhere? NYSCI is committed to making learning irresistible by taking its DESIGN-MAKE-PLAY approach into schools around the world. NYSCI's president Margaret Honey—author of Design-Make-Play: Growing the Next Generation of STEM Innovators—will share with you how and why this can apply to the work you do with students in mathematics and other disciplines.

Margaret Honey, New York Hall of Science, Queens, New York

Presider, **Maria Everett**, NCSM Secretary, Towson, Maryland

Dr. Margaret Honey joined the New York Hall of Science (NYSCI) as President and CEO in November of 2008. Under her leadership, NYSCI has adopted Design-Make-Play as its signature strategy to promote STEM engagement and learning. The defining characteristics of this sensibility—deep involvement with content, experimentation, exploration, problem-solving, collaboration and curiosity—are the very ingredients that develop inspired and passionate STEM learners. Dr. Honey also serves a member of the National Science Foundation's Education and Human Resources Advisory Committee and is on the educational advisory board at NASA.

SPOTLIGHT SPEAKER

SESSION 3602 **GRAND BALLROOM ABC**
STRAND 1 **ELEMENTARY (K–5)**

Create a Math-a-Rama Experience: A Low-Cost, Low-Stress Process for Introducing Classroom Teachers to Teacher Leadership

Based on 25 years of professional development focused on supporting leaders in the classroom, we have designed a process for encouraging classroom teachers' development of leadership skills, allowing them to contribute to their professional field while staying in the classroom where they can still have a direct, positive impact on students.

Janie Schielack, Texas A&M University, College Station, Texas

Dinah Chancellor, D R Chancellor, Inc., Southlake, Texas

Kathy Riley, Fort Bend Independent School District, Sugar Land, Texas

Cindy Hart, Deer Park Independent School District, Deer Park, Texas

Presider, **Cynthia L. Schneider**, NCSM Conference Coordinator, Austin, Texas

SESSION 3603 **JUNIOR BALLROOM 1–2**
STRAND 1 **GENERAL**

Ignite! We'll Enlighten You and We'll Make It Quick

Join us for fast, informative, and fun talks where mathematics educators light up the room with fresh ideas in mathematics teaching and edit learning. Each speaker gets five minutes to talk about whatever ignites their passion, using 20 slides that auto -advance every 15 seconds, whether they are ready or not. Here are this year's speakers: Comfort Akwaji-Anderson, Graham Fletcher, April Goodman-Orcutt, Kristin Gray, Erin Igo, Arjan Khalsa, Amy Lucenta, José Vilson (presenting virtually), Dan Zaharopol, and Jason Zimba, with John Staley presiding.

Suzanne Alejandre, The Math Forum, National Council of Teachers of Mathematics, Swarthmore, Pennsylvania

SESSION 3604 **JUNIOR BALLROOM 3–4**
STRAND 1 **GENERAL**

Practical Suggestions for Recasting our Homework Policies and Practices

Little in life is a greater waste of time than doing and going over mathematics homework. This session will review typical practices, available research, and propose a set of changes that result in far more impactful homework policies and practices.

Steve Leinwand, American Institutes for Research, Washington, DC

3:30 PM–4:30 PM CONT...

SESSION 3605 **OCC 201**
STRAND 2 **ELEMENTARY (K–5)**

Coaching with Number Strings: Deepening Teachers' Mathematics and Pedagogy

Number strings are a daily computational routine (Fosnot & Dolk, 2002) in which the teacher poses a carefully crafted set of computational problems and represents student thinking using mathematical models. This session will explore using number strings to support teachers' growth while using contexts and models to leverage student thinking.

Jennifer DiBrienza, Stanford University, Stanford, California

Rachel Lambert, Chapman University, Orange, California

Kara Imm, Math in the City, New York, New York

SESSION 3606 **OCC 202**
STRAND 2 **ELEMENTARY (K–5)**

Coaching Teachers Through Focusing on Student Thinking

What do effective coaching conversations sound like? In this session we discuss how mathematics coaches can use student learning progressions in their coaching conversations with teachers. These conversations can support teachers to consider how to focus on and extend students' current ideas to advance understanding and sense making (NCTM, 2014).

Lynsey Gibbons, Boston University, Boston, Massachusetts

Teresa Lind, Renton School District, Renton, Washington

SESSION 3607 **OCC 203**
STRAND 1 **GENERAL**

Using Constructive Feedback to Develop Leadership Teams

How do you create leadership loops that actually support changes in the teaching and learning of mathematics? In this presentation we will examine one principal's journey to create a leadership team at her school. We will share video of our collaboration and highlight specific tools and structures for improving mathematics teaching and learning.

Antonia Cameron, Metamorphosis Teaching Learning Communities, New York, New York

Donna Taylor, Brooklyn School of Inquiry, New York, New York

SESSION 3608 **OCC 204**
STRAND 2 **SECONDARY (6–12)**

Designing Effective Collaborations Around Learning (DECAL): How One Small Change Improved Student Learning

This session will support leaders in using a content-focused coaching cycle and follow-up video analysis to promote the emergence of teacher voice. In our session, an emerging teacher leader will share his classroom "before and after" videos to demonstrate how this coaching process helped him to succeed in promoting powerful classroom discourse.

Valerie Maxwell, Delaware K–12 Mathematics Partnership, Dover, Delaware

Jamila Riser, Delaware Mathematics Coalition, Dover, Delaware

Thomas Becker, MOT Charter School, Middletown, Delaware

SESSION 3610 **OCC 206**
STRAND 1 **GENERAL**

A Blueprint to Build a Solid Foundation

Teachers are thirsty for more information about mathematical content and pedagogical content knowledge tied to the standards. We will share how a large urban district supported teacher needs by offering "clinics" at all grade levels. You will leave with a list of resources to guide development and our blueprint for starting your own Common Core Clinics.

Debbie Thompson, Wichita Public Schools, Wichita, Kansas

Sarah Stevens, Wichita Public Schools, Wichita, Kansas

Elizabeth Peyser, Wichita Public Schools, Wichita, Kansas

Lynette Sharlow, Wichita Public Schools, Wichita, Kansas

Toni Osterbuhr, Wichita Public Schools, Wichita, Kansas

3:30 PM–4:30 PM CONT...

SESSION 3612 **OCC 208**
STRAND 5 **ELEMENTARY (K–5)**

Concluding Mathematics Discussion: What Do Novice Teachers Do and How Can We Support All Teachers' Practice?

Class discussions can support student learning of complex mathematics, but leading discussions is challenging for new teachers. We will focus on the often overlooked but crucial work of concluding discussions through (a) examining records of novices' practice and (b) considering ways to support novices to more productively conclude discussions.

Sarah Kate Selling, University of Michigan, Ann Arbor, Michigan

Meghan Shaughnessy, University of Michigan, Ann Arbor, Michigan

Nicole Garcia, University of Michigan, Ann Arbor, Michigan

Michaela O'Neill, University of Michigan, Ann Arbor, Michigan

SESSION 3613 **OCC 210/11**
STRAND 2 **MIDDLE (6–8)**

Helping Your Teachers Prepare Students for Algebra in Middle School: Filling in the Gaps

More eighth graders take Algebra than any other mathematics class, but skipping curriculum to do so leaves gaps. Learn how to help teachers implement research-based and CCSSM-aligned strategies and investigations that provide a coherent, comprehensive development of algebraic thinking. Coaching techniques including a free observation app will be shared.

Katherine Gavin, University of Connecticut, Storrs, Connecticut

Linda Sheffield, Northern Kentucky University, Highland Heights, Kentucky

SESSION 3614 **OCC 212**
STRAND 4 **HIGH SCHOOL (9–12)**

Increasing Coherence in High School Mathematics

The traditional 9–12 mathematics curriculum is badly fragmented. An integrated approach can help, but not if it merely slices up the courses and mixes up the pieces. What's needed are unifying big ideas. I'll focus on transformations and system extension as examples of these, and mention others. The presentation has an interactive component.

Lew Douglas, Mathematics Education Consultant, Oakland, California

SESSION 3616 **OAKLAND**
STRAND 3 **INTERMEDIATE (3–5)**

Who is Mathematics Talk Good For?

The Standards for Mathematical Practice require all students to make sense of problems, reason abstractly and quantitatively, and construct viable arguments and critique the reasoning of others. Mathematics leaders and coaches of students of color will learn how to engage their students in productive discourse to assess their learning.

Le Vada Gray, Math Solutions, Sausalito, California

Genni Steele, Math Solutions, Sausalito, California

NOTES

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mathlearningcenter.org/**intervention**

JOHNS HOPKINS UNIVERSITY CONFIRMS

Worthington School District success with new curriculum

Johns Hopkins University evaluated the impact of *ORIGO Stepping Stones* on student achievement outcomes in the Ohio school district of Worthington for the 2013–2014 school year. The district utilized *ORIGO Stepping Stones* as the main method of daily elementary math instruction during the 2013–2014 school year in all 11 of its schools.

The mixed–methods evaluation design involved classroom observations, an online teacher survey, principal interviews, and student achievement scores on the Northwest Evaluation Association Measurement of Academic Progress and Measurement of Academic Progress for Primary Grades Assessments (NWEA MAP and MAP/MPG). The study measured the impact on student achievement of students using *Stepping Stones* compared to students who did not use the program, analyzing results of the NWEA Measure of Academic Progress exam.

read more at **bit.ly/PB_16**

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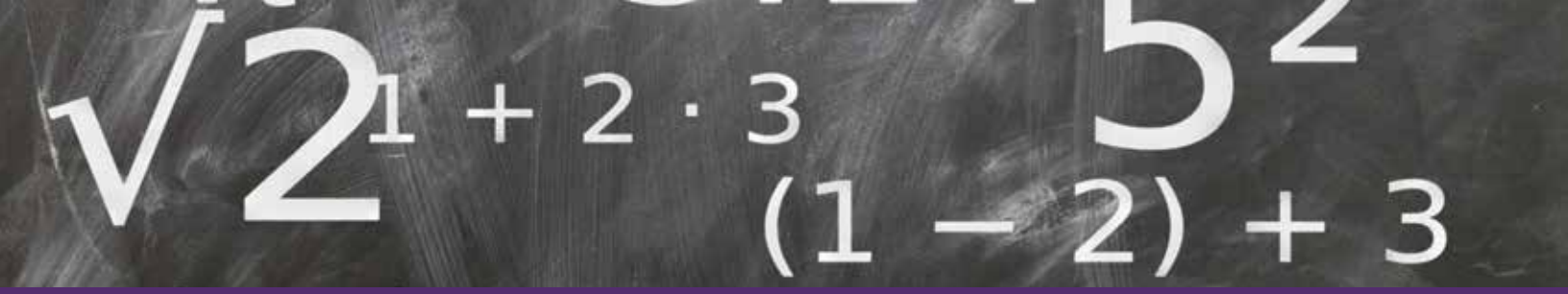

Mathematics Leadership in a Time of Change: Building Leaders at all Levels

LEADERSHIP IN MATHEMATICS EDUCATION

NCSM

NETWORK
COMMUNICATE
SUPPORT
MOTIVATE

NCSM is striving to provide year-long professional learning opportunities that follow the theme of Mathematics Leadership in a Time of Change: Building Leaders at all Levels utilizing It's Time and PRIME resources. Please join us for one or more events!

SUMMER LEADERSHIP ACADEMY	What: Summer Leadership Academy Where: Adlai Stevenson High School, Lincolnshire, IL When: July 18-20, 2016	
FALL SEMINARS	What: Phoenix Fall Seminar Where: Phoenix, AZ When: October 25, 2016	What: St. Louis Fall Seminar Where: St. Louis, MO When: November 16, 2016
WINTER LEADERSHIP ACADEMY (NEW)	What: Winter Leadership Academy Where: Atlanta, GA When: December 2-4, 2016	

The Summer Academy is about the Curriculum Leadership Principle; the Fall Seminars will expand on Curriculum Leadership; and the NEW Winter Academy will take on the Teaching and Learning Leadership Principle. Threaded throughout all professional learning opportunities will be shifting mindsets and beliefs about teaching and learning mathematics.

Watch for more information on www.mathedleadership.org

National Council of Supervisors of Mathematics

www.mathedleadership.org

NCSM MISSION

The National Council of Supervisors of Mathematics (NCSM) is a mathematics leadership organization for educational leaders that provides professional learning opportunities necessary to support and sustain improved student achievement.

NCSM VISION

NCSM envisions a professional and diverse learning community of educational leaders that ensures every student in every classroom has access to effective mathematics teachers, relevant curricula, culturally responsive pedagogy, and current technology.

To achieve our NCSM vision, we will:

Network and collaborate with stakeholders in education, business, and government communities to ensure the growth and development of mathematics education leaders.

Communicate to mathematics leaders current and relevant research, and provide up-to-date information on issues, trends, programs, policies, best practices, and technology in mathematics education.

Support and sustain improved student achievement through the development of leadership skills and relationships among current and future mathematics leaders.

Motivate mathematics leaders to maintain a life-long commitment to provide equity and access for all learners.

OVER FOUR DECADES OF NCSM PRESIDENTS

We honor the legacy of Former Presidents and value their contribution, support, and leadership.

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Western Region 2 – Nancy Drickey, McMinnville, OR

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2851 S. Parker Road, Suite 1210
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REQUEST FOR NOMINATIONS

The following positions are open for the 2017 Board:

- Second Vice President
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- Regional Director, Eastern 2 (Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania, West Virginia)
- Regional Director, Southern 2 (Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, Texas)
- Regional Director, Western 2 (California, Far West: American Samoa, Federated States (Guam, Marshall Islands, Micronesia, Northern Mariana Island, Palau Islands), Hawaii, Military AP: AFO/FPO, Oregon, Washington)

Visit *www.mathedleadership.org* for details about the positions, the nomination procedure, and the nomination form.
The deadline for nominations for the *NCSM* Board positions is Friday, May 15, 2016.

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Special thanks to EMS&TL and the mathematics coaches and leaders from Maryland for their partnership in developing *IT WORKED!* for NCSM: Coaching Corner

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Patricia Baltzley, Co-Director, Gardiner, MT
Arjan Khalsa, San Francisco, CA – CEO, Conceptua Math, Digital Learning Initiative
Cathy Fosnot, New York, NY – DreamBox Learning, Keynote Speaker (Nashville)
Donna Knoell, Kansas City, Missouri – DreamBox Learning, Keynote Speaker (Atlantic City)
Kelly Kutach, Dallas, TX – Texas Instruments, Digital Learning Initiative
John W. Staley, Towson, MD

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NCSM AWARDS

SUPPORT THE NCSM IRIS CARL LEADERSHIP FUND

The NCSM Iris Carl Mathematics Leadership Fund endows up to three travel grants per year to NCSM members who have not attended an NCSM conference for the past three years. The fund is supported by generous donations from individuals. To support the fund, you may mail a check in any amount payable to:

NCSM Charitable Trust and mail to: Jon Manon, NCSM Treasurer 2851 S. Parker Road, Suite 1210, Aurora, CO 80014.

Information about the Iris Carl Grant for Travel and an application form are available on the NCSM Website, *www.mathedleadership.org.*

The deadline for nominations for the 2017 Iris Carl Grant is December 1, 2016.

ROSS TAYLOR/GLENN GILBERT NATIONAL LEADERSHIP AWARD

Nominations are open for the 2017 Ross Taylor/Glenn Gilbert National Leadership Award. Any member of NCSM may submit a nomination.

The Ross Taylor/Glenn Gilbert National Leadership Award annually recognizes an individual who has demonstrated leadership in, and has made outstanding, unique, and dedicated contributions to the field of mathematics education. Award criteria and nomination procedures are available at mathedleadership.org. The deadline for nominations for the 2017 Award is November 1, 2016.

KAY GILLILAND EQUITY LECTURE SERIES AWARD

Nominations are open for the 2017 Kay Gilliland Equity Lecture Series. Any member of NCSM may submit a nomination.

This award is given annually to an outstanding mathematics educator who has made a significant and lasting contribution to the cause of promoting equity achievement in mathematics education. The lecture series serves to acknowledge and honor Kay Gilliland's service to NCSM and to promote the cause of equity in mathematics education in perpetuity.

Award criteria and nomination procedures are available at mathedleadership.org. The deadline for nominations for the 2017 Award is October 1, 2016.

MATHEMATICS STUDENT RECOGNITION AWARD

The Mathematics Student Recognition Program was created to provide a means for honoring outstanding students who excel in the study of mathematics. All public, parochial, and private schools, colleges, and universities that have at least one NCSM member in the area are eligible to participate. The number of awards should not exceed two per year per graduating class or grade level. Award certificates are available at Conference Registration Area or may be ordered from NCSM Office, 2851 S. Parker Road, Suite 1210, Aurora, CO 80014, (303) 758-9611, *office@ mathedleadership.org*. More information about the Student Recognition Awards is available at *www.mathedleadership.org.*

NCSM AFFILIATES

Carol Matsumoto, 2015–2017 NCSM Affiliate Coordinator
Winnipeg, MB, Canada

NCSM Affiliates

Central 1:	Michigan Council of Teachers of Mathematics Michigan Mathematics Consultants and Coordinators
Central 2:	Minnesota Council of Teachers of Mathematics Missouri Council of Supervisors of Mathematics North Dakota Council of Teachers of Mathematics
Eastern 1:	Association of Teachers of Mathematics in Maine Association of Teachers of Mathematics in New England Boston Area Mathematics Specialists New York State Association of Mathematics Supervisors Vermont Math Leadership Council
Eastern 2:	Maryland Council of Supervisors of Mathematics Pennsylvania Council of Leaders of Mathematics New Jersey Association of Mathematics Supervisors and Leaders
Southern 1:	Florida Association of Mathematics Supervisors Georgia Council of Supervisors of Mathematics
Southern 2:	Arkansas Association of Mathematics Leaders Texas Association of Supervisors of Mathematics Texas Council of Teachers of Mathematics
Western 1:	Arizona Mathematics Leaders
Western 2:	California Mathematics Council Oregon Council of Teachers of Mathematics Teachers of Teachers of Mathematics (Oregon)
Canada:	Ontario Mathematics Coordinators Association
National:	Council of Presidential Awardees in Mathematics

Join us during the conference to connect with your local affiliate, share your affiliate's activities, or learn how to organize an affiliate.

- Look for the Membership Information Table in the Exhibit Hall Foyer Lobby Level 1: Check the sign to see if your organization is an NCSM affiliate and then grab an affiliate ribbon if it is. Applications available for NCSM Affiliation.
- Meet with NCSM Affiliate Coordinator and NCSM affiliate leaders (by invitation) on Monday, April 11 from 7:00 am to 8:00 am in Grand Ballroom EFGH.
- Attend the Business Meeting—Tuesday, April 12 at 4:30 pm to 5:15 pm in Junior Ballroom 1–2 of the Oakland Marriott City Center Convention Center. The newest affiliates will be receiving their charter.
- See NCSM acknowledge our affiliates at the Wednesday, April 13 Luncheon.

If your mathematics organization is interested in organizing an affiliate in your area, contact the 2015–2017 NCSM Affiliate Coordinator, Carol Matsumoto (cmat1@mymts.net). You can also find helpful information and application forms in the ***Affiliates*** section (under ***Membership***) of the NCSM Website at *www.mathedleadership.org*.

ENGAGING IN THE MISSION OF MATHEMATICS EDUCATION LEADERSHIP

49TH NCSM ANNUAL CONFERENCE
APRIL 3-5, 2017 • SAN ANTONIO, TEXAS

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SPEAKER PROPOSALS:
Deadline for speaker proposals: **June 1, 2016**
Proposals must be submitted online at:
mathedleadership.org

Engaging in the Mission of Mathematics Education Leadership: High Quality, Meaningful and Relevant Mathematics for All

The 2017 NCSM Annual Conference will provide sessions that enhance our work as mathematics leaders to support teachers so that all students have access to a high-quality mathematics program. The five strands for the 2017 NCSM Annual Conference–Leadership, Coaching, Motivation, Equity and Social Justice, and Assessment–represent areas of interest to a large number of our members. We invite proposals that focus on the following conference strands.

Powerful Mathematics Education Leadership
Presentations in this strand will focus on research-affirmed leadership actions and thought processes that improve teaching and learning at the building, district, region and state/province levels.

Visionary Coaching Practices
Presentations in this strand will focus on the coach's role in supporting all aspects of the teaching and learning of mathematics.

Motivational Mathematics Teaching and Learning
Presentations in this strand will focus on engaging students in mathematics, sparking interest through meaningful tasks, dynamic technology, and strong curriculum that address the rigor, depth, and conceptual understanding of mathematical standards.

Empowering Equity and Social Justice Leadership
Presentations in this strand will focus on equitable practices to support building, district, region and state/province level leaders that build students' mathematical knowledge.

Exemplary Assessment Leadership
Presentations in this strand will focus on research-affirmed assessment practices that support student and teacher engagement in reflective practices.

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NCSM JOURNAL OF MATHEMATICS EDUCATION LEADERSHIP

The purpose of the *Journal of Mathematics Education Leadership* is to advance the mission and vision of the National Council of Supervisors of Mathematics by disseminating knowledge related to research, issues, trends, programs, policy, and practice in mathematics education and relevant to leaders in mathematics education.

In addition, the journal aims to foster inquiry into key challenges of mathematics education leadership, raise awareness about key challenges of mathematics education leadership, and engage the attention and support of other education stakeholders in order to broaden as well as strengthen mathematics education leadership. Manuscripts should fit within one or more of the following categories.

- Key topics in leadership and leadership development
- Case studies of mathematics education leadership work in schools and districts or at the state level and the lessons learned from this work
- Reflections on what it means to be a mathematics education leader and what it means to strengthen one's leadership practice
- Research reports with implications for mathematics education leaders
- Professional development efforts including how these efforts are situated in the larger context of professional development and implications for leadership practice

Across each of these categories, evidence of the impact of the work is expected along with connections to the existing knowledge base. In addition, manuscripts should be consistent with the *NCTM Principles and Standards* and should be relevant to *NCSM* members. In particular, manuscripts should make clear to mathematics leaders the implications of its content for their leadership practice.

The *JMEL* uses a double-blind review process. Manuscripts are reviewed by at least two volunteer reviewers and a member of the editorial panel. Reviewers are chosen on the basis of their expertise related to the content of the manuscript and are asked to evaluate the merits of the manuscripts according to the guidelines listed above.

Manuscripts should be formatted according to the guidelines of the *Publication Manual of the American Psychological Association* (6th edition).

Manuscripts should be submitted via e-mail to *ncsmJMEL@mathedleadership.org*. Submissions should include:
- A word file with the body of the manuscript without any author identification;
- A word file with author information; and
- An abstract of no more than 300 words.

Manuscripts may be submitted at any time, although deadlines of January 1st and July 1st are established to support timely review and publication.

Angela T. Barlow, Editor

IMPORTANT FUTURE NCSM DATES

Mathematics Leadership in a Time of Change: Building Leaders at all Levels

Summer Leadership Academy
Adlai Stevenson High School,
Lincolnshire, IL, July 18–20, 2016

Fall Seminars
Phoenix, AZ October 25, 2016
St. Louis, MO November 16, 2016

Winter Leadership Academy (NEW)
Atlanta, GA December 2–4, 2016

49th NCSM Annual Conference
San Antonio, TX April 3–5, 2017

For more details visit *www.mathedleadership.org*.

NCSM COMMUNICATIONS

NCSM NEWSLETTER

The *NCSM Newsletter* promotes networking and collaboration among NCSM members and other stakeholders in the education community and welcomes submissions from members. The purpose of the *NCSM Newsletter* is to advance the mission and vision of NCSM by informing the membership of the ongoing activities of the NCSM Board and by publishing current information about issues, trends, programs, policy, and practices in mathematics education.

The *NCSM Newsletter* is published four times a year—fall, winter, spring, and summer—in addition to being physically mailed to all NCSM members, access to all issues is available on our website. You will be prompted to log in with your membership information when clicking on an issue.

Deadlines for Submissions
Fall 2016 *NCSM Newsletter*—July 5, 2016
Winter 2016–2017 *NCSM Newsletter*—September 5, 2016
Spring 2017 *NCSM* Newsletter—December 5, 2016
Summer 2017 *NCSM* Newsletter—March 5, 2017
Please visit *mathedleadership.org* for more information and submission procedures

NCSM ENEWS

The *eNEWS* is delivered five times a year and serves as timely information regarding NCSM happenings and future events. The dates for *eNEWS* are August 31, November 15, January 31, March 31, and May 31.

NCSM WEBINARS

Visit *http://www.mathedleadership.org/events/webinars.html* for future Webinar topics and dates. Previous Webinars are available at this link to view any time after they have posted.

NCSM EVENTS ARCHIVE

We have handouts, PowerPoints materials, etc. from conferences, leadership academies, and fall seminars on our website at: *http://www.mathedleadership.org/events/conferences/index.html.* You may want to refer to this section to support your leadership work.

NCSM COMMON CORE STATE STANDARDS

We have implementation materials and resources for implementation of the *Common Core State Standards* at: *http://www.mathedleadership.org/ccss/index.html.*

- *NCSM Illustrating the Standards for Mathematical Practice*
- *NCSM Great Tasks for Mathematics*
- NCSM Common Core Presentations and Webinars
- Assessment Consortia
- Mathematics Common Core Coalition
- *Mathematics Assessment Project (MAP/Shell Centre)*
- Inside Mathematics
- CCSS Curriculum Materials Analysis Tools

NCSM "GET CONNECTED" THROUGH SOCIAL MEDIA

Whether you are a newbie to technology, or one who could not teach, work, or live without it, sooner or later you may find yourself participating in one or more online social networks. There are many web tools and web sites that allow mathematics education leaders to connect, share and collaborate with one another. These tools are part of the Internet's social networking landscape, and provide a means for leaders to build and maintain communities of practice. In an effort to harness the power of these collaborative opportunities to help connect its membership with rich conversations, NCSM is now subscribed to several social networking tools.

Find links for these conversations by clicking on the "Get Connected" tab on our website at *http://www.mathedleadership.org/networks/index.html*

POSITION PAPER

The NCSM Board proudly offers our membership the *Improving Student Achievement Position Paper* series that can be found at *http://www.mathedleadership.org/resources/position.html.* We hope these papers are informative, supportive and challenging as our members lead efforts in their local districts to improve student achievement in mathematics.

The process of developing research-informed leadership *Position Papers* on issues critical to the future of mathematics education began in the summer of 2006. Past President, Steven Leinwand, strongly recommended that the Board provide a long-term series of practical, research-informed *Position Papers* as part of the NCSM's strategic plan. During his presidency, Tim Kanold pursued the initiative and created the following format for all position papers:

- The stated Position of
- A summary of research that supports the Position
- Specific leadership actions to assist implementation of the Position
- References that support further investigation into the Position

The process for developing each paper begins with identifying an author to create an initial draft on a specific topic. The draft is edited and sent out to individuals for critique. The paper is revised based on that feedback, returned to the author, and sent to *NCSM*'s Board of Directors for review. The paper undergoes a final edit and then is submitted again to the Board for approval. This extensive and collaborative process reflects our collective voices and contributes to the power of these position papers. NCSM expresses its thanks and appreciation to all who have contributed to this series. We welcome suggestions for future papers, as well as volunteers to write or review.

Current *Position Papers* include:

The *Position Papers* beginning in 2007 are part of The *National Council of Supervisors of Mathematics Improving Student Achievement Series*.

- *Mathematics Education Through the Lens of Social Justice: Acknowledgement, Actions and Accountability*–A joint position paper from NCSM and TODOS (2016)
- *Mathematics Education in the Digital Age* (Spring 2015)
- *Improving Student Achievement in Mathematics Through Formative Assessment in Instruction* (A joint position of the Association of Mathematics Teacher Educators [AMTE] and the National Council of Supervisors of Mathematics [NCSM]) (no. 14, Spring 2014)
- *Improving Student Achievement by Implementing Highly Effective Teacher Evaluation Practices* (no. 13, Spring 2014)
- *Improving Student Achievement by Infusing Highly Effective Instructional Strategies into RtI Tier I Instruction* (no. 12, Spring 2013)
- *Improving Student Achievement in Mathematics by Using Manipulatives with Classroom Instruction* (no. 11, Spring 2013)
- *Improving Student Achievement in Mathematics by Expanding Learning Opportunities for the Young* (no.10, Spring 2012)
- *Improving Student Achievement in Mathematics by Expanding Opportunities for Our Most Promising Students of Mathematics* (no.9, Spring 2012)
- *Improving Student Achievement in Mathematics by Systematically Integrating Effective Technology* (no.8, Spring 11)
- *The Role of Elementary Mathematics Specialist in the Teaching and Learning of Mathematics* (A joint position of the Association of Mathematics Teacher Educators [AMTE], The Association of State Supervisors of Mathematics [ASSM], the National Council of Supervisors of Mathematics [NCSM], and the National Council of Teachers of Mathematics [NCTM] in response to the release of Elementary Mathematics Specialists: A Reference for Teacher Credentialing and Degree Programs [AMTE, 2010)](Winter, 2010)
- *Improving Student Achievement in Mathematics by Promoting Positive Self-Beliefs* (no.7, Spring 2010)
- *Improving Student Achievement in Mathematics by Addressing the Needs of English Language Learners* (no.6, Fall 2009)
- *Improving Student Achievement by Leading Highly Effective Assessment Practices* (no. 5, Spring 2009)
- *Improving Student Achievement in Mathematics for Students with Special Needs* (no.4, Winter 2008)
- *Improving Student Achievement by Leading the Pursuit of a Vision for Equity* (no.3, Spring 2008)
- *Improving Student Achievement by Leading Sustained Professional Learning for Mathematics Content and Pedagogical Knowledge Development* (no.2, Fall 2007)
- *Improving Student Achievement by Leading Effective and Collaborative Teams of Mathematics Teachers* (no. 1, Fall 2007)
- *A Position Paper on the Development of Numerical Power from the National Council of Supervisors of Mathematics* (September 1999)
- *Focusing the Dialogue: Suggestions for Engaging in Productive Discourse on the Future of School Mathematics, A National Council of Supervisors of Mathematics (NCSM) Position Statement* (Fall 1998)
- *Improving Student Achievement Through Designated District and School Mathematics Program Leaders* (January 1998)
- *Leadership in Mathematics Education: A Position Paper of the National Council of Supervisors of Mathematics* (1994)
- *Essential Mathematics for the 21st Century: The Position of the National Council of Supervisors of Mathematics* (June 1988)
- *National Council of Supervisors of Mathematics Position Paper on Basic Mathematical Skills* (January 1977)

NOTES

BUILDING BRIDGES BETWEEN LEADERSHIP AND LEARNING MATHEMATICS

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Tuesday, April 12th @ 10AM to 11AM:

Fractions! Fractions! Learn All About 'Em:

Professional Development Research Results and Building Schema Through Problem Solving

Room: OCC 205

Lead Speaker: Erich Zeller, Manager of Instructional Consulting for MIND Research Institute

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Phone: (312) 288-7600
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Jon Wolff, Marketing Communication and Events
Phone: (814) 651-0147
Email: jwolff@larsontexts.com

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Carnegie Learning, Inc.
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Pittsburgh, PA 15219
Email: info@carnegielearning.com
Website: www.carnegielearning.com

Erin Simmons
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esimmons@carnegielearning.com

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Phone: (973) 361-5400 x 1509
Email: jandersen@casio.com

CURRICULUM ASSOCIATES
153 Rangeway Rd.
N. Billerica, MA 01862

Kathy Walsh
Phone: (978) 313-1272
Email: kwalsh@cainc.com

CPM EDUCATIONAL
PROGRAM, ANNUAL CONFERENCE PROMOTIONAL GIFT, ADS
CPM Educational Program
9498 Little Rapids Way
Elk Grove, CA 95758
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Bob Petersen, Assistant Director
Phone: (916) 638-1145
Email: bobpetersen@cpm.org

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Mike Garofolo
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Website: discoveryeducation.com

Donovan Goode, Director of Educational Partnerships
Email: Donovan_Goode@discovery.com

Jennifer O'Brien, Director of Marketing
Phone: (240) 662-2863
Email: Jennifer_Obrien@discovery.com

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FALL LEADERSHIP SEMINARS LUNCHEON AND CONFERENCE BOOTH
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305 108th Ave NE, Suite 200
Bellevue, WA 98004
Phone: (425) 637-8900
Email: info@dreambox.com
Website: DreamBox.com

Jesse Woolley-Wilson, Chief Executive Officer
Phone: (425) 637-8900
Email: jesse@dreambox.com

Tracy Kennedy, Marketing Director
Phone: (425) 637-8900 ext. 415
Email: tracy.kennedy@dreambox.com

Sarah Johnson, Marketing Coordinator
Phone: (425) 637-8900 ext. 435
Email: sarah.johnson@dreambox.com

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EAI Education
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Bernard Guglberger, National Sales Manager
Phone: (800) 770-8010
Email: bguglberger@eaieducation.com

Barbara Tuzzeo, Sales Manager
Phone: (800) 770-8010 x 7600
Email: btuzzeo@eaieducation.com

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Kevin Stone
Phone: (800) 795-1987
Email: kstone@edcaliber.com

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ETA hand2mind
500 Greenview Court
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Website: hand2mind.com

Sara Delano Moore, Director of Mathematics and Science
Phone: (330) 619-0119
Email: smoore@hand2mind.com

EXEMPLARS, INC.
CONFERENCE ADS
Exemplars, Inc.
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Megan Meadows, Director
Phone: (802) 899-4409
Email: megan@exemplars.com

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Rick Roegiers, National Sales Director
Phone: (866) 882-4141 x 207
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Phone: (434) 293-7043 x 222
Email: dshuster@explorelearning.com

Abby Dogum, Tradeshow & Event Manager
Phone: (866) 882-4141
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Tess Steenbeke, Event Coordinator
Phone: (603) 431-7894
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Email: colettechambers@learnzillion.com

THE MATH FORUM
NCSM WEBSITE, LISTSERV AND EMAIL HOSTING, ELECTRONIC PROMOTIONS, ANNUAL CONFERENCE NCSM MEMBERSHIP & REGISTRATION SUPPORT
The Math Forum
3210 Cherry Street
Philadelphia, PA 19104
Website: mathforum.org

Stephen Weimar, Director
Phone: (215) 895-1080
Email: steve@mathforum.org

Suzanne Alejandre, Director of Professional Development
Phone: (215) 895-1080
Email: Suzanne@mathforum.org

THE MATH LEARNING CENTER
CONFERENCE BOOTH
The Math Learning Center
P. O. Box 12929
Salem, OR 97309
Website: mathlearningcenter.org

Collin Nelson, Marketing Coordinator
Phone: (503) 779-1970
Email: collinn@mathlearning.org

MATH SOLUTIONS
ANNUAL CONFERENCE LITERARY GIFT AND BOOTH
Math Solutions
1 Harbor Drive, Ste. 101
Sausalito, CA 94965
(800) 868-9092
Email: info@mathsolutions.com
Website: mathsolutions.com

Laura Sexton, Marketing Manager
Phone: (415) 339-4818
Email: lsexton@mathsolutions.com

MATHLINE-HOWBRITE
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Mathline-Howbrite
P. O. Box 880
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Brita Ylitalo, President
Phone: (320) 286-2597
Email: mathline@howbrite.com

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Norma Fiala, Event Manager
Phone: (614) 430-4482
Email: norma.fiala@mheducation.com

MIND RESEARCH
CONFERENCE BOOTH
111 Academy, Suite 100
Irvine, CA 92617

Mike Limon
Email: mlimon@mindresearch.org

MOVING WITH MATH
CONFERENCE BOOTH
4850 Park Glen Rd.
Minneapolis, MN 55416

MQI COACHING
CONFERENCE BOOTH
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Cambridge, MA 02138

Samantha Booth
Phone: (781) 373-7068
Email: mqicoaching@gse.harvard.edu

NEXTLESSON
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Bonnie Burgart, Marketing
Phone: (415) 766-7927
Email: bonnie@nextlesson.org

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ORIGO Education, Inc.
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James Burnett, President
Phone: (636) 724-8380
Email: j_burnett@origo.com.au

Rob Nickerson
Professional Learning Educator
Phone: (636) 724-8380
Email: r_nickerson@origo.com

Cole Pourchot
Event Coordinator and Marketing Assistant
Phone: (314) 475-3061
Email: c_pourchot@origomath.com

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Paulette Willis, Communication Manager
Phone: (832) 255-2959
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Matthew Mugo Fields, President
Email: mmfields@redbirdlearning.com

Janet Pittock, Vice President of Curriculum, Mathematics
Phone: (844) 288-7225
Email: janetpittock@redbirdlearning.com

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Peter Cipkowski, Vice President Education
Phone: (646) 373-5002
Email: cipkowski@thinkghroughmath.com

Heath Maksin, Marketing Events Coordinator
Phone: (866) 357-8664 x 787
Email: hmaksin@thinkthroughmath.com

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Andrea Bright
Marketing and Social Media
Phone: (206) 547-0434
Email: andrea.bright@whizz.com

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Tom Fischaber
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Monday

9:30 am–10:30 am	***Casio,*** Session 1110: The Probabilities of "Wheel of Fortune"—A Contestant's Perspective
10:45 am–11:45 am	***Redbird Advanced Learning***, Session 1210: Optimize Blended Learning Environments and Professional Development
1:30 pm–2:30 pm	ETA ***Hand2Mind***, Session 1510: Rich Mathematical Tasks: Familiar Resources to Meet the Challenges of a New Era

Tuesday

8:15 am–9:15 am	***Math Solutions***, Session 2110: Number Talks: Fractions, Decimals, and Percentages
11:15 am–12:15 pm	***LearnZillion***, Session 2310: The Struggle Is Real: Bringing Authentic Opportunities for Productive Struggle

TECHNOLOGY SHOWCASE SESSIONS

All Technology Showcases will be held in room OCC 207 of the Oakland Marriott City Center Convention Center

Monday

9:30 am–10:30 am	***Pearson,*** Session 1111: Scout—Using Technology for Observational Assessments
10:45 am–11:45 am	***Pearson***, Session 1211: Leveraging the Power of Technology in Inquiry Based Learning
1:30 pm–2:30 pm	***LearnZillion***, Session 1511: The Power of Open Curriculum: Get Hands On with LearnZillion
2:45 pm–3:45 pm	***Math Solutions***, Session 1611: Defining a Model Math Classroom in Physical and Virtual Schools
4:00 pm–5:00 pm	***MQI Coaching***, Session 1711: Finally! A Coaching Framework That's Actually About the Mathematics

Tuesday

8:15 am–9:15 am	***Texas Instruments,*** Session 2111: Connecting Concepts in Grades 6–8
10:00 am–11:00 am	***Texas Instruments***, Session 2211: From Standards to Practice: Leading Teachers to Improve Student Understanding Through Formative Assessment
11:15 am–12:15 am	***Redbird Advanced Learning***, Session 2311: Online Personalized Learning: Understand, Apply, and Create with Redbird Mathematics
2:15 pm–3:15 pm	***Pearson***, Session 2411: Using Adaptivity to Personalize Homework in Grades 3–5

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LEAD SPEAKER CONTACT INFORMATION

Thomasenia Adams
tla@coe.ufl.edu

Joyce Agness
joyce_agness@hcpss.org

Comfort Akwaji-Anderson
comforta@iastate.edu

Suzanne Alejandre
suzanne@mathforum.org

Loria Allen
loria.allen@uah.edu

Nancy Anderson
nancy_anderson@milton.edu

Karim Ani
karim@mathalicious.com

Julie Antill
jantill@semo.edu

Katey Arrington
katey.arrington@austin.utexas.edu

Sandy Atkins
satkins@creatingahas.com

Deborah Ball
dball@umich.edu

Bill Barnes
william_barnes@hcpss.org

Virginia Bastable
vbastabl@mtholyoke.edu

Allan Bellman
abellman@olemiss.edu

Babette Benken
babette.benken@csulb.edu

Barbara Beske
bbeske@studentsachieve.net

Barbara Blanke
drbarbblanke@gmail.com

Randi Blue
randi_blue@hcpss.org

Jo Boaler
joboaler@stanford.edu

Emily Bonner
emily.bonner@utsa.edu

Samantha R. Booth
sbooth@air.org

Denise Brady
brady@sresd.org

Diane Briars
djbmath@comcast.net

Angela Broaddus
broaddus@ku.edu

Kyndall Brown
kbrown@gseis.ucla.edu

Lisa Brown
lisabrown@austin.utexas.edu

Kevin Bruney
kbruney@parcconline.org

Michele Burgess
michele.burgess@aiu3.net

Marilyn Burns
mburns1941@gmail.com

Gail Burrill
burrill@msu.edu

Peg Cagle
peg@cagle.com

Cynthia Callard
ccallard@warner.rochester.edu

Antonia Cameron
tonicam52@gmail.com

Catherine Carroll
ccarroll@wested.org

Cynthia Carson
cynthia.carson@warner.rochester.edu

Ruth Casey
ruthcasey@aol.com

Zachary Champagne
zacharychampagne@gmail.com

Cristina Charney
ccharney@nthurston.k12.wa.us

Haiwen Chu
achu@wested.org

Michelle Cirillo
mcirillo@udel.edu

Andrew Clark
andrew.m.clark.1@gmail.com

Patricia Clark
pclark@mathsolutions.com

Doug Clarke
doug.clarke@acu.edu.au

Leandra Cleveland
lcleveland@bentonvillek12.org

Ted Coe
tcoe@achieve.org

Lynn Columba
hlc0@lehigh.edu

Jere Confrey
jere_confrey@ncsu.edu

Kathi Cook
klcook@austin.utexas.edu

Ruth Cossey
rcossey@mills.edu

Deborah Crocker
crockerda@appstate.edu

Kris Cunningham
kcunningham@phoenixunion.org

Molly Daley
molly.daley@evergreenps.org

Linda Davenport
ldavenport@bostonpublicschools.org

Susana Davidenko
Susana.Davidenko@cortland.edu

Tiffany Della Vedova
tiffany.dellavedova@mandellschool.org

Dianne DeMille
drdianne@roadrunner.com

Debi DePaul
d_depaul@origomath.com

Keith Devlin
kdevlin@stanford.edu

Jennifer DiBrienza
jdibrienza@gmail.com

Emily Diehl
ediehl@mindsetworks.com

Fred Dillon
dillon314@sbcglobal.net

Juli Dixon
juli.dixon@ucf.edu

David Dockterman
david_dockterman@gse.harvard.edu

Lew Douglas
lewdouglas@berkeley.edu

Nancy Drickey
ndricke@linfield.edu

Jared DuPree
jbdupree@usc.edu

Alden Edson
edsona@msu.edu

Wade Ellis
wade25@sbcglobal.net

Katie England
katie.england@comcast.net

Christina Eubanks-Turner
ceturner@lmu.edu

Molly Farrell
heymolly@gmail.com

Francis (Skip) Fennell
ffennell@mcdaniel.edu

LEAD SPEAKER CONTACT INFORMATION

Annie Fetter
annie@mathforum.org

Graham Fletcher
gfletchy@gmail.com

Michael Flynn
mflynn@mtholyoke.edu

David Foster
dfoster@svmimac.org

José Franco
franco@wested.org

Linda Fulmore
lmfulmore@yahoo.com

Joanie Funderburk
jfunderburk@studentsachieve.net

Karen Fuson
karenfuson@mac.com

Mardi Gale
mgale13@gmail.com

Anurupa Ganguly
anurupa.r.ganguly@gmail.com

Marc Garneau
mgarneau@mathedleadership.org

Miriam Gates
MGates@edc.org

Jason Gauthier
jgauthier@alleganaesa.org

Katherine Gavin
kathy.gavin@uconn.edu

Lynsey Gibbons
lgibbons@bu.edu

Nicholas Gilbertson
gilbe197@msu.edu

Sandie Gilliam
sandie.gilliam@coloradocollege.edu

Debbie Gochenaur
dlgochenaur@ship.edu

Linda Gojak
lgojak@sbcglobal.net

Norma Gordon
norma@cuethink.com

Jill Gough
jplgough@gmail.com

Michael Gould
mgould@mathsolutions.com

Yvonne Grant
grant@math.msu.edu

Le Vada Gray
lgray@mathsolutions.com

Paul Gray
pgray73@sbcglobal.net

Jason Green
jasongreen@redbirdlearning.com

Linda Griffith
lindag@uca.edu

Jody Guarino
jguarino@ocde.us

Tammy Guthrie
tguthrie@sdale.org

Susie Hakansson
shakans@g.ucla.edu

Pamela Harris
pamharris@utexas.edu

Peg Hartwig
Peggy_Hartwig@discovery.com

Meghan Hearn
meghearn@learnzillion.com

Scott Hendrickson
scott@mathed.byu.edu

Judy Hickman
judy.hickman@smarterbalanced.org

Margaret Honey
mhoney@nysci.org

Tim Hudson
timh@dreambox.com

Beth Hulbert
hulbertb1@myfairpoint.net

Lizzy Hull Barnes
hullbarnese@sfusd.edu

Kara Imm
karaimm@gmail.com

Darshan Jain
djain@d125.org

Ryan Jones
rsjones3@ncsu.edu

Jeane Joyner
joynerj@meredith.edu

Tim Kanold
tkanold@d125.org

Patsy Kanter
kanterpatsy@gmail.com

Robert Kaplinsky
rkaplins@gmail.com

Donna Karsten
karstend@gov.ns.ca

Grace Kelemanik
GKelemanik@comcast.net

Glenn Kenyon
kenyong@sfusd.edu

Arjan Khalsa
akhalsa@conceptuamath.com

Melinda Knapp
melinda.knapp@osucascades.edu

Jennifer Knudsen
jennifer.knudsen@sri.com

Beth Kobett
bkobett@stevenson.edu

Marta Kobiela
marta.kobiela@mcgill.ca

Barbara Kuehl
barbarakuehl@gmail.com

Kelly Kutach
kkutach@ti.com

Jackie Lain
JackieL@learninglist.com

Rachel Lambert
rpetunial@gmail.com

Crystal Lancour
crystal.lancour@colonial.k12.de.us

Matt Larson
mrl@lps.org

Jane LaVoie
jlavoie@warner.rochester.edu

Steve Leinwand
sleinwand@air.org

Travis Lemon
lemonmath@gmail.com

Suzanne Libfeld
suzanne.libfeld@gmail.com

Alyson Lischka
alyson.lischka@mtsu.edu

Celine Liu
cliu@acoe.org

Kendra Lomax
klomax@uw.edu

Jennifer Luebeck
luebeck@math.montana.edu

Glenys MacLeod
gmacleod@mymts.net

June Mark
jmark@edc.org

W. Gary Martin
wgarymartin@auburn.edu

Victor Mateas
vmateas@edc.org

LEAD SPEAKER CONTACT INFORMATION

Carol Matsumoto
cmat1@mymts.net

Ryota Matsuura
matsuura@stolaf.edu

Janeal Maxfield
jmaxfield@nthurston.k12.wa.us

Valerie Maxwell
vmaxwell@udel.edu

Amy Mayfield
amayfield@mathsolutions.com

Karen Mayfield-Ingram
mayfield@berkeley.edu

William McCallum
william.mccallum@gmail.com

Maggie McGatha
maggie.mcgatha@louisville.edu

Deb McGinley
deb.mcginley@pearson.com

Dan Meyer
dan@mrmeyer.com

Lisa Miller
lzmiller@nvusd.org

Valerie L. Mills
valerie.mills@oakland.k12.mi.us

Eric Milou
milou@rowan.edu

Leigh Mingle
lsedlacek@reasoningmind.org

Mary Mitchell
mmitchell@mathsolutions.com

Suzanne Mitchell
suzmitch@comcast.net

Swapna Mukhopadhyay
swapna@pdx.edu

Stuart Murphy
stuart@stuartjmurphy.com

Gil Naizer
gilbert.naizer@tamu.edu

Johannah Nikula
jnikula@edc.org

Kit Norris
norriskit@aol.com

Jenny Novak
jnovak@hcpss.org

Kate Nowak
katherine.nowak@gmail.com

Richard Parr
rparr@rice.edu

Sherry Parrish
sherrydparrish@att.net

Alison Paskal
apaskal@wested.org

Marjorie Petit
mpetit@gmavt.net

Joanne Philhower
philhowe@msu.edu

Elizabeth Phillips
ephillips@math.msu.edu

Janet Pittock
jpittock@mac.com

Sharon Rak
sharonrak@yahoo.com

Nora Ramirez
nora.ramirez91@gmail.com

Amy Rayray
amy1@msu.edu

Max Ray-Riek
max@mathforum.org

Tom Reardon
tom@tomreardon.com

Mike Reiners
mreiners@chof.net

Sharon Rendon
sharon.rendon@mathedleadership.org

Nick Resnick
nick@caedpartners.org

Jessica Rigby
jrigby@uw.edu

Nicole Rigelman
rigelman@pdx.edu

Kimberly Rimbey
kimrimbey@gmail.com

Michelle Rinehart
mrinehart@esc18.net

Jamila Riser
jqriser@gmail.com

Ingrid Ristroph
ingrid.ristroph@austin.utexas.edu

Patricia Rogers
patricia.rogers.math@gmail.com

Diane Rogers
drogers@kresa.org

Ann Roman
romana@austin.utexas.edu

Tammy Rudolph
trudolph@bcps.org

Susan Jo Russell
Susan_Jo_Russell@terc.edu

Sarah Ryan
SLRyan123@yahoo.com

Kim Sadler
ksadler@collegeboard.org

Kay Sammons
kaybsammons@gmail.com

Beth Schefelkler
bschefelker@sdsm.k12.wi.us

Janie Schielack
janie@math.tamu.edu

Deborah Schifter
dschifter@edc.org

Sandy Schoff
sandy.schoff@gmail.com

Connie Schrock
cschrock@emporia.edu

Pamela Seda
pamseda@yahoo.com

Cathy Seeley
cseeley@utexas.edu

Richard Seitz
ottoseitz@hotmail.com

Sarah Kate Selling
sselling@umich.edu

Diana Sherman
shdiana@umich.edu

Chris Shore
shore@mathprojects.com

James Short
james.shrt@gmail.com

Jessica Shumway
jessica.shumway@aggiemail.usu.edu

Robyn Silbey
robyn@robynsilbey.com

John Staley
jstaley@bcps.org

Michael Steele
steelem@uwm.edu

Marilyn Strutchens
strutme@auburn.edu

David Surdovel
david.surdovel@gmail.com

Kim Sutton
kim@creativemathematics.com

Mary Swarthout
swarthout@shsu.edu

LEAD SPEAKER CONTACT INFORMATION

Greg Tang
gregtang@gregtang.com

Jane Tanner
tannerj@sunyocc.edu

Christine Thomas
cthomas11@gsu.edu

Debbie Thompson
dthompson1@usd259.net

Janet Tomlinson
jtomlinson@carnegielearning.com

Mona Toncheff
mona.toncheff@gmail.com

Uri Treisman
uri@austin.utexas.edu

Emma Trevino
trevinoe@SFUSD.edu

Jennifer Trievel
jennifer.trievel@colonial.k12.de.us

Phil Tucher
philip.tucher@ousd.k12.ca.us

Cassandra Turner
Cassyt@gmail.com

Zalman Usiskin
z-usiskin@uchicago.edu

Patrick Vennebush
patrick.vennebush@verizon.net

Stephanie Verners
Stephverners@gmail.com

James Vicich
james.vicich@gmail.com

Stephen Weimar
steve@mathforum.org

Lucy West
lucy@lucywestpd.com

Tina Westwood
tinabaer68@gmail.com

Kurt Whited
kurt.whited@pearson.com

Ellen Whitesides
ellen.whitesides@gmail.com

Alison Whittington
awhittington@uchicago.edu

Bethann Wiley
wiley107@umn.edu

Christine Willig
sharon.binkley@mheducation.com

Jennifer Wilson
jwilson@rcsd.ms

Samantha Wuttig
samantha.wuttig@k12northstar.org

Emily Yanisko
eyanisko@gmail.com
Tracy Zager
tracyzager@gmail.com

Erich Zeller
ezeller@mindresearch.org

Jeff Ziegler
jeff.ziegler@brookhillmath.org

Jason Zimba
jzimba@studentsachieve.net

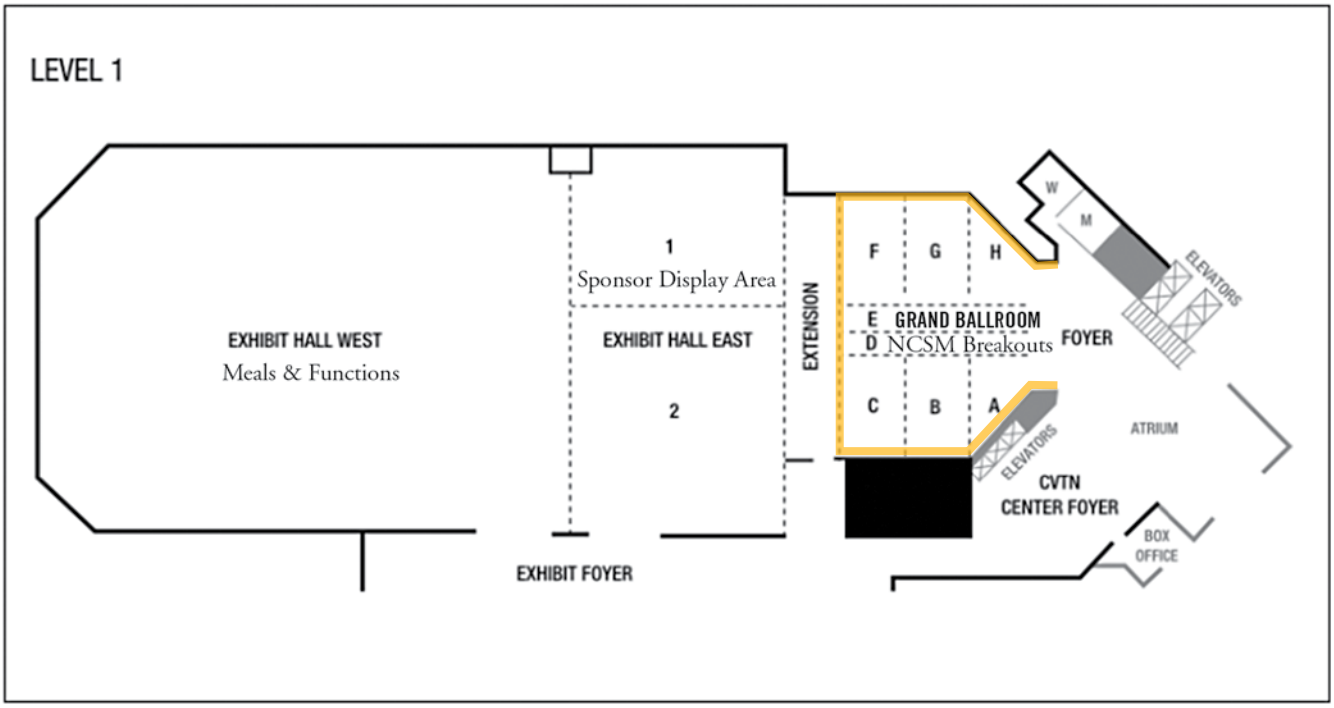
Gwen Zimmermann
gzimmermann@d125.org

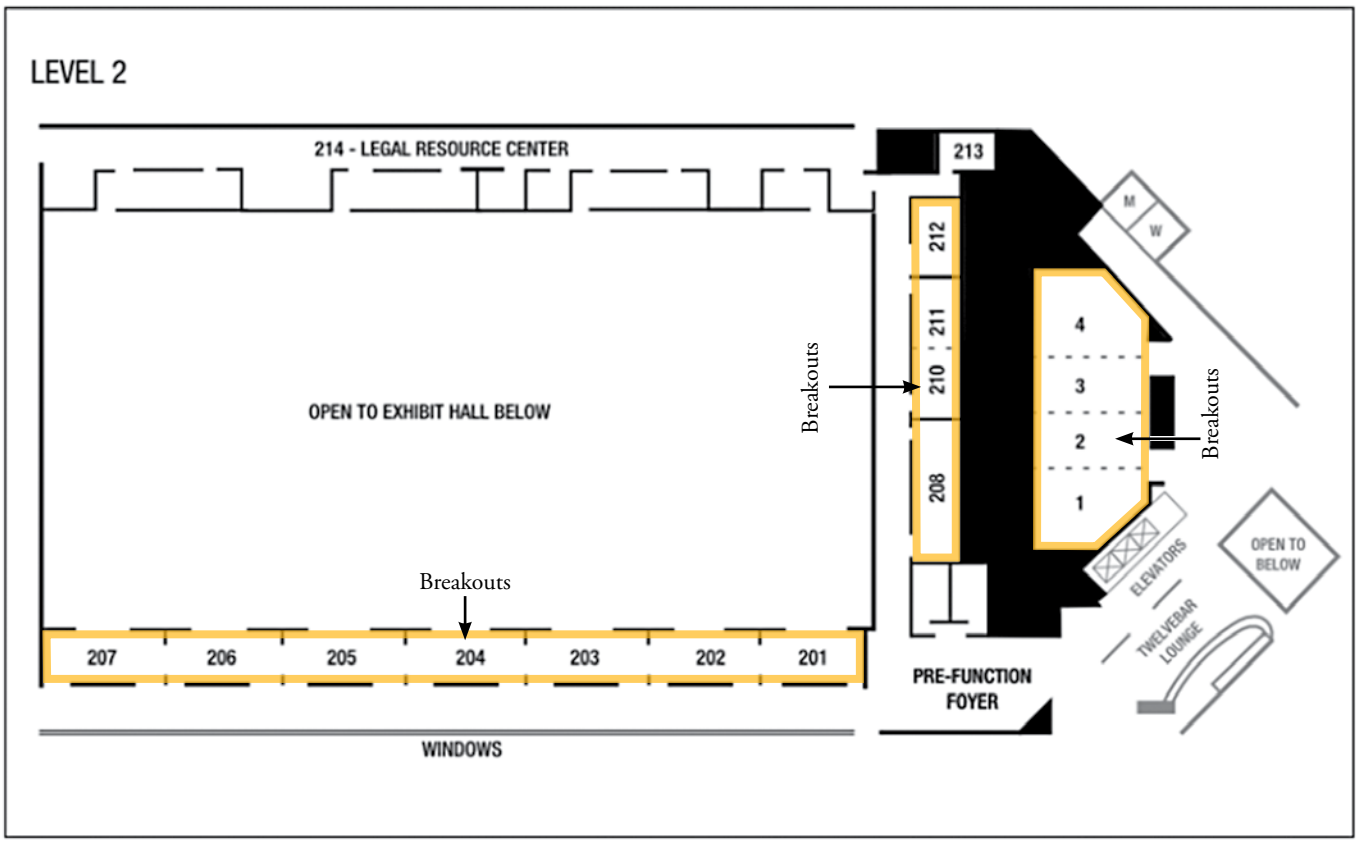
Amanda Zimolzak
azimolzak@uchicago.edu

Note: Commercial Sessions = Sponsor Showcases & Technology Showcases • All Sessions – ***Oakland Marriott City Center Convention Center***

Date & Time	Event	Location
Monday, April 11		
6:45 am–5:00 pm	**Advance & On-Site Registration**	Level 1, Oakland Marriott CC
7:30 am–8:00 am	**First-Timers Session – Special Gifts**	OCC 208
8:00 am–9:15 am	**Opening Session & Keynote – Keith Devlin**	Exhibit Hall West
9:00 am–5:30 pm	**Sponsor Displays**	Exhibit Hall East
9:30 am–5:00 pm	**NCSM Bookstore, Membership Booth, & Coaches Center**	Exhibit Hall Lobby Level 1
9:30 am–10:30 am		
10:45 am–11:45 am		
12:15 pm–1:15 pm		
1:30 pm–2:30 pm		
2:45 pm–3:45 pm		
3:00 pm–3:45 pm	**Hot Topic Café**	Foyer Exhibit Hall West
4:00 pm–5:00 pm		
5:15 pm–5:45 pm	**First–Timers Session – Special Gifts**	OCC 208
5:30 pm–7:00 pm	**Reception – Co-sponsored by Math Teachers Press**	**Exhibit Hall West**
Tuesday, April 12		
6:45 am–5:00 pm	**Advance & On-Site Registration**	Level 1, Oakland Marriott CC
7:00 am–8:00 am	**Breakfast – McGraw Hill** (Ticket Required)	Exhibit Hall West
8:30 am–4:00 pm	**Sponsor Displays**	Exhibit Hall East
8:30 am–4:00 pm	**NCSM Bookstore, Membership Booth, & Coaches Center**	Exhibit Hall Lobby Level 1
8:15 am–9:15 am		
9:15 am–10:00 am	**Special Focus on Sponsor Displays**	Exhibit Hall East
10:00 am–11:00 am		
10:15 am–11:00 am	**Hot Topic Café**	Foyer Exhibit Hall West
11:15 am–12:15 pm		
12:30 pm–2:00 pm	**Luncheon – Texas Instruments** (Ticket Required)	Exhibit Hall West
2:15 pm–3:15 pm		
3:30 pm–4:15 pm	**Caucus Meetings**	OCC 201–212
4:30 pm–5:15 pm	**NCSM Business Meeting & State of the Organization Report**	Junior Ballroom 1–2
5:30 pm–7:00 pm	**Reception – Discovery Education** (Ticket Required)	Exhibit Hall West
Wednesday, April 13		
7:30 am–10:30 am	**Advance & On-Site Registration**	Level 1, Oakland Marriott CC
7:30 am–8:30 am	**Breakfast – Pearson** (Ticket Required)	Exhibit Hall West
8:45 am–9:45 am		
10:00 am–11:00 am		
11:15 am–12:15 pm		
12:30 pm–2:00 pm	**Luncheon –** (Ticket Required) **Co-sponsored by DreamBox Learning**	Exhibit Hall West
2:15 pm–4:30 pm		
2:15 pm–3:15 pm		
3:30 pm–4:30 pm		

HOTEL FLOORPLAN





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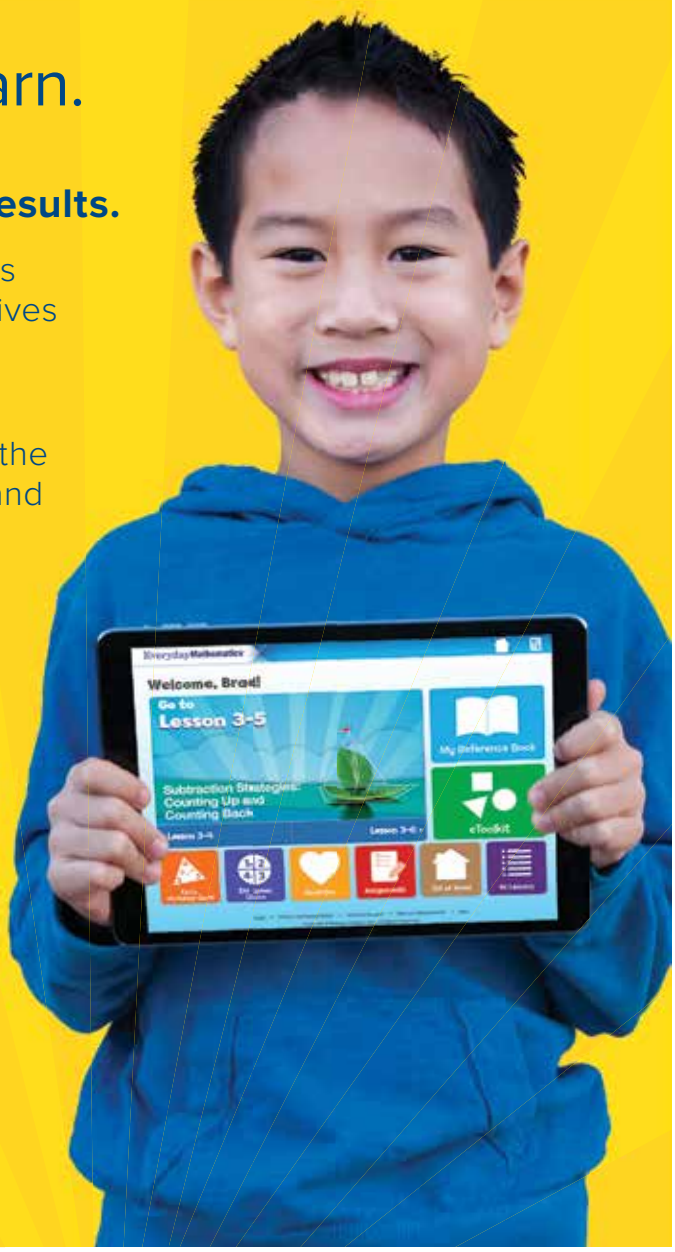

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