

California Mathematics Council

Northern Section - Asilomar - 2010

Friday, December 3 - Sunday, December 5, 2010

Asilomar Conference Grounds • Pacific Grove Middle School, Pacific Grove

#### Welcome to Asilomar

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

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

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

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

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

#### A PLACE TO NETWORK...

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

#### A WONDERFUL PLACE TO BE...

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

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#### ~ NAME BADGES ~

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

#### A Special Thanks To!

**Conference Coordinator**Gretchen Muller

**Registration**Julie Crozier

**Program Chair**Rebecca Lewis

# MINI CONFERENCE AT ASILOMAR FRIDAY | 1:30-4:30 PM

Speaker	Торіс	Grade Level	Room
Brutlag, Dan	Getting Algebra into the Adolescent Brain	6-12	Oak Shelter
Carroll, Cathy	Developing and Supporting Teachers' Mathematical Knowledge for Teaching	Ldrshp	Surf & Sand
Giganti, Paul	Algebra: Concrete to Abstract-Blocks to Formulas	6-8	Triton
Roddick, Cheryl	Fractions, Fair Trades, and Pattern Blocks   <i>co-presenter: Christina Silvas-Centeno</i>	3-8	Acacia
Serra, Michael	Problem Solving Featuring Polya's Problem	8-12	Evergreen
Willebrand, Sheri	Common Core Standards for K-2: How Are They Different?	Pk-2	Toyon



	Time	Event	Location
	3:00-7:00 РМ	Registration	Admin. Building, Asilomar
	3:00-7:00 рм	Commercial Exhibits	Merrill Hall, Asilomar
Friday	4:00-6:00 РМ	Newcomers' Session	Curlew, Asilomar
È	5:00-7:15 РМ	Commercial Exhibits (materials for purchase)	Gym, Pacific Grove MS
	6:00-7:00 РМ	Dinner	Dining Hall, Asilomar
	7:30-9:00 PM	KEYNOTE SESSION: (information on page 7) Lucy West — Academic Discourse—It Ain't Just for Kids	Auditorium, Pacific Grove MS
	7:00-8:15 ам	Breakfast	Dining Hall, Asilomar
	7:30 ам-12:00 рм	Registration	Admin. Building, Asilomar
	7:45-9:00 ам	Newcomers' Session	Curlew, Asilomar
	8:00 am-5:30 pm	Commercial Exhibits (materials for purchase)	Gym, Pacific Grove MS
a	8:00 am-4:00 pm	Commercial Exhibits	Merrill Hall, Asilomar
Saturday	8:00 am-12:00 pm	Sessions (matrix begins on page 10, speaker section begins on page 14)	
Sa	8:00 am-5:00 pm	Make-It, Take-It (refer to page 12)	Library, Pacific Grove MS
	12:00-1:30 рм	Lunch (refer to page 4)	Dining Hall, Asilomar
	1:30-5:00 РМ	Sessions (matrix begins on page 10, speaker section begins on page 14)	
	6:00-7:00 РМ	Dining Hall, Asilomar	
	7:30-10:00 рм	Ignite! and President's Party - Everyone Welcome!	Fred Farr Forum, Asilomar
	7:30-8:30 ам	Breakfast	Dining Hall, Asilomar
	8:00-8:45 am	CMC-N Membership Meeting	Dining Hall, Asilomar
Sunday	9:00-10:15 AM	Morning Keynote Session: Jo Boaler — The Psychological Prisons from Which They Never Escape? How School Mathematics Shapes Children's Lives	Merrill Hall, Asilomar
S	10:15-10:45 AM	Coffee Break	
	10:45 AM-12:00 PM	MID-MORNING KEYNOTE SESSION: David Schwartz — Putting the "Wonder" Back in Wonderful: Math Happens When Children Wonder About What They Read	Merrill Hall, Asilomar

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

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

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

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

**The Presiders and Pre-Service Teacher Volunteers**—for providing speakers with warm hospitality, a welcoming introduction, and a hearty thank you at the end of each session. Presiders are one of the ones to keeping speakers coming back to Asilomar.

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



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

#### IGNITE!

We're very excited to offer an Ignite session sponsored by Key Curriculum Press. What is Ignite? This fast-paced, fun, thought-provoking, high-energy series of 5-minute talks with 20 self-advancing slides by people with the guts to get onstage and talk about something they are passionate about! Stay for the President's Party afterwards.

#### **Ignite Presenters:**

Jo Boaler, Gloria Brown Brooks, Phil Daro, Tim Erickson, Scott Farrand, Linda Gojak, Steve Leinwand, Dan Meyer, Gretchen Muller and Michael Serra.

Saturday, 7:30 - 8:30 | Asilomar, Fred Farr Forum

#### **LUNCH OPTIONS**

There will be food available for purchase at the Middle School! From 8:00 a.m. till about 2:00 p.m., student organizations will be selling various snacks and refreshments. Coffee, sodas and water will be available, as well as sandwiches and pastries.

Please support these local school groups.

#### FIRST TIME AT ASILOMAR?

Come to the **Curlew** for a 20-minute orientation session on how to navigate your first conference at Asilomar. We will show you all you need to know. Friday, 4:00-6:00 p.m. and Saturday 7:45-9:00 a.m.

#### **IN MEMORIUM**

#### Lyle Fisher & Beth Schlesinger

On November 13, 2010, CMC lost a great friend. Lyle was a teacher, mentor, and coach to many of us as well as CMC North and State president. Along with Bill Medigovich, he started the Student Activities Trust Fund enabling CMC to promote among our students the love and joy of mathematics he experienced. A condolences card, to be sent to his wife Connee, will be in the main registration area for anyone to sign.

Beth Schlesinger, a retired high school teacher from San Diego, was a long time contributor and member of the ComMuniCator editorial panel. She will be missed by her friends and colleagues.

#### T-SHIRTS AND SWEATSHIRTS

Displaying this year's Asilomar Mathematics Conference logo will be available for purchase at the Asilomar registration area. Don't miss your opportunity to bring home a memento of your conference participation.

#### **C**ONFERENCE **V**OLUNTEERS

#### **Program Chair**

Rebecca Lewis

#### **Program Committee**

Hope Bjerke, Renae Burson, Katy Early, Ana England, Dave Robathan

#### **Evaluation**

Elizabeth Brooking and Rebecca Hubbell

#### **Packets**

Mark Hailey

#### **Pre-Registration**

Julie Crozier

#### Housing

John Martin

#### **Exhibits**

Michael Pease and Daniel Wieman

#### **NCTM Representative**

Stephen Asp

#### **NCTM Sales**

Chicha Lynch

#### Awards

FaraLee Wright

### Pre-Service Volunteer Coordinators

Catherine Reed and Jean Simutis

#### **Asilomar Presider**

Nyla DeLong and Kay Gilliland

#### **Conference Signs**

Julia Stephens

#### **Information Booth**

Christine Robles

#### **Equipment**

Alison Nash

#### **Newcomers' Orientation**

Kathlan Latimer and April Goodman-Orcutt

#### **Program Logo and T-shirt Design**

John Martin

#### **Conference Program**

Connie Anderson

#### **CONFERENCE INFORMATION**

#### Sessions

You will find four session types: Presentations, Hands-on Workshops, Interactive and Make-It, Take-It sessions.

#### Presentations (PRS)

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

#### Hands-on Workshops (WkS)

Limited enrollment. Tickets (free) are needed for admission. Workshop tickets save your spot only to the scheduled start time so a person without a ticket will admitted on a space-available basis at the scheduled start of the session.

#### Interactive Sessions (INT)

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

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

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

#### **Session Capacity/Seating**

We have made every attempt to provide adequate seating for participants at the conference. However, to ensure your safety and adhere to fire regulations, the number of participants allowed in each meeting room will be limited to the number of seats approved by the Fire Marshall. Anyone sitting on the floor or standing will be asked to leave the room. Please check the Program Matrix (pages 10-13) for the seating capacity of each room. All seats are available on a first-come, first-served basis.

#### First Time at Asilomar?

Come to the **Curlew** for a 20 minute orientation session on how to navigate your first conference at Asilomar. We will show you all you need to know to get the most out of the experience. Friday 4:00-6:00 p.m. and Saturday 7:45-9:00 a.m.

#### **Commercial Exhibits**

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

Friday Merrill Hall 3:00 - 7:00 p.m.
PGrove MS 5:00 - 7:15 p.m.
Saturday Merrill Hall 8:00 a.m. - 4:00 p.m.
PGrove MS 8:00 a.m. - 5:30 p.m.

#### **Parking**

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

#### **Disabled Services**

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

#### **College Credit**

Course details and registration information are found on page 45.

#### **Bus Service**

Buses run between Asilomar and the Middle School on Friday 3:45 to 9:30 p.m. and all day on Saturday.

#### **Cell Phones and Pagers**

Out of respect for presenters and other participants, please turn off cell phones and pagers during sessions

#### **Conference Day Assistance**

Look for the attendees with "Ask Me" stickers! They can assist you.

#### **Program Changes**

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

#### **Lunch Options**

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

#### **Meal Tickets**

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

#### **T-shirt and Sweatshirt Sales**

T-shirts and sweatshirts displaying this year's Asilomar Mathematics Conference logo will be available for purchase at the Asilomar registration area. Don't miss your opportunity to bring home a memento of your conference participation.

#### Walking

It is one mile from Asilomar to Pacific Grove Middle School. A map of this area of Pacific Grove is provided on page 46.

#### **Help Protect the Vegetation**

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

#### Dan Brutlag — Math Teacher/Curriculum Developer, Meaningful Math

#### **Getting Algebra into the Adolescent Brain**

Why does algebra often seem to go in one ear and out the other? Recent brain research has some answers. Come learn about engaging, classroom-tested, easy-to-use techniques for algebra that work for all students. The mathematical focus will be the big ideas of linear relations. Both the "how" and "why" of mental math, problem solving, student presentations, posters, and classroom management/discipline will be discussed.

6-12 | PRS | 4 | Oak Shelter

# Cathy Carroll — Senior Research Assoc/Project Dir, WestEd Developing and Supporting Teachers' Mathematical Knowledge for Teaching

This session examines issues and challenges PD leaders and coaches face in developing learning communities focused on deepening teachers' mathematical knowledge for teaching. Video clips of teachers engaged in doing mathematics provide a concrete "case" to ground examination and discussion of some of the issues involved in supporting teachers' mathematical and pedagogical content knowledge. Participants will consider these ideas in terms of their own work through analyzing a set of teacher work.

Ldrshp | WkS | 14 | Surf & Sand

#### Paul Giganti — Math Festival Director, California Mathematics Council

#### **Algebra: Concrete to Abstract-Blocks to Formulas**

Algebra is abstract, but it needn't start that way. In this workshop, we begin with blocks, and by investigating geometry growth patterns, slowly move from hands-on building to visualizing algebraic function generalizations. If you take your students on this tour of functions in algebra moving gradually from concrete to abstract, more students will understand the power of algebra and its connections to real situations.

6-8 | WkS | 15 | Triton

### Cheryl Roddick — Associate Professor, San Jose State Univ Fractions, Fair Trades, and Pattern Blocks

The teaching of fractions is one of the major emphases in grades 3-5. Students often experience difficulties when fraction concepts and procedures are taught too abstractly and without meaning. In this session teachers will learn how to use pattern blocks to develop a hands-on approach for understanding the concept of fractions. Teachers will also use pattern blocks and pictures, as well as the use of fair trades to determine equivalent fractions and to give meaning to the algorithms for addition, subtraction, multiplication, and division of fractions. Real-life problems will also add a context to the operations.

3-5 | INT | 7 | Acacia | BT

Co-presenter: Christina Silvas-Centeno — Math Curriculum Specialist, San Jose Unified SD

#### Michael Serra — Author/PD Workshop Leader, Key Curriculum Press

#### **Problem Solving Featuring Polya's Problem**

This mini-course warms up with some of the classics of problem solving. We will explore the classic problems as a whole group, recognizing the importance of thinking "out of the box," using models or diagrams, perseverance, and visual thinking. Participants will work in cooperative groups on new problems from a list and present their solutions. Finally, we'll finish with a famous problem posed by George Polya.

8-12 | INT | 5 | Evergreen | BT

#### Sheri Willebrand — President, California Mathematics Council

#### Common Core Standards for K-2: How Are They Different?

The common core standards are more coherent and with fewer standards, more focused. How can they inform curriculum and teaching? How can they support children's learning? Follow several learning paths across the primary grades. Experience how the mathematics develops a firm foundation in concepts while building skills and problem solving competencies. Rich activities that build depth and understanding will be highlighted.

PK-2 | WkS | 8 | Toyon | BT

## 2010-12 Board Members State

# President Sheri Willebrand President-Elect Kathlan Latimer Secretary Jeannie Toshima Treasurer April Goodman-Orcutt Past President Kathy Woods North President Gretchen Muller President Christine Robles Vice-President Rebecca Lewis Secretary Rita Nutsch Treasurer Chris Tsuji

#### COMMERCIAL EXHIBITS

Be sure to make time in your schedule to visit the commercial exhibits at the Pacific Grove Middle School Gym and Merrill Hall. You'll find a remarkable collection of mathematics education books, curriculum materials, teaching resources, games, manipulatives, and technology and services. Exhibit hours allow ample opportunity to explore, try out, and purchase product/services for use in your classroom or to help you meet your career goals. You'll also have the opportunity to get fresh ideas, valuable information and resources and to see demonstrations of how products work. Be sure to check the list of exhibits and map of the two exhibit halls on page 37.



#### FRIDAY EVENING — PACIFIC GROVE MIDDLE SCHOOL, AUDITORIUM

7:30 - 9:00



#### **Lucy West, Education Consultant**

#### Metamorphisis

#### Academic Discourse—It Ain't Just for Kids

What is the quality and frequency of academic discourse among the educators at your school or district? How often and in what ways do you inquire into teaching in ways that actually improve instructional practice as evidenced in student learning? To what degree is discourse necessary to foster understanding? What is the connection between the nature and quality of adult discourse in schools and the nature and quality of student discourse in classrooms? What about conflict, disagreement and diversity as related to the capacity to dialogue? How might discourse be built into lesson design? What tools do teachers need to provide students in order to have regular, robust dialogue among students? What types of mathematical tasks engender dialogue? These and related questions will be explored as we consider the role of discourse in teaching and learning.

GI | PRS | 53 | BT



 $\textbf{Sunday Morning} \leftarrow \textbf{Asilomar, Merrill Hall}$ 

9:00 - 10:15 10:45 - Noon

Jo Boaler, Professor of Mathematics Education

Stanford University School of Education

#### The Psychological Prisons from Which They Never Escape? How School Mathematics Shapes Children's Lives

What is math really? And why do so many children have such a traumatic experience of school math? In this session I will describe the insights I have gained over recent years from conversations with politicians, the public and members of the media, in England and the U.S. I will also report upon a research study that followed children who had learned in different ways into their adult lives—with some interesting results. GI | PRS | 1018

David Schwartz, Author



**ESSIONS** 

#### Putting the "Wonder" Back in Wonderful: Math Happens When Children Wonder About What They Read

David is thrilled when young readers are inspired by his books to raise questions and develop mathematical strategies to answer those questions. Illustrating his talk with impressive student work, the author of 50-plus math and science picture books including *How Much Is a Million?*, *G Is for Googol* and *If You Hopped Like a Frog* will demonstrate how teachers can encourage students to read, wonder, and do the math to address the questions that literature can raise. He'll share results that are instructive, surprising and sometimes hilarious. **GI | PRS | 1118** 

		SATURDAY HIGHLIGHTED SESSIONS						
Time	Speaker	Session	Grade Level   Type	Room				
	Cook, Marcy	Mathematics Spoken Here!	6-8   PRS	Fred Farr Forum				
9:00	Eisenberg, Gary	Singing, Dancing, and Playing Through K-3 Math	PK-2   INT	Heather				
8:00 - 9:00	Farrand, Scott	and, Scott Developing Fraction Sense in Secondary Students		Kiln				
œ	Fulton, Brad	Losing Your Marbles: Function Fun for Everyone	3-8   PRS	PG Middle Auditorium				
0	Brown, Ron	Rock Your Math Class!	PK-2   PRS	Fred Farr Forum				
9:30 - 10:30	Cummins, Jerry	Marcy Mathematics Spoken Here! 6-8   PRS  Derg, Gary Singing, Dancing, and Playing Through K-3 Math PK-2   INT  Developing Fraction Sense in Secondary Students 6-12   INT  Developing Fraction Sense in Secondary Students 7-8   PRS  Developing Fraction Sense in Secondary Students 7-8   PRS  Developing Fraction Sense in Secondary Students  Developing Pres Sense in Secondary Student Success  Developing Developing Praction Sense in Secondary Student Success  Developing Pres Sense in Secondary Students  Developing Pres Sense in Sense in Secondary Students  Developing Pres Sense in Sense						
30 -	Meyer, Dan	Math Curriculum Makeover	GI   INT	Kiln				
6	Leinwand, Steven	Glimpses of Instructional Excellence	GI   PRS	PG Middle Auditorium				
00	Foster, David	National Core Standards—WYTIWYG	GI   INT	Fred Farr Forum				
12:0	Novelli, Barbara	Stirring Up Place Value Understanding and Success	3-5   INT	Heather				
11:00 - 12:00	Fulton, Brad	Graphic Organizers for Teaching Algebra	6-8   PRS	Kiln				
=	Daro, Philip	Common Core Standards: What is the Difference?	GI   PRS	PG Middle Auditorium				
	Jacobs, Harold	Mathematical Snapshots of 2010	GI   PRS	Fred Farr Forum				
1:30 - 3:00	Novelli, Barbara	Mixing Up Math Success for All Learners	PK-2   INT	Heather				
:30	Choate, Laura	Effective Games and Practices that Lead to Student Success	PK-2   INT	Kiln				
_	Cook, Marcy	Algebraic Experiences for All	3-5   PRS	PG Middle Auditorium				
	Childs, Leigh	Engaging Activities+Strategies = Numerically Nimble Students	3-5   INT	Fred Farr Forum				
5:00	Calahan, Heather	Perspectives on California's New Math Standards	GI   W	Heather				
3:30 -	Hunter, Kelley	Math Intervention: Ideas That Work!	6-12   PRS	Kiln				
m	Serra, Michael	Investigations in Geometry for 2010	8-12   INT	PG Middle Auditorium				

#### CALL FOR SPEAKERS

#### **CMC-North 54th Annual Conference**

Asilomar and Pacific Grove Middle School, Pacific Grove

Grow with STEM (Science, Technology, Engineering & Mathematics)

December 2-4, 2011

Proposals will be accepted online at **www.cmc-math.org** from January 30 to April 10, 2011. We welcome new and returning speakers to submit proposals. Speaking at a conference is a great way to share your ideas and expertise with your colleagues.

For further information, please contact: Rebecca Lewis at asilomarprogramchair@cmc-math.org.

#### **CMC S**TUDENT **A**CTIVITIES **T**RUST

#### **Tax Deductible Contribution**

Remember your year-end tax deductible contribution to the CMC Student Activities Trust Fund. So far we've spent \$185,000 to support student activities throughout California since 1983. All contributions should be mailed to:

Gayle Spencer CMC Student Activities Trust Fund 3617 Dayton Avenue, Fresno, CA 93726

#### **Applications**

For information on how to apply for these funds to support student activities, visit: **www.cmc-math.org/awards**, contact your affiliate president, or:

Natalie Mejia 4518 Hummel Drive Santa Maria, CA 93455

#### How To Use The Conference Time Planner

The Conference Time Planner is designed to help you "map out" your sessions so you can enjoy the conference without the frustration of running from place to place, arriving late for a session, or missing one completely. It cannot, of course, help you decide which of the many sessions for your grade level to select in each time slot, nor can it make the very popular sessions less crowded. We hope it will help you enjoy the conference just a little bit more.

Below are some ideas to be aware of as you check your plan for the day:

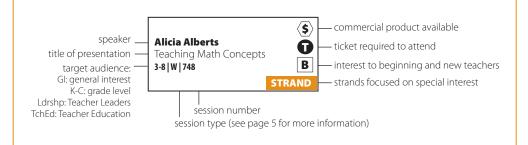
- If this is your first Asilomar math conference, be sure to drop in at the newcomers' session Friday or Saturday morning.
- The lunch hour is 90-minutes and does not overlap any session.
- Use the chart to plan your conference schedule. Don't forget that tickets are necessary for workshops. They are indicated by **1** in the matrix, as well as by a "W" in the presenter alpha list.
- Many ticketed workshops may still have space available. Just go directly to the session and see if there's space remaining. Seats that are still vacant five minutes after the start time may be filled on a first-come basis.
- Don't forget to visit the commercial exhibits in Merrill Hall and at Pacific Grove Middle School, or the Make-It, Take-It workshops in the Middle School Library.

#### CONFERENCE DAY AND TIME PLANNER

	Time	Speaker / Topic	Location
Ув	6:00-7:00 PM	Dinner	Dining Hall, Asilomar
Frid	Content   Cont	Auditorium, Pacific Grove MS	
1:00 -1:30 PM   Dinner		Dining Hall, Asilomar	
	0.00.000	1sт Сноісе:	
	6:00-7:00 PM  7:30-9:00 PM  7:00-8:15 AM  8:00-9:00 AM  9:30-10:30 AM  11:00 AM-12:00 PM  12:00-1:30 PM  1:30-3:00 PM  7:30-10:00 PM  7:30-10:00 PM	2nd Choice:	
	0.20.10.20	1st Choice:	
	6:00-7:00 PM  7:30-9:00 PM  7:00-8:15 AM  8:00-9:00 AM  9:30-10:30 AM  11:00 AM-12:00 PM  12:00-1:30 PM  1:30-3:00 PM  7:30-10:00 PM  7:30-10:00 PM  7:30-8:30 AM	2nd Choice:	
NE N	9:30-10:30 AM  11:00 AM-12:00 PM  12:00-1:30 PM  1:30-3:00 PM	1st Choice:	
turd	11:00 AM-12:00 PM	2nd Choice:	
Sa	12:00-1:30 РМ	Lunch / Commercial Products	
	1.20.2.00 pu	1sт Сноісе:	
	1:30-3:00 PM	2nd Choice:	
	2.20 5.00 av	1sт Сноісе:	
	3:30-5:00 PM	2nd Choice:	
	7:30-10:00 PM	Ignite! and President's Party - Everyone Welcome! (refer to page 4 for details)	Fred Farr Forum, Asilomar
	7:30-8:30 AM	Breakfast	Dining Hall, Asilomar
unday	9:00-10:15 AM	Jo Boaler — The Psychological Prisons from Which They Never Escape?	Merrill Hall, Asilomar
S	10:45 AM-12:00 PM	MID-MORNING KEYNOTE SESSION: David Schwartz — Putting the "Wonder" Back in Wonderful: Math Happens When Children Wonder About What They Read	Merrill Hall, Asilomar

			Asilomar Conference	E GROUNDS—SATURDA	Y Sessions	
Fa	cility	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
FIRESIDE	Fred Farr Seats 140	Marcy Cook Mathematics Spoken Here! 6-8   PRS   101	Ron Brown Rock Your Math Class! PK-2   PRS   201	David Foster National Core Standards—WYTIWYG GI   INT   301	Harold Jacobs Mathematical Snapshots of 2010 GI   PRS   401	Leigh Childs Engaging Activities + Strategies = Numerically Nimble Students 3-5   INT   501
FIRE	Kiln Seats 100	Scott Farrand Developing Fraction Sense in Secondary Students 6-12   INT   102	Dan Meyer Math Curriculum Makeover GI   INT   202	Brad Fulton Graphic Organizers for Teaching Algebra 6-8   PRS   302	Laura Choate Effective Games and Practices that Lead to Student Success PK-2   INT   402	Kelley Hunter Math Intervention: Ideas That Work! 6-12   PRS   502
NORTH WD	Heather Seats 110	Gary Eisenberg Singing, Dancing, and Playing Through K-3 Math PK-2   INT   103	Jerry Cummins Equity as it is Related to Appropriate Levels of Rigor GI   PRS   203 LDRSHP	Barbara Novelli Stirring Up Place Value Understanding and Success 3-5   INT   303	Barbara Novelli Mixing Up Math Success for All Learners PK-2   INT   403	Heather Calahan Perspectives on California's New Math Standards GI   WkS   503
FIRESIDE	Oak Shelter Seats 36	Robert Loew Student Signaling Systems Ldrshp   INT   104	Darrell Manderscheid Level the Algebra Playing Field by Teaching Fractions 6-12   PRS   204	Rick West Preparing for Algebraic Success Using Function Machines PK-5   PRS   304	Modesto Tamez Integrating Proportions Across the Curriculum 6-12   WkS   404	Blanche Malankowski- Smith Every Number Wants To Be a Ten PK-2   INT   504
FIRE	Evergreen Seats 36	William Bintz Equity or Rigor: Which Comes First? GI   PRS   105	Sara Moore Algebra for All: Engage Students and Ensure Understanding 6-12   INT   205	Victor Selby Game Theory: Building a Universal Conceptual Model 8-12   PRS   305	Sara Moore Virtual Manipulatives? What Does Hands-on Really Mean? 3-8   INT   405	Vicki Vierra From Passive Spectator to Productively Engaged Tchr Ed   WkS   505
WOODS	Acacia Seats 36	Nancy Blachman Fun Ways to Learn Math Facts: Alternatives to "Drill and Kill" 3-5   INT   107	Stuart Moskowitz 2 Birthday Parties in 1 Day? Problem Simulations on TI-Nspire© 8-C   WkS   207	Daren Starnes Making Sense of Inference for Sampling and Experiments 8-C   INT   307	Daren Starnes Probability and Risk: Increasing Access via Simulation 8-12   INT   407	Brenda Romanek Powerful Problem Solving: Functions in Algebra II 8-12   WkS   507
Facts: Alternatives to "Drill and Kill" 3-5   INT   107  Brian Lim Instructional Strategies to Increase Cognitive Complexity 8-12   PRS   108		Instructional Strategies to Increase Cognitive Complexity	Deborah Lane Math Intervening: Lessons Learned PK-5   INT   208	Emiliano Gomez Filling Bottles with Water 6-12   INT   308	Wallace Etterbeek Probability Problems with Surprising Solutions 8-12   INT   408	David De Laby Making Linear Functions Meaningful 8-12   INT   508

#### **How To Read THE MATRIX**



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

#### **ASK ME!**

Need assistance on the day of the conference? Look for the attendees with "Ask Me" stickers.

#### **IMPORTANT NOTE**

Although you have likely planned your schedule ahead of time, it is important that you verify the session information with what appears in this book. The information here reflects some unavoidable changes. Some sessions have changed speakers and/or topics, some have changed times and some have changed location. Please be sure to check on the very last minute information that is posted in the Asilomar registration area.

			Asilomar Conference	E GROUNDS—SATURD	AY <b>S</b> ESSIONS	
Fa	cility	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
VIEW CRESCENT	Marlin Seats 40	Gloria Brown Brooks A Math Circle to Foster Equity in the ELL Math Classroom Tchr Ed   INT   109	Shelley Kriegler Making Sense of Slope and the Linear Function 6-12   INT   209	Michael Lutz CAMTE Business Meeting Tchr Ed   PRS   309	Joanne Rossi Becker Math Specialist Credential: Creating CA Programs Tchr Ed   PRS   409	Judith Kysh Performance Assessment as Support for Preservice Teachers Tchr Ed   INT   509
VIEW CF	Curlew Seats 40	Newcomers' Sessioin	April Goodman-Orcutt At-Risk Students: Technology and Nontraditional Curric. 6-8   INT   210	Marty Bonsangue Surprising Problems for Those Not Easily Surprised 6-12   INT   310	Bruce Cohen An Introduction to Projective Geometry 8-C   PRS   410	Karen Arth Equity for K-2 Students Through Lesson Study and Cognit. Guided Inst. PK-2   PRS   510
	Surf / Sand Seats 35	Jim Greco Common Core California Standards GI   PRS   114	Ann Carlyle Grids, Games and Arrays PK-2   WkS   214	Matthieu Hamo Standards-Based Mini Projects for All 3-8   INT   314	Luana Canty The Art of Units: Arrays, Areas and Angles 3-5   WkS   414	Kathy Morris Powers of Art: Multiplication for Middle Grades 3-8   WkS   514
GALAXY	Triton Seats 36	Loring Coes Picturing Proportions: Visual Tasks for Algebra and Geometry 6-12   PRS   115	Bob Petersen Algebra Connections: \$ All Students Can Learn Algebra 8-12   WkS   215	Sandy Silverman Big Math for Little Kids: Sorting and Patterns PK-2   WkS   315	Sheldon Erickson Conceptual Algebra: Teach More, Better, Faster 6-8   Wks   415	Marilynn Manderscheid Visual, Auditory, and Kinesthetic Cures for Scrambled Brains 3-5   WkS   515
SEA G	Nautilus E. Seats 30	Ed Zaccaro Five Real-Life Math Investigations that will Astound Students 6-12   PRS   116	Ed Zaccaro How We Are Lied To: Cheated and Manipulated by Statistics 6-12   PRS   216	Halcyon Foster An Active Mathematics Intervention 8-12   PRS   316	Kathleen Jalalpour Singapore Math: An Overview PK-5   INT   416	Staci Erlandson Block Explore Engaging Opportunities to Meet the Needs of ELL 3-5   INT   516
	Nautilus W. Seats 30	Priscilla Jo Elsner Empower Diverse Learners to Access the Math Spectrum Tchr Ed   INT   117	Cheryl Roddick Using the Singapore Bar Model to Solve Word Problems 3-8   INT   217	Henri Picciotto Escape from the Textbook! Sharing and Collaboration Network 6-12   PRS   317	Kim Kirley Building Number Sense in the K-1 Classroom PK-2   PRS   417	Victoria Brady Solar Calendar Geometry—It's All Angles! 6-12   WkS   517

#### Special Interest Strands

**CAMTE** The California Association of Mathematics
Teacher Educators brings together a set of speakers whose presentations focus on areas of interest to those involved in pre-service and in-service mathematics teacher education.

**LDRSHP** The leadership strand focuses on areas of interest to mathematics teacher leaders and coaches as well as district and site administrators.

TODOS In collaboration with TODOS: Mathematics for All!, an affiliate of NCTM, the sessions in this strand focus on issues related to equity and providing all students with high quality mathematics learning opportunities.

own models for classroom projects and activities. Each session is limited to 25 participants. There may be a small materials fee for some sessions.

#### **EVALUATION FORM**

Evaluations (page 41) returned during the conference will be entered in a drawing for FREE conference registration and on grounds housing for next year. The winners for this year's free registration and housing are Kimberly Kirley and Katie Sutton.



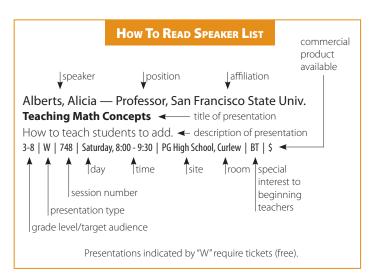
Interested in participating in a long-time tradition at Asilomar? Come join the caroling on the beach from 8:30-9:30 p.m. on Saturday night. Meet at the fireplace in the Phoebe A. Hearst Social Hall.

		Pacific Grove Mid	DOLE SCHOOL—SATURD	AY <b>S</b> ESSIONS	
Room	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
Library Seats 25	Peg Cagle Building Modular Origami = Building Spatial Reasoning 6-12   MITI   130	Linda Flood Flip Books, Magic Books and More! A Fun Way to Learn Math 3-5   MITI   230		Patricia Ritchie-Reese String Polyhedra with a Twist GI   MITI   430	Joan Zumwalt Let's Make Junk Sequences GI   MITI   530
Room 1 Seats 30	Jeanne Ramos Making Mathematics Accessible for All Students: Focus on ELLs 6-8   INT   131	William Zahner Designing Tasks and Norms for Cooperative Learning with ELLs 6-12   INT   231		Debra Coggins Strategies for Supporting English Learners' Algebra Success 6-12   INT   431	Allan Bellman Interactive Learning Objects on a Handheld Device! 8-12   INT   531
Room 4 Seats 30	Christopher Mackenzie Algebra Using Dynamic Illustrations on Excel Spreadsheets 8-C   PRS   133	Jennifer Dirksen Field Trips: Taking Math to the Real World 8-12   PRS   233		Julia Olkin What's Holding This Up? Using Underlying Math Structures 8-12   INT   433	Cynthia Raff Making Sense of Integer Operations 6-8   WkS   533
Room 5 Seats 30	Greisy Winicki-Landman Fun and Powerful Geometry Activities for All 6-12   WkS   134	Julie McNamara Beyond Pizzas and Pies: Supporting Fraction Sense 3-5   INT   234	Jeffrey Gernes Prepare Your Calculus Students for AP Success 8-12   PRS   334	Masha Albrecht Student Centered Projects to Enrich a Pre-Calculus Class 8-C   WkS   434	Jeff Tobes Math and Carpentry for the Young GI   INT   534
Room 6 Seats 30	Patricia Pernin Enhancing Collaborative Workgroups Through Targeted PD Ldrshp   INT   135 LDRSHP	Paul Rogers Smartboards for Dummies 6-12   PRS   235	Mardi Gale Aiming at Algebraic Intervention: Not Business as Usual 6-12   PRS   335	Elmano Costa Exponential Opportunities for ELLs with Comprehensible Input GI   WkS   435	Lisa Miller Working Together to Provide Opportunities for All Students GI   PRS   535
Room 7 Seats 30	Carol Dorf Mathematics and Poetry 6-12   WkS   136	Melissa Gwaltney How to Make "Extra-Credit" a Meaningful Learning Experience 8-12   INT   236	Peggy McLean It's a Tangram World 3-5   WkS   336	Lisbeth Sarcona Strategies for Discussion and Writing in Mathematics 3-5   INT   436	Lori Lambertson Geometry in Playgrounds 3-8   WkS   536
Room 10 Seats 30	Cliff Petrak Don't Slow Me Down with that Calculator, Part 1 3-8   PRS   137	Julie Yu Geometry of Nature: Exploring Patterns, Shapes and Symmetry 6-12   WkS   237	Brandon Matsumoto From Multiplication to Factoring: Strategies for Factoring 6-12   INT   337	Mark Freathy Building the Foundation for Algebra: Using Factors and Terms 6-12   INT   437	Jim Miller The Power of One in Teaching Fractions 6-8   INT   537
Room 12 Seats 30	Alice Ho Key Factors to Singapore World-Class Mathematics System Tchr Ed   PRS   139	Karen Arth It's All Connected: Similarity as a Geometric Building Block 8-12   WkS   239	John Martin A Piece of Pi 8-C   PRS   339	Bob McDonald The Importance of Language, Culture and Power in Mathematics GI   INT   439	Juanita Walker Building a Bridge from Elementary Mathematics to Geometry 3-8   WkS   539
Room 13 Seats 30		Joshua Cook Mathematical Modeling Using the TI-Nspire© 8-C   WkS   240	Joshua Cook Speaking Math 6-12   WkS   340	Jane Kise Differentiated Coaching: Every Teacher Helping Every Student Ldrshp   INT   440 LDRSHP	Eric Muller Exposing Exponents: Really Big and Small Numbers in Science 8-C   INT   540
Room 21 Seats 30	Rudy Neufeld Teach, Don't Tell: Understand, Don't Memorize 3-8   WkS   141	Rudy Neufeld Build It, Draw It, Write It, Talk It Own the Equity! 3-5   WkS   241	Emad Elias Closing the Achievement Gap with Math Simulations 3-8   WkS   341	Ivona Grzegorczyk Fun in Algebra Class! 6-12   WkS   441	Ivo Dinov Technology-Enhanced Mathematics, Probability and Statistics 8-C   INT   541
Room 22 Seats 30	Charles Biehl Empowering Students Outside the Box: Math Behind NUMB3RS 8-12   INT   142	Pam Mason Effective Practices in Algebra That Create Success for All 8-12   INT   242	Thomas Bjorkman Diamond Problems Across the Grades 3-8   WkS   342	Christl Yates Reaching All Learners: Math as a Second Language GI   INT   442	Cliff Petrack Don't Slow Me Down with that Calculator, Part 2 3-8   PRS   542

		Pacific Grove Mic	DDLE SCHOOL—SATURD	ay <b>S</b> essions	
Room	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
Room 24 Seats 30	Clay Dagler Turning Problems into Puzzles Using Graphic Organizers 6-12   PRS   143	Shairlyn Fish Revealing the Mystery of the Unknown for All Students 3-8   INT   243	Ruth Chamberlin What's Vocabulary Got to Do with Equity in Mathematics? 3-8   INT   343	Allan Bellman Differentiation in Your Algebra Class is Easier Than You Think 8-12   INT   443	Bix Beeman Scaffolding a Square = Success^2 8-12   WkS   543
Room 25 Seats 30	Richard Kalman Math Contests Build Better Students (and Teachers) Nine Ways 3-8   PRS   144	Richard Kalman Are You Smarter Than a 5th Grader (2010 edition)? 3-8   INT   244	Barbara Shreve Developing Linear Relationships 6-8   WkS   344	Renee Goularte Giant Story Problems: Visualizing the Language of Math PK-5   INT   444	Nancy McGuire-Paulson Level the Playing Field for All Using Math Games! 6-12   WkS   544
Room 26 Seats 30	Michael Fenton Imagine: Wikipedia for Mathematics Assessment Questions 6-12   PRS   145	Nancy McGuire-Paulson Fun Factoring: Strategies that Make Sense to All Students! 3-8   WkS   245	Todd CadwalladerOlsker Making Negatives Tangible Before and During 6th Grade 3-5   INT   345	Diane Resek Developing Deductive Thinking Before High School 3-8   INT   445	Michelle Beyronneau Accessing Algebra I Through Multiple Representations 6-12   INT   545
Room 27 Seats 30	Christine Latulippe Improving Achievement Through the Power of Number Sense 6-8   INT   146	Andre Mathurin Ways to Naturally Revisit Geometry Proofs in Algebra Class 8-12   INT   246	Dave Youngs Teach Arithmetic Using Algebra for Exponential Learning 3-5   INT   346	Erich Zeller The Number Line? Animate it to Teach and Reach PK-2   WkS   446	Maria Hirsch Practical Solutions to Make Math Accessible to All Learners 6-8   INT   546
Room 28 Seats 30	Ron Carlson Engage Your Students with Real Data 8-12   PRS   147	Zhonghe Wu Differentiating Instruction: A Way to Close the Learning Gap K-8   PRS   247	Karie Gladis Practical Applications: Differentiation Strategies for Math GI   INT   347	Agnes Tuska Empowering Teachers to Ensure Educational Access to Students Ldrshp   INT   447	Linda Gojak Life's Too Short for Long Division 3-8   PRS   547
Room 29 Seats 30	Donna Goldenstein Mathematics and the Arts: Thinking and Reasoning Through Art 3-5   PRS   148	Helen Smiler The Power of Exponents to Create Mathematical Opportunities 3-8   INT   248	Jody Anderson Who, What, When & How to Assess K-1 Students Efficiently! New! PK-2   INT   348	Janet Gillespie A Number Sense Approach to X Facts = Success for All 3-5   PRS   448 LDRSHP	Christopher Casey Number Sense and the Days of School 3-8   INT   548
Room 31 Seats 30	Carrie Carpenter Hot Off the Press! Behind that Math Concept is a Great Story PK-5   INT   149	Carrie Carpenter Activities for Making Algebraic Reasoning Engaging 6-8   PRS   249 B	Keith Smith Going Beyond Algorithms for Area of Polygons 3-8   WkS   349	Carleen Watts Fractions: For Those Who Need to See It to Believe It 3-8   INT   449	
Room 32 Seats 30	Randy Guzik Building a Winning AP Calculus Team 8-C   FG   150	Leslie Good Teaching the Standards Through Stories PK-2   INT   250	Glenda Wilkins A Logical Approach to Proofs: All Students Achieve Success 8-12   INT   350	Tim Erickson Mathematical Modeling in "Regular" Stats 8-C   INT   450	Robert Preston Room for Alternative Algorithms: Multiplication & Division 3-8   WkS   550
Room 33 Seats 30	Shuhua An Model-Strategy-Applic. Approach to Assess Diverse Student Math Thinking 3-8   INT   151	Lynda Holman Graphs: More Than Pretty Pictures 3-5   WkS   251	Jamie Collie Logarithms: Much More Than Just a Button on the Calculator! 8-12   INT   351	Tom Murray How Likely Is It? Probability Games of Fun and Chance 3-8   WkS   451	Melanie Wenrick EEEK! There's a Buggy Algorithm in My Math Class! PK-2   INT   551
Auditorium Seats 700	Brad Fulton Losing Your Marbles: Function Fun for Everyone 3-8   PRS   153	Steven Leinwand Glimpses of Instructional Excellence GI   PRS   253	Philip Daro Common Core Standards: What is the Difference? GI   PRS   353  LDRSHP	Marcy Cook Algebraic Experiences for All 3-5   PRS   453	Michael Serra Investigations in Geometry for 2010 8-12   INT   553

#### **CONFERENCE EVALUATION FORM**

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### Albrecht, Masha — Math Teacher, Berkeley Unified SD **Student Centered Projects to Enrich a Pre-Calculus Class**

The presenters share projects that connect directly to topics in the pre-calculus curriculum, but use real data and information developed by students. Some projects involve collecting data from a pendulum, bouncing ball, or cooling water. In others, students design the problems and outcomes. Attendees will choose which projects to focus on during the session. You will walk away with ready-to-use handouts and samples of student work. Bring a Tl-83 or Tl-84 calculator if you can.

8-C | WkS | 434 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 5 Co-presenter: Dan Plonsey — Math Teacher, Berkeley HS

### An, Shuhua — Professor, Director of Graduate Program in Math Education, CSU Long Beach

#### Using Model-Strategy-Application Approach to Assess Diverse Student Math Thinking

The session demonstrates how to use a research-based structured assessment of Model-Strategy-Application (MSA) approach to gauge students' mathematics thinking in culturally and linguistically diverse K-8 classes. You will learn how to analyze and identify students' diverse thinking effectively using sample student MSA work and learn methods of developing students' conceptual understanding, procedural fluency, and competence in problem solving using this visual, structured MSA assessment tool.

3-8 | INT | 151 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 33 Co-presenter: Zhonghe Wu — Professor, National Univ

### Anderson, Jody — Kindergarten Teacher, PARC President, Roseville City SD

#### Who, What, When & How to Assess K-1 Students Efficiently! New!

Who, what, when, why and how to assess students in the most efficient manner. Explore how to assess your students for standards-based report cards, differentiated instruction and intervention. Using a center-based approach, you will assess your students in a time efficient manner with all students engaged. Included: ideas for instruction, intervention and homework; making an assessment tool box to use with K-1 standards, and ideas for organizing assessment data. New Management Ideas!

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

### Arth, Karen — Director, Region VII Math Project, Mentor Teacher It's All Connected: Similarity as a Geometric Building Block

Start with a rubber band activity that establishes a conceptual basis for understanding similarity. Next solve some rich, interesting problems using similarity. After developing the notion of expanding and reducing figures, use it to develop right triangle trigonometry. Then extend similarity for plane figures to include area comparisons, and conclude with surface area and volume comparisons for three-dimensional figures.

8-12 | WkS | 239 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 12 | \$

### Equity for K-2 Students Through Lesson Study and Cognitively Guided Instruction

Watch videos of children excited about learning mathematics. Hear teachers share their process of collaborating over time to develop a research lesson based upon students' thinking. See a classroom in which students are encouraged to solve problems using strategies that make sense to them and often using multiple strategies. Find out about how lesson study blended with cognitively guided instruction can provide the environment that allows all students to experience success in mathematics.

PK-2 | PRS | 510 | Saturday, 3:30 - 5:00 | Asilomar, Curlew
Co-presenter: Rajee Amarasinghe — Mathematics Faculty, CSU Fresno

### Beeman, Bix — Teacher, Merced Union HSD Scaffolding a Square = Success^2

A rich and thematic set of problems (developed by the California Mathematics Project and the MPDI) illustrate effective scaffolding of area and perimeter concepts. At their upper level, an elegant solution to the area maximization problem highlights the value of completing the square. Taking this experience back into the classroom and incorporating manipulatives has yielded tips to improve instruction and increased student success when analyzing conic sections.

8-12 | WkS | 543 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 24 | BT

#### Bellman, Allan — Lecturer, UC Davis

#### Differentiation in Your Algebra Class is Easier Than You Think

See how scaffolding and multi-level material can be used to create a differentiated classroom. Learn how to create differentiated material and use this material during interactive lectures and group work sessions. Learn techniques, with or without technology, to quickly assess individual readiness at the start of a class period, and then use this information to form productive student groups. This easy form of differentiation can help minimize discipline problems and provide success for all.

### 8-12 | INT | 443 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 24 | BT Interactive Learning Objects on a Handheld Device!

Many of the math manipulative and computer learning tools that we teach with are now available on the TI-Nspire® calculator. Experience some of what's available for algebra. Work with virtual algebra tiles, algebra balances, sliders that change function parameters, and lots more. Discuss how this type of learning objects can aid student achievement. No more hassles trying to schedule the computer lab, get online, or clean-up manipulatives. You don't need to know much about the calculator!

8-12 | INT | 531 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 1

### Beyronneau, Michelle — Math Coach/Teacher, San Bernardino City USD

#### **Accessing Algebra I Through Multiple Representations**

Participants will engage in activities designed to develop a rich understanding of the connections between a table, graph, rule, and context. After solving challenging problems and exploring the ways connections can be used to enrich learning, teachers will analyze how emphasizing multiple representations can help to develop students into powerful problem-solvers. Teachers will receive ideas and materials that they can use in their own algebra classrooms.

6-12 | INT | 545 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 26

#### Biehl, Charles — Mathematics Instructor, MD Empowering Students Outside the Box: Math Behind NUMB3RS

This session uses clips from the CBS crime drama NUMB3RS and a walk-through of a sample of novel classroom activities based on the mathematics used in the show. Doing mathematics in realistic context serves to draw a higher interest level from a wider variety of students, and the topics themselves tend to be extensions of existing curriculum or even novel mathematics. This has been observed to spark traditionally non-inspired students to become more active math doers and appreciators.

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

### Bintz, William — Associate Professor, Ohio **Equity or Rigor: Which Comes First?**

This session discusses the interrelationship between equity and rigor. The definition of rigor one chooses determines which students appear to succeed and which do not. To achieve equity the definition of rigor in mathematics must be carefully considered. We will present definitions of rigor from a variety of sources, share examples of rigorous, classroom-based mathematical tasks, and discuss implications of these definitions and tasks for increasing equity in the mathematics classroom.

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

Co-presenter: Sara Moore — Director of Mathematics, ETA Cuisenaire

### Bjorkman, Thomas — Mathematics Coach **Diamond Problems Across the Grades**

See how to use this effective teaching strategy to reinforce operations with whole numbers, fractions, decimals and integers to show the relationships between multiplying, dividing, adding and subtracting. We will show how to introduce this strategy in the lower grade levels and how to progress it through middle school math content and into algebra—culminating with how to use diamond problems with polynomials, factoring, and completing the square.

3-8 | WkS | 342 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 22Lab | BT Co-presenter: Caren Friedman — Teacher, Harvest MS

#### **PROGRAM CHANGES**

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

### Blachman, Nancy — Math Instructor, Lincoln ES/Princeton Day Fun Ways to Learn Math Facts: Alternatives to "Drill and Kill"

Foster delight by providing engaging, hands-on activities, games, magic tricks, puzzles, and problems that develop children's basic math skills while engaging them in higher-level thinking. No need for flashcards, worksheets, and other repetitious material likely to turn many young learners off mathematics. Nancy Blachman, founder of the Julia Robinson Mathematics Festival (www.jrmathfestival.org) and the web site MathDelights.org, teaches after-school Mathemagic classes and summer camps. Dr. Lynne Ipina inspires middle school math teachers at the University of Wyoming.

3-5 | INT | 107 | Saturday, 8:00 - 9:00 | Asilomar, Acacia Co-presenter: Lynne Ipina

#### Bonsangue, Marty — Professor of Mathematics, CSU Fullerton **Surprising Problems for Those Not Easily Surprised**

This session presents mathematics problems that have unexpected, but not trick solutions. The problems should be accessible to many MS and most HS and college level students, and are excellent for building students' mathematical power, interest, and self-esteem. Problems are aligned with major state and national topic strands, including number sense, algebra, geometry, and problem-solving. Classroom-ready handouts provided for everyone.

6-12 | INT | 310 | Saturday, 11:00 - 12:00 | Asilomar, Curlew

Co-presenter: Jerry Gannon — Professor of Mathematics, CSU Fullerton

### Brady, Victoria — Staff Educator, The Exploratorium Solar Calendar Geometry—It's All Angles!

Explore the geometry of the sky as we model the orbital planes and relative positions of the sun and moon through the seasons and discuss the 18.6 year "lunar standstill." We will make a "pinhole analemma" and design our own "ancient observatory." This workshop is based on observations and activities done at the Cesar Chavez Memorial Solar Calendar in Berkeley, California.

6-12 | WkS | 517 | Saturday, 3:30 - 5:00 | Asilomar, Nautilus West | BT

### Brown, Ron — Author/Songwriter/Consultant, Intelli-Tunes **Rock Your Math Class!**

Teach time, money, place value, fractions, number sense, shapes and much more with the power of classroom tested songs, games, activities, rhythm and rhyme. Ignite your teaching, energize your classroom, and accelerate achievement. Create equity in teaching mathematics with the power of music. Handouts! Prizes!

PK-2 | PRS | 201 | Saturday, 9:30 - 10:30 | Asilomar, Fred Farr Forum | BT | \$
Co-presenter: Nancy Brown — Teacher Consultant

# Brown Brooks, Gloria — Teacher, San Benito COE A Math Circle to Foster Equity in the English Language Learner Math Classroom

Math Circles can provide pedagogical as well as content knowledge to help insure equity in the classroom. Many of our middle school teachers are looking for new ways to develop lessons for English language learners. This session will provide ways to bridge the gap in middle school mathematics.

Tchr Ed | INT | 109 | Saturday, 8:00 - 9:00 | Asilomar, Marlin Co-presenter: Angel Rivera

### CadwalladerOlsker, Todd — Assistant Professor, CSU Fullerton Making Negatives Tangible Before and During 6th Grade

This session will introduce an activity designed to make negative numbers tangible to students through a simple game. By playing the game, students (and teachers) can discover the usual rules for addition and subtraction of positive and negative numbers in a natural and fun way.

3-5 | INT | 345 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 26

### Cagle, Peg — Teacher, Los Angeles Unified SD **Building Modular Origami = Building Spatial Reasoning**

Extend your students' understanding of three-dimensional geometry through an examination of the underlying structure and interrelations of polyhedra, including surface and dihedral angles, axes and planes of symmetry, and the concept of duality, by creating a variety of captivating modular paper-folded models. No previous origami experience required.

6-12 | WkS | 130 | Saturday, 8:00 - 9:00 | PG Middle School, Library

### Calahan, Heather — Lecturer in Mathematics and Executive Director of Curtis Center, UC Los Angeles

#### **Perspectives on California's New Math Standards**

Come for an introduction to the new standards. You'll hear from a few members of the Academic Content Standards Commission as they provide their insights into the standards, and how they might change the mathematical life in CA classrooms from K-12. These standards describe a carefully ordered mathematical development and emphasize depth over breadth, mathematical habits of mind, and applications.

Gl | WkS | 503 | Saturday, 3:30 - 5:00 | Asilomar, Heather Co-presenter: Scott Farrand

### Canty, Luana — Curriculum Specialist, Pearson The Art of Units: Arrays, Areas and Angles

Students' conceptual understanding of multiplication starts with the visual representation of an array. But the square units in the arrays can teach so much more! From a visual tool of a single square unit we can teach measurement that builds understanding through patterns to multiplication, area and perimeter and more. Come and see how creatively and artistically unit-building can be used to visually teach math concepts.

3-5 | WkS | 414 | Saturday, 1:30 - 3:00 | Asilomar, Surf & Sand

#### Carlson, Ron — Professor, Eastern Michigan Univ Engage Your Students with Real Data

Challenge your students with real data and technology. This session will generate data that can be modeled with a step function. The data is collected with a TI-Nspire® and a CBR2®. The participants will analyze the data, discover a function that models the data and explore the effects of several of the variables.

8-12 | PRS | 147 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 28

#### **SPEAKER PROPOSALS**

Interested in presenting at the 2011 Asilomar Mathematics Conference? Submit speaker proposals on-line by April 10, 2011 at www.cmc-math.org/activities/north\_speakers.html

### Carlyle, Ann — Supervisor, The Gevirtz School, UC Santa Barbara

#### **Grids, Games and Arrays**

In this K-2 workshop, the tens frame is used as a way for students to see a number of objects as composed of fives and extras. The arithmetic rack (rekenrek) is a visual and physical tool for thinking about number combinations and differences. We will explore some engaging games that build number sense using these kinds of grids and arrays. The supplies required for the classroom are simple to make and/or readily available.

PK-2 | WkS | 214 | Saturday, 9:30 - 10:30 | Asilomar, Surf & Sand | BT

#### Carpenter, Carrie — Math Consultant

#### Hot Off the Press! Behind that Math Concept is a Great Story

Come join in a fun and practical session that has the best new children's literature from 2008-10. Literature helps link math concepts to real-world applications, and helps reluctant learners achieve. Experience the math and literature connection through activities that are motivating, simple, and relevant.

PK-5 | INT | 149 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 31 | \$

#### **Activities for Making Algebraic Reasoning Engaging**

Algebra remains the pathway to access for advanced math classes, yet the teaching of algebraic reasoning starts early. Engaging middle school learners into algebraic reasoning requires more than paper, pencil, and textbooks. Participants will engage in student-centered algebra activities, hands-on lessons, literature selections, and games. 6-8 | PRS | 249 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 31 | BT | \$

### Casey, Christopher — Curriculum Developer Number Sense and the Days of School

This session is for 4th, 5th or 6th grade teachers to reinforce number sense on a daily basis. Using about 5 minutes a day, students discuss aspects about the day of school, such as its factors. On the 24th day of school students might say that 24 is a multiple of 1, 2, 3, 4, 6, 8, 12, and 24, it's even and composite and it is 2/15 of the school year. This daily activity is set up by several activities that will be presented: using Pascal's triangle, 100 charts, Venn Diagrams, etc.

3-8 | INT | 548 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 29 | \$

### Chamberlin, Ruth — Secondary Math Specialist/Instructional Coach, Olympia SD, Vancouver, WA

#### What's Vocabulary Got to Do with Equity in Mathematics?

Struggling students often lack the requisite math vocabulary. This session will focus on key components of embedded vocabulary development. Practical strategies and games to increase mathematical vocabulary will be shared. Many of these strategies can be implemented next week.

3-8 | INT | 343 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 24 Co-presenter: Shairlyn Fish — K-4 Teacher, Moses Lake SD

#### Childs, Leigh — Consultant

#### **Engaging Activities+Strategies = Numerically Nimble Students**

Work smarter, not harder to improve numeric competence. These strategies promote greater participation and sense making, ideal for intervention success and "family math" efforts. A ready-for-immediate-use handout includes high-interest activities to improve students' performance and enhance mathematical reasoning abilities.

3-5 | INT | 501 | Saturday, 3:30 - 5:00 | Asilomar, Fred Farr Forum | BT

#### Choate, Laura — Teacher, Iowa Street School, Fallbrook Union Elem SD

#### **Effective Games and Practices that Lead to Student Success**

Be more efficient and selective about time devoted to number. A ready-to-use handout of highly engaging, repeatable activities and instructional strategies will help you enhance number sense and build confidence in your students.

PK-2 | INT | 402 | Saturday, 1:30 - 3:00 | Asilomar, Kiln

### Coes, Loring — Teacher, Rocky Hill School, RI Picturing Proportions: Visual Tasks for Algebra and Geometry

Proportional thinking is at the heart of algebra, geometry, calculus and of everyday mathematics, too, yet many students are uncomfortable with their own proportional thinking skills. Here are some visual activities that can develop skill and confidence in this critical area of reasoning for middle and high school students.

6-12 | PRS | 115 | Saturday, 8:00 - 9:00 | Asilomar, Triton

### Coggins, Debra — Math Coach, Debra Coggins & Associates Strategies for Supporting English Learners' Algebra Success

English learners, and other students, benefit from instruction that creates and maintains access by incorporating multiple representations, frequent formative assessments, and opportunities to "talk math." Specific ELL teaching strategies for mathematical concept and language development, along with classroom routines that increase engagement, will be presented and discussed, using the context of writing and solving algebraic equations.

6-12 | INT | 431 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 1

### Cohen, Bruce — Math Teacher, Lowell HS, San Francisco Unified SD

#### **An Introduction to Projective Geometry**

We will introduce the beautiful topic of projective geometry. We will not assume any prior study of projective geometry, but our tour will include several nice theorems. Studying projective geometry gives teachers a way to reconsider the concept of infinity in a geometric setting. What is a geometry? As a practical concern, projective geometry comes into play in the mathematics of displaying three dimensional objects on a two dimensional computer screen.

8-C | PRS | 410 | Saturday, 1:30 - 3:00 | Asilomar, Curlew

Co-presenter: David Sklar — Lecturer, San Francisco State Univ

### Collie, Jamie — Math Teacher, Marin Academy Logarithms: Much More Than Just a Button on the Calculator!

This session will provide opportunities to enrich a unit on logarithms. We will begin with a technique for estimating log values by hand. In addition to demystifying the values that come out of the calculator, the activity reinforces previous topics while setting up the rules of logarithms. After some numerical experimentation we will break out basic paper slide rules and both discover and explain how simple looking devices can do calculations so quickly. Classroom ready digital files included.

8-12 | INT | 351 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 33

### Cook, Joshua — Faculty Advisor, UC Los Angeles Mathematical Modeling Using the TI-Nspire®

This workshop will focus on using the multiple representation functionality of the TI-Nspire® to model real world situations. There will be an emphasis on algebra and calculus.

8-C | WkS | 240 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 13 | BT

Speaking Math

A language-based approach to the instruction of math. Research shows that a more interactive classroom is an effective way to build student mastery. Teachers should use language as a "social tool for collective thinking." We will focus on making talk central to learning and knowing, especially for English language learners. We will practice giving students access to academic concepts by talking through their definitions with each other and by forming definitions using familiar language and concepts.

6-12 | WkS | 340 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 13 | BT

### Cook, Marcy — Math Consultant/Author Mathematics Spoken Here!

Provide a rich mathematical environment focusing on communication, problem solving, and reasoning. Utilize a math menu of starters and independent task time to ensure that the language of math is emphasized along with textbook problems. Experience simple tools for student participation and constant teacher assessment. Practical ideas to put to immediate use in the classroom.

### 6-8 | PRS | 101 | Saturday, 8:00 - 9:00 | Asilomar, Fred Farr Forum | BT Algebraic Experiences for All

Provide algebraic thinking experiences to involve all students in meaningful mathematics. Set up a math menu to incorporate algebraic thinking into your daily routines: as starters, mental math, stumpers and/or independent task time. See patterns, deal with unknowns or variables, work with the equation as a balance and look for relationships. Practical ideas to put to immediate use in your classroom to develop mathematical competence and confidence.

3-5 | PRS | 453 | Saturday, 1:30 - 3:00 | PG Middle School, Auditorium | BT

#### Costa, Elmano — Professor, CSU Stanislaus/TODOS Exponential Opportunities for English Language Learners with Comprehensible Input

Yes they can! English learners can meet the high expectations with specially designed instruction. This workshop shows you how to plan and deliver lessons that are comprehensible to English language learning students at every level. It shows how to integrate the hallmarks of quality instruction for English language learning students. The highlight of this session is a lesson taught in another language that illustrates how to make content accessible and comprehensible even to students who speak no English.

GI | WKS | 435 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 6 | BT

#### NAME BADGES!

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

#### Cummins, Jerry — Past President, National Council of Supervisors of Mathematics

#### Equity as it is Related to Appropriate Levels of Rigor

Using Professional Learning Communities so that every teacher addresses gaps in mathematics achievement expectations for all student populations and every teacher works interdependently in a collaborative learning community to erase inequities in student learning.

GI | PRS | 203 | Saturday, 9:30 - 10:30 | Asilomar, Heather

#### Dagler, Clay — Teacher, Luther Burbank HS, Sacramento City Unified SD **Turning Problems into Puzzles Using Graphic Organizers**

Two graphic organizers will be used in this session. The first is a mathematical cloze where students will be given a worked out problem with missing parts. This activity turns most math problems into puzzles. The second organizer will be a flow chart which forces students to think forward and backwards. It will be used with topics including long division, solving equations, and exponent laws. However, these organizers can be used to support most topics in mathematics.

6-12 | PRS | 143 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 24

### Daro, Philip — Mathematics Educator Common Core Standards: What is the Difference?

Forty-eight states have signed on to have common standards written in mathematics and English language arts. So what? How will common standards change anything for teachers and students? The speaker was a member of the writing team that led the development of the standards for mathematics. He will show some of the key points of difference in the substance of the standards, explain why they are the way they are and discuss how the standards can make a difference for teachers.

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

### De Laby, David — Math Instructor, CSU Dominguez Hills **Making Linear Functions Meaningful**

Most of the Algebra I curriculum revolves around linear functions. Taking a meaningful approach to this idea can help student understanding of graphing linear functions, slope, intercept, linear systems, etc. It also can make solving linear equations more meaningful to students. You'll get a sampling of problems that can enhance your instruction and make Algebra I accessible to all of your students.

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

#### **IMPORTANT NOTE**

Although you have likely planned your schedule ahead of time, it is important that you verify the session information with what appears in this book. The information here reflects some unavoidable changes. Some sessions have changed speakers and/or topics, some have changed times and some have changed location. Please be sure to check on the very last minute information that is posted in the Asilomar registration area.

### Dinov, Ivo — Professor of Statistics and Neurology, UC Los Angeles

#### **Technology-Enhanced Mathematics, Probability and Statistics**

Statistics Online Computational Resource (SOCR) components will be demonstrated. Distributions: interactive graphs and calculators; Experiments: virtual analogs of popular games; Analyses: collection of common web-accessible tools for statistical data analysis; Games: interfaces and simulations to real-life processes; Modeler: tools for distribution, polynomial, Fourier and Wavelet model-fitting and simulation; and Graphs, Plots and Charts: comprehensive web-based tools for exploratory data analysis. Visit our web site at:

#### http://www.socr.ucla.edu

8-C | INT | 541 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 21Lab | BT Co-presenter: Nicolas Christou — Professor of Statistics, UC Los Angeles

#### Dirksen, Jennifer — Teacher, San Mateo HS, San Mateo Union HSD Field Trips: Taking Math to the Real World

Come learn about field trips that have excited and motivated our students in the last few years. We'll show you how we plan, run, assess, and support the learning of all our students through projects like scavenger hunts on UC campuses, geometry walks in the city, study sessions in university libraries, and crazy competitions at Calculus Camp. Hear how we use the trips to open channels for dialogue about college, and leave with the resources you need to lead your own!

8-12 | PRS | 233 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 4 Co-presenter: Jinna Hwang — Teacher, Francis Polytechnic HS

### Dorf, Carol — Math Teacher, Berkeley HS, Berkeley Unified SD **Mathematics and Poetry**

Mathematics and poetry are often seen as opposed to each other. However both seek the essence of experience, and compress our understandings into often-elegant forms. Writing poetry about mathematics increases understanding of mathematics, enriches poetic vocabulary, and integrates feeling into cognitive understandings. This workshop will present poems about mathematics and a bibliography. Teachers will experiment with writing games and exercises that are effective in the classroom. 6-12 | WkS | 136 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 7

#### Eisenberg, Gary — Math and Language Arts Enrichment Teacher, Eugene Padan Elem, Vacaville Unified SD Singing, Dancing, and Playing Through K-3 Math

Participants will not only have fun at this session, but they will leave with practical, ready-to-use activities for Monday that will get the following math concepts into student long term memory: writing numbers, shapes, even and odd, doubles, place value, time, skip counting, and multiplication. We will relearn some of Ron Brown's great math songs as well as learn some great cooperative learning number games and how to teach extended number patterns as a basis for eventual times table mastery.

PK-2 | INT | 103 | Saturday, 8:00 - 9:00 | Asilomar, Heather | BT

#### **ASK ME!**

Need assistance on the day of the conference? Look for the attendees with "Ask Me" stickers.

### Elias, Emad — Mulholland MS, Los Angeles Unified SD Closing the Achievement Gap with Math Simulations

In this engaging hands-on session, you will enter a 21st century classroom where you learn math using online simulations. Participants will become aware of the potential power of simulations for teaching math concepts using an inquiry-based approach. They will become familiar with various simulations and their correlation to the state math standards. Participants will gain an in-depth understanding of the simulations' implementation in the classroom.

3-8 | WkS | 341 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 21Lab

#### Elsner, Priscilla Jo — Math Teacher Leader, Oakland Military Institute College Preparatory, Oakland **Empower Diverse Learners to Access the Math Spectrum**

Questioning skills, relational thinking through talking and writing math, formative multi-level investigations and tasks, reengagement ideas based on student work, how the brain learns, and the real world of students will be shown to create equal opportunities for diverse learners to access material, to empower students in use of multiple strategies for greater achievement and to develop tools for higher levels of thinking and problem solving.

Tchr Ed | INT | 117 | Saturday, 8:00 - 9:00 | Asilomar, Nautilus West | BT

### Erickson, Tim — Teacher, Lick-Wilmerding HS Mathematical Modeling in "Regular" Stats

What does modeling look in this setting? We'll look at (and do) tasks from our stats class that are designed to help students understand how to use symbolic, tabular, and graphical tools to describe concrete relationships. The class makes extensive use of software to support students in data analysis. We'll discuss what effect that has, and see student work.

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

#### Erickson, Sheldon — Teacher, Computech MS, Fresno Unified SD

#### Conceptual Algebra: Teach More, Better, Faster

Research shows that students learn best when they gain conceptual understanding before moving to procedural recipes. Explore handson investigations and video animations that develop conceptual understanding and lead to abstract procedures. The session will focus on solving equations and linear functions. Get materials, learn how to facilitate active learning, and how to integrate conceptual instruction into you classroom.

6-8 | WkS | 415 | Saturday, 1:30 - 3:00 | Asilomar, Triton | BT

# Erlandson Block, Staci — Coordinator II, Ventura COE Explore Engaging Opportunities to Meet the Needs of English Language Learners

Come explore opportunities for educators to refine their skills for teaching English learners. Discover how to create robust lessons with research-based strategies that will help your students improve their academic vocabulary and foster higher order thinking skills. Participants will observe and discuss GLAD and Kagan Cooperative Learning strategies that promote language acquisition and development. Hands-on experiences will further empower teachers and students to increase math proficiency.

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

### Etterbeek, Wallace — Professor of Mathematics, CSU Sacramento

#### **Probability Problems with Surprising Solutions**

We will look at several elementary problems in probability, including some of the very first considered. Included in these will be several versions of the Monty Hall Problem. We will use geometric probability to introduce and develop conditional probability and then use conditional probability to obtain some surprising solutions to our problems.

8-12 | INT | 408 | Saturday, 1:30 - 3:00 | Asilomar, Toyon

#### Farrand, Scott — Professor of Mathematics, CSU Sacramento **Developing Fraction Sense in Secondary Students**

In the same way that there is number sense that goes beyond skill with the algorithms for whole numbers, there is much to know about fractions that is not included in instruction in the algorithms for fractions. We'll look at sequenced sets of exercises that help students to develop fraction sense. Designed especially as warm-up exercises for algebra students with weaknesses in fraction skills, these exercises are puzzles that promote reasoning and a deeper understanding of fractions.

6-12 | INT | 102 | Saturday, 8:00 - 9:00 | Asilomar, Kiln
Co-presenter: Debra Stetson — Project Director, Math Project,
CSU Sacramento

### Fenton, Michael — Teacher, Fresno Christian Schools, Fresno Imagine: Wikipedia for Mathematics Assessment Questions

Imagine having free access to a rich, growing bank of multiple choice and open ended questions for every mathematics course taught in secondary school! It takes time to create truly high quality questions of both types. Stop spinning your wheels in isolation. I'll cast the vision for assembling an organized, standards-based, peer-reviewed, and peer-improved pool of questions. Think "Wikipedia" for mathematics assessment! No advanced tech skills required.
6-12 | PRS | 145 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 26 | BT

### Fish, Shairlyn — Teacher, Larson Heights, Moses Lake SD 161 Revealing the Mystery of the Unknown for All Students

Looking for ways to help all students develop concepts? Participants will explore many rich and proven mathematical tasks to help students develop and deepen their conceptual thinking. Lessons are adaptable for students of varied abilities.

3-8 | INT | 243 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 24 Co-presenter: Ruth Chamberlin — Math Coach, Olympia WA SSD

#### Flood, Linda — Teacher, E. Ruth Sheldon ES, Fairfield-Suisun Unified SD Flip Books, Magic Books and More! A Fun Way to Learn Math

Flip books are a fun way to help students learn vocabulary, formulas, and concepts. These books also act as a reference tool. This Make-It, Take-It workshop will provide you an opportunity to learn to make the books as well as to see a variety of ways that they can be used in a classroom.

3-5 | MITI | 230 | Saturday, 9:30 - 10:30 | PG Middle School, Library

# Foster, David — Executive Director, Silicon Valley Mathematics Initiative National Core Standards—WYTIWYG

What might be the out growth from the new National Core Standards? How might they influence summative and formative assessments? How are the standards being addressed, embraced and what innovations are occurring in other states? How might curriculum change? How might teaching and learning change? This session will address these questions and share work and products from several states who are embracing the new core standards.

GI | INT | 301 | Saturday, 11:00 - 12:00 | Asilomar, Fred Farr Forum

### Foster, Halcyon — Assistant Professor, San Francisco State Univ An Active Mathematics Intervention

This session will describe a summer mathematics intervention program for students entering high school who have previously struggled with mathematics. One hundred students from the San Francisco Unified School District attended a five-week mathematics program that focused on algebra, geometry, and probability and statistics, where each lesson was based on a hands-on activity. The session will address the curriculum and its philosophy, the successes, and the challenges that students and teachers faced.

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

#### Freathy, Mark — Math Teacher, Pinkerton MS, Elk Grove Unified SD

#### **Building the Foundation for Algebra: Using Factors and Terms**

In this session teachers will discuss the development of math language that supports a greater conceptual understanding of Algebra. Teachers will be given strategies and designed lessons that promote the use of factors, terms, and decomposition. These strategies will enhance student understanding of integers, fractions, and solving equations. Teachers will leave this session with ideas and worksheets that they can use in the classroom to improve their instruction Monday morning.

6-12 | INT | 437 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 10 | BT Co-presenter: Brandon Matsumoto — Math Teacher, Pinkerton MS

### Fulton, Brad — Teacher, Mistletoe ES, Enterprise Elem SD Losing Your Marbles: Function Fun for Everyone

This clever and engaging activity has made functions accessible for all students from 4th grade through high school algebra. They can see, understand, and discuss concepts such as slope, y-intercept, domain, and range. The slope-intercept formula flows logically from the visual demonstration. Extensions allow the illustration of positive, negative, zero and fractional slopes, and line of best fit. A comprehensive handout is available.

3-8 | PRS | 153 | Saturday, 8:00 - 9:00 | PG Middle School, Auditorium | BT

#### **Graphic Organizers for Teaching Algebra**

Learning algebra can be challenging. These classroom-proven graphic organizers have helped students gain mastery of both concepts and computation. Great for regular education and struggling students, this presentation will help you guide your students to greater success in both algebra and algebra readiness courses. A complete handout is provided.

6-8 | PRS | 302 | Saturday, 11:00 - 12:00 | Asilomar, Kiln | BT

### Gale, Mardi — Senior Research Associate, WestEd Aiming at Algebraic Intervention: Not Business as Usual

Aim at intervention from a different angle. Learn about essential elements for algebraic intervention by examining a successful, conceptually based program that is standards-aligned and supports struggling students through modules that target common barriers to success in algebra and provides teacher support for each lesson. Flexible implementation for grade levels and schedules. Includes number theory, exponents, rational numbers, equations and formulas, proportional reasoning.

6-12 | PRS | 335 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 6 | \$

#### Gernes, Jeffrey — Math Teacher, Montclair College Preparatory, Van Nuys **Prepare Your Calculus Students for AP Success**

An AP Calculus AB & BC teacher with ten years of experience, I will share some insights and techniques I have developed which have helped my students succeed on the AP Exam. I will discuss curriculum choices for both courses, with an emphasis on the strategies I use to motivate and prepare students for the AP Exam. Whether you are a first-time calculus teacher looking for guidance or an experienced AP teacher looking for inspiration, this session is for you.

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

### Gillespie, Janet — Author, Former Title 1 Math Specialist, Portland Schools (retired)

#### A Number Sense Approach to X Facts = Success for All

Explore a school-wide approach to teaching x facts that encourages algebraic reasoning while building fluency in 5-10 minutes a day. Visual models, including a special counting tape and array flash cards for use at school and home, help children see ways to break harder facts into easier ones, speeding memorization for all. Materials provided.

3-5 | PRS | 448 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 29

### Gladis, Karie — Director of Education and Professional Development

#### **Practical Applications: Differentiation Strategies for Math**

Learn how to differentiate curriculum for all learners to develop 21st Century Skills and higher-level thinking skills. Explore research-based strategies for differentiating mathematics by content, process, and product. Lessons using the strategies will be modeled and the step-by-step processes for implementing the strategy will be debriefed. Acquire methods for leading lesson writing and lesson study using these essential strategies.

GI | INT | 347 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 28 | BT | \$

#### **CELL PHONES AND PAGERS**

Out of respect for presenters and other participants, please turn off cell phones and pagers during sessions.

#### Gojak, Linda — Past President, National Council of Supervisors of Mathematics **Life's Too Short for Long Division**

Do your students struggle with division? Explore the two models of division and questioning techniques that will help your students to understand what it means to divide. The concepts of whole number division, when understood, lead to developing and understanding division with fractional numbers and decimals as well. Using the process standards will open a door to understanding and doing division successfully.

3-8 | PRS | 547 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 28 | BT

#### Goldenstein, Donna — Teacher, Lorin A. Eden ES, Hayward Unified SD

#### Mathematics and the Arts: Thinking and Reasoning Through Art

This session will focus on math/art activities that help assess mathematical thinking and reasoning as well as help students access the core curriculum. Participants will be introduced to a variety of art projects that deepen the mathematical concepts in an intermediate grade classroom. Participants will see student work as well as a variety of journal prompts that integrate literature, mathematics and the arts.

3-5 | PRS | 148 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 29

### Gomez, Emiliano — Academic Coordinator/Mathematics Specialist, UC Berkeley

#### **Filling Bottles with Water**

Different groups will gradually fill different bottles with water and measure the height of the water with each increment in volume. We will graph the results and try to match the graphs to the bottles. We will then study more deeply the relationship between the shape of the bottle and the properties of the resulting graph, like linearity, concavity, and kinks. This will be fun, interactive and challenging! 6-12 | INT | 308 | Saturday, 11:00 - 12:00 | Asilomar, Toyon

#### Good, Leslie — Kindergarten Teacher, Ellerhorst ES, West Contra Costa Unified SD Teaching the Standards Through Stories

Use favorite children's literature to make the standards come alive in your math classroom. Stories emphasizing counting and number, measurement, geometry, probability, money, fractions, addition/subtraction, and time will be presented. Hands-on activities, suggested resources, student work samples, and a detailed handout will be provided. Bring your favorite math story to share!

PK-2 | INT | 250 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 32 | BT

### Goodman-Orcutt, April — 8th Grade Math Teacher, Miller MS, Cupertino USD

#### At-Risk Students: Technology and Nontraditional Curriculum

For the last couple of years I have taught an Algebra Readiness Class using a self-paced web-based program and nontraditional curriculum (like College Preparatory Mathematics or America's Choice Ramp-Up to Algebra). The blending of skills building using the technology and the open-ended thinking curriculum of CPM and America's Choice has shown some improvement in the students' California Standards Test (CST) scores. Come talk about thinking outside the box to help our at-risk students.

6-8 | INT | 210 | Saturday, 9:30 - 10:30 | Asilomar, Curlew

### Goularte, Renee — Teacher, Thermalito Union SD Giant Story Problems: Visualizing the Language of Math

Address story problems from the perspective of visual literacy using collaborative problem-solving activities which link oral and written language, pictures, numbers, and mathematical symbols. Focus on math vocabulary to help students determine successful problem-solving strategies and learn to communicate those strategies to others. Especially useful for visual learners, English language learner students and math intervention, these strategies can also be easily extended for high-achieving students.

PK-5 | INT | 444 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 25 Co-presenter: Sharon Bloomingcamp — Retired Teacher

# Greco, Jim — Education Administrator Mathematics and Science Leadership Office, California Dept of Education Common Core California Standards

On August 2, 2010, the State Board of Education adopted new California standards. Attend a California Department of Education presentation on the Common Core California Standards. Learn about why and how they were developed, how they are different, and next steps for California.

Gl | PRS | 114 | Saturday, 8:00 - 9:00 | Asilomar, Surf & Sand Co-presenter: Tony Quirarte — Education Programs Consultant, California Dept of Education

### Grzegorczyk, Ivona — Mathematician, CSU Channel Islands Fun in Algebra Class!

Hands-on workshop introducing classroom-ready fun activities as supplementary instructions addressing diverse modes of learning algebra. Topics include solving equations, inequalities, factoring, graphing, problem solving, exponentials and logarithms. We will present: games, art projects, videos, animal characters, poetry. Assessment shows improvement of content understanding and involvement for learners on all levels.

6-12 | WkS | 441 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 21Lab | \$

### Guzik, Randy — Math Teacher, Pacifica HS, Oxnard Union HSD **Building a Winning AP Calculus Team**

Building a winning AP Calculus team requires organization, motivation, and technique. Using a team approach, we will discuss ways to coach our AP students so that they are prepared for the "big game".

8-C | FG | 150 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 32

#### Gwaltney, Melissa — Math Teacher, Anderson New Technology HS, Anderson Union HSD **How to Make "Extra-Credit" a Meaningful Learning Experience**

I discovered last school year how to make extra-credit a valuable learning experience. I want to share with you how to use it to maximize its potential for making it a valuable learning experience. I also have been known to use this method for those perpetually absent students who lose classroom time. I use this in my teaching of Pre-Algebra to Calculus classes. You will leave with some PDFs to use right away.

8-12 | INT | 236 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 7

### Hamo, Matthieu — Teacher, Glenoaks ES, Glendale Unified SD **Standards-Based Mini Projects for All**

Differentiate and motivate with easy-to-implement, standards-based math projects that all your students can successfully do on their own. Come join an interactive session where you will learn how to incorporate practical and meaningful projects into your math program effectively. These projects can be adapted to meet the needs of any student in grades 3-8, and a handout with complete directions will be provided to help you get started right away.

3-8 | INT | 314 | Saturday, 11:00 - 12:00 | Asilomar, Surf & Sand | BT

### Hirsch, Maria — Retired, UCLA Math Project; TODOS Montebello USD

#### **Practical Solutions to Make Math Accessible to All Learners**

What obstacles do English learners students face when learning math? What about strategic and intensive level students? Special needs? How do we bring all the pieces together? The diversity of learning styles requires a variety of teaching methods. Practical ideas, such as organizers, foldables, interactive worksheets, motivating activities, and more will be highlighted and shared. Participants will receive techniques and strategies that were tested in the classroom. Student samples will also be available.

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

Co-presenter: Lenie Galima — National Board Certified Teacher; TODOS; UC Los Angeles Math Project, Schuurr HS

### Ho, Alice — Pedagogical Research Specialist, Math Teach (Singapore)

#### **Key Factors to Singapore World-Class Mathematics System**

Learn how and where to access Singapore Curriculum/Resources so as to achieve excellence in students' performance using a unique identity derived from the Ministry of Education's CPA Approach. We will share the key factors that lead students to continued success. Participants will appreciate the beauty and power of a five Color-Coded Communicator, which has helped countless students to learn basic to in-depth mathematics concepts without fear or tears.

Tchr Ed | PRS | 139 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 12 | \$

#### Holman, Lynda — Math Coach, Marietta City Schools, Marietta, GA

#### **Graphs: More Than Pretty Pictures**

Students need to collect, organize, and display information in meaningful ways that help them make sense of the world around them. Graphs should help students compare and analyze the information that occurs in classroom and real-world experiences. The session will include lessons and activities that teachers can take back to their classrooms and use Monday.

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

Hunter, Kelley — Math & AVID Teacher, Windsor MS, Windsor Unified SD Math Intervention: Ideas That Work!

Create an Intervention class that addresses students' needs, keeps students accountable, and is positive, engaging, and effective. Ideas from this workshop can easily be modified for various grade levels.
6-12 | PRS | 502 | Saturday, 3:30 - 5:00 | Asilomar, Kiln

#### Jacobs, Harold — Teacher, Grant HS, Los Angeles USD Mathematical Snapshots of 2010

How to pull your students into your lessons by means of surprising and timely examples that everyone can enjoy—a new talk in a continuing series that began at Asilomar in 1971. It will present ideas that can be used to motivate the review of old concepts as well as the introduction of new ones. Participants will receive a CD of the talk so that they can prepare transparencies for use in their own classroom.

GI | PRS | 401 | Saturday, 1:30 - 3:00 | Asilomar, Fred Farr Forum

### Jalalpour, Kathleen — Math Teacher, The Pi Project, Palo Alto Singapore Math: An Overview

Experience the advantages of Singapore Math in an interactive session, including number sense activities, mental math, and examples of word problems using model-building. Singapore Math provides a strong math foundation for all your students—from the fastest learners to those who are overwhelmed and frustrated with algorithm-based curriculums. Come learn more about this world-class math program!

PK-5 | INT | 416 | Saturday, 1:30 - 3:00 | Asilomar, Nautilus East Co-presenter: Corrinne Khoo-Lieu — Math Teacher, The Pi Project

### Kalman, Richard — Executive Director Emeritus, Math Olympiads Math Contests Build Better Students (and Teachers) Nine Ways

Mathematics contests prepare both students and teachers exceptionally well for assessment tests. We'll discuss the reasons why and sample five rich problems. You'll leave with an additional 53 Math Olympiad problems to use with your students.

3-8 | PRS | 144 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 25 | BT

Co-presenter: Nicholas Restivo — Executive Director, Math Olympiads

#### Are You Smarter Than a 5th Grader (2010 edition)?

These five authentic Math Olympiad problems were given to about 40,000 5th graders last year. Can you solve them? I bet you're as good as the average 5th grader! Attendees will get another 50 problems (yes, solutions included!) to use with your students to help prepare properly for high-stakes testing.

3-8 | INT | 244 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 25 | BT Co-presenter: Nicholas Restivo — Executive Director, Math Olympiads

### Kirley, Kim — Kindergarten Teacher, Park School, Mill Valley SD **Building Number Sense in the K-1 Classroom**

Build students' number sense as you go about your day. Small adaptations in routines, games, charts and projects help kids deepen their mathematical understanding. I'll share easy, fun and cost-free ideas that can be used with any curriculum.

PK-2 | PRS | 417 | Saturday, 1:30 - 3:00 | Asilomar, Nautilus West

### Kise, Jane — Principal, Differentiated Coaching Associates, LLC **Differentiated Coaching: Every Teacher Helping Every Student**

Differentiated coaching capitalizes on teacher strengths to help them transform their classrooms. Learn how to use a neutral framework to uncover teacher beliefs, provide differentiated evidence to change those beliefs, and adopt coaching roles that meet teacher learning styles so that coaching practices model how teachers can differentiate mathematics instruction. Understand how the same framework can help teachers better understand the learning needs of each child.

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

#### Kriegler, Shelley — Program Director, Center for Mathematics and Teaching

#### **Making Sense of Slope and the Linear Function**

Participants will experience games and classroom-ready activities that develop the concept of slope and the slope-intercept form of a linear function.

6-12 | INT | 209 | Saturday, 9:30 - 10:30 | Asilomar, Marlin | \$

### Kysh, Judith — Associate Professor, San Francisco State Univ Performance Assessment as Support for Preservice Teachers

For the past two years our credential students have been required to pass the Performance Assessment for California Teachers (PACT). This session focuses on ways the use of this assessment has affected credential candidates' implementation of research-based materials and teaching methods. Changes we have made in our program and examples drawn from student responses to assignments in the curriculum and instruction courses will be used as discussion starters for an interactive session.

Tchr Ed | INT | 509 | Saturday, 3:30 - 5:00 | Asilomar, Marlin

### Lambertson, Lori — Staff Educator, The Exploratorium **Geometry in Playgrounds**

Come explore the geometry of playgrounds! These activities were developed in conjunction with the Exploratorium's NSF-funded Geometry Playground exhibition. Designed for use in generic parks, playgrounds, and schoolyards, we'll make measuring tools to use outside where we'll make measurements, identify and draw shapes, compare shape attributes, explore networks, and play some games. In the event of rain, we'll make indoor adaptations.

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

#### Lane, Deborah — Math Team Assistance, Educational Service District 113 (adjunct faculty) Math Intervening: Lessons Learned

What do we know about math intervening with second through sixth graders? One district's journey shared for coaches, RTI leaders and instructors. This session will look at what was learned during a six month analysis of mathematics intervening in a large district. Variables that affected students' achievement were things about the: students, instructor, and program. Rubrics were developed to keep gathering data consistent. I will share common disconnects for students and problems of practice for instructors. As a group we will grapple with, "how do we monitor our students' progress and our own practice?"

PK-5 | INT | 208 | Saturday, 9:30 - 10:30 | Asilomar, Toyon

### Latulippe, Christine — Assistant Professor of Mathematics, California State Polytechnic Univ, Pomona

#### Improving Achievement Through the Power of Number Sense

When considering success inside and outside of the mathematics classroom, number sense and estimation are skills from which all of our students can benefit. Strong number sense skills can be applied to standardized tests, every day life, and mathematical problem solving. This session will include research-based strategies and activities to promote fluency with number sense and estimation for middle grades students.

6-8 | INT | 146 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 27

### Leinwand, Steven — Principal Research Analyst, American Institutes for Research

#### Glimpses of Instructional Excellence

There is so much that we all can learn from observing our colleagues and discussing our observations. A videographer and I had the opportunity to observe and videotape one complete lesson taught by each of the 30 middle school teachers in a courageous school district. This session will use video vignettes from these lessons and a Video Observation Protocol to explore the issues of making collegial observations and video reviews both safe and productive. There will be lots to reflect on here.

GI | PRS | 253 | Saturday, 9:30 - 10:30 | PG Middle School, Auditorium

### Lim, Brian — Professor, CSU Sacramento Instructional Strategies to Increase Cognitive Complexity

We will be looking at the instructional strategy of integrating topics which helps students make connections between topics as well as looking at the instructional strategies to help students develop procedural flexibility and strategic thinking.

8-12 | PRS | 108 | Saturday, 8:00 - 9:00 | Asilomar, Toyon

### Loew, Robert — Teacher, Foothill HS, Pleasanton Unified SD **Student Signaling Systems**

Here is a neat piece of classroom technology that galvanizes student interest and motivates their participation in class activities. Student signaling systems involve the use of hand-held devices by students to respond to questions/topics posed by the teacher. Responses are tabulated and displayed in real time, giving instant feedback to students and allowing teachers to shape and guide the ensuing discussion. Never fails to get students involved.

Ldrshp | INT | 104 | Saturday, 8:00 - 9:00 | Asilomar, Oak Shelter | \$

Lutz, Michael — Associate Professor Mathematics,

### Lutz, Michael — Associate Professor Mathematics, CSU Bakersfield

#### **CAMTE Business Meeting**

This is the California Association of Mathematics Teacher Educators (CAMTE) annual business meeting. The meeting is open to all CAMTE members and any CMC members interested and involved in mathematics teacher education, pre-service or in-service. In addition to business items related to the organization, we will discuss issues of interest to mathematics teacher educators and develop priorities for the next year of work within the organization.

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

### Mackenzie, Christopher — Math & Physics Teacher, Paloma Valley HS, Perris Union HSD

#### **Algebra Using Dynamic Illustrations on Excel Spreadsheets**

Engage students with dynamic algebra illustrations at no charge. Students will appreciate instant dynamic algebra comparisons in motion. A short mouse motion will cause the graph to change shape and initiate student conversation and stimulate interest. You will receive spreadsheet tools for class use and for student use. You will also receive instructions to make your own lively illustrations. Learn to generate multiple problem sets for practice and quizzes. From fractions through Algebra II.

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

### Malankowski-Smith, Blanche — Math Specialist, WCCUSD (retired)

#### **Every Number Wants To Be a Ten or a Close Relative**

Ah, if they only knew their facts. Addition and subtraction strategies have been around for a very long time. So why are they still counting on their fingers, sometimes well into junior high? A grade one standard but perhaps we need to look at what to do in grades K-2. This workshop will help teachers weave into their already full curriculum a systematic way to have students memorize their facts. Games, ready to go materials included.

PK-2 | INT | 504 | Saturday, 3:30 - 5:00 | Asilomar, Oak Shelter | BT

#### Manderscheid, Darrell — Retired, Garden Grove USD **Level the Algebra Playing Field by Teaching Fractions**

Beginning algebra and pre-algebra students that do not understand fractions cannot compete equitably with those that do. Many students "learned" fractions as a process that emerged from the numbers of arithmetic, but never really grasped the conceptual basis of the topic. In this session we will explore ways to teach the underlying concepts of fractions using familiar algebraic properties. Students' fear of rational expressions will be diminished as they strengthen their algebra skills.

6-12 | PRS | 204 | Saturday, 9:30 - 10:30 | Asilomar, Oak Shelter

### Manderscheid, Marilynn — Resource Specialist, Plavan ES, Fountain Valley SD

#### Visual, Auditory, and Kinesthetic Cures for Scrambled Brains

Participants will learn and practice specific tactics to facilitate equitable learning of content standards. Strategies include student-made manipulatives, instant assessment for more efficient instruction, language to enhance understanding, and total student participation that engages and reveals individual mastery. Individual problems addressed. Handout available.

3-5 | WkS | 515 | Saturday, 3:30 - 5:00 | Asilomar, Triton

### Martin, John — Teacher, Santa Rosa Junior College, Santa Rosa A Piece of Pi

Through the ages, the ratio of the circumference of a circle to its diameter, which we call  $\pi$  has fascinated mathematicians and non-mathematicians alike. In this presentation we will explore the history, mysteries, and controversies surrounding this famous number. 8-C | PRS | 339 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 12

### Mason, Pam — Professor, Harvey Mudd College, Claremont **Effective Practices in Algebra That Create Success for All**

Experience the enthusiasm and creativity of the Math for America Los Angeles Fellows. Their highly engaging activities and instructional strategies will help enhance student achievement and success in Algebra I and II.

8-12 | INT | 242 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 22Lab Co-presenter: Marla Mattenson — Teacher, Helen Bernstein HS

#### NAME BADGES!

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

Mathurin, Andre — Teacher, Bellarmine College Preparatory San Jose

#### Ways to Naturally Revisit Geometry Proofs in Algebra Class

Competent algebra students know that you can tell whether or not two lines are parallel by comparing their slopes, but how many of these competent algebra students can communicate how equal slopes connect to geometry-based tests for parallel lines? What about doing this for perpendicular lines? This session will highlight numerous natural connection points for up-keeping your students' geometry skills.

8-12 | INT | 246 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 27

Matsumoto, Brandon — Math Teacher, Pinkerton MS, Elk Grove Unified SD

#### From Multiplication to Factoring: Strategies for Factoring

In this session we will demonstrate how to move students from basic multiplication to factoring polynomials. These strategies have proven to be highly effective with all learners including ESL and special education students. Teachers will receive not only training on how to teach factoring but lessons and worksheets that can be used immediately to improve instruction and student performance.

6-12 | INT | 337 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 10 | BT Co-presenter: Mark Freathy — Math Teacher, Pinkerton MS

McDonald, Bob — Math Teacher, Marc T. Atkinson MS/TODOS, Cartwright Elem SD

#### The Importance of Language, Culture and Power in Mathematics

Equity in mathematics is somewhat like the weather. We talk about it, but what do we do about it? Through the use of a jigsaw approach, we will first learn about the experiences of people who were speakers of the non-dominant cultural language. We will then participate in BARNAGA, a simulation that will help us experience what it is like to be unable to communicate with those around us. Finally, we will examine and discuss the culture of power.

GI | INT | 439 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 12

McGuire-Paulson, Nancy — Teacher, San Marcos MS, San Marcos Unified SD

#### Fun Factoring: Strategies that Make Sense to All Students!

All students can be successful using strategies from this handson workshop. Participants learn unique, multiple representation strategies, and motivating games, using multi-sided dice and cards, for prime factoring and for factoring fractions to find LCM and GCF. Students learn to view and decompose numbers in a "different" way; one that leads to success in algebra and higher mathematics. Strategies are extended for factoring of polynomials, quadratics and finding square roots.

3-8 | WkS | 245 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 26 | BT

#### Level the Playing Field for All Using Math Games!

Using math games as a teaching strategy provides teachers with tools to motivate all students, especially those who struggle with math. The curriculum becomes available to all students using these games centered around soccer, baseball, basketball, and football. All students get a chance to score while refining fundamental skills with algebra, integers, fractions, decimals, basic operations and more! Put on your game face and be prepared to play!

6-12 | WkS | 544 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 25 | BT

### McLean, Peggy — Math Specialist, The Nueva School **It's a Tangram World**

Working with this unique puzzle facilitates understanding of geometric shapes, congruent shapes, similar shapes, and size of angles. Making a set develops understanding of fraction-decimal-percent concepts. Building the world develops understanding of the relative size of continents. Playing games and solving puzzles strengthen math concepts.

3-5 | WkS | 336 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 7

### McNamara, Julie — Education Specialist, Math Solutions **Beyond Pizzas and Pies: Supporting Fraction Sense**

Fraction sense is tied to common sense. Students with fraction sense can reason about fractions and don't apply rules and procedures blindly; nor do they give nonsensical answers to problems involving fractions. Helping students develop fraction sense is an essential foundation for preparing them to compute on and with fractions. We will explore common student dilemmas and share activities from the book, *Beyond Pizzas and Pies: 10 Essential Strategies for Supporting Fraction Sense*.

3-5 | INT | 234 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 5 | \$

### Meyer, Dan — Doctoral Candidate, Stanford Univ **Math Curriculum Makeover**

Our students like to solve problems they have already seen. They like seeing steps laid out in the text of a problem. They are impatient with new problems. To what extent does our adopted math curriculum encourage this impatience? How can we improve it? We will define the tools and skills of the modern curriculum designer, someone who can convert any interesting thing into a challenge for his or her students. We will emphasize the multimedia and modern technology essential to that role.

GI | INT | 202 | Saturday, 9:30 - 10:30 | Asilomar, Kiln | BT

#### Miller, Jim — Teacher, Cle Elum Roslyn HS **The Power of One in Teaching Fractions**

Losing 'one' loses students. If you are struggling to help your students really understand fractions, try this approach. It is simple and the students construct their own knowledge (with your guidance.) Come prepared to think!

6-8 | INT | 537 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 10 Co-presenter: Dr. Virginia Erion

#### Miller, Lisa — Math Coach/Leader, Napa HS, Napa Valley Unified SD

#### **Working Together to Provide Opportunities for All Students**

How can we use the Professional Learning Community (PLC) process to provide opportunities for high levels of achievement for all students? Using a current example, learn realistic ways to get teachers to work together to look at essential learnings, develop common assessments, use data to form instruction, and examine what to do when students don't learn. We'll focus on how to overcome obstacles. Teachers will be given concrete examples and templates to use as tools to get a functioning PLC started.

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

### Moore, Sara — Director of Mathematics & Science, ETA/Cuisenaire

#### Algebra for All: Engage Students and Ensure Understanding

As more take Algebra I earlier, teachers face new challenges helping these students find success. This session will share strategies for keeping students actively engaged in learning math, connecting algebra to prior mathematical knowledge, and developing understanding through implementation of a manipulative-based learning cycle from concrete to representational to abstract. Learn to mix technology, hands-on tools, and traditional algebra content and skills to find success for every child.

6-12 | INT | 205 | Saturday, 9:30 - 10:30 | Asilomar, Evergreen | \$

#### Virtual Manipulatives? What Does Hands-on Really Mean?

Manipulatives have a long history of success in teaching and learning. Now interactive whiteboards and virtual manipulatives are in our classrooms too. Learn to use these new technologies along with traditional concrete manipulatives for effective math teaching and learning. When is technology best? When do students still need hands-on resources of their own? See the technology in action; learn strategies for incorporating it into your own class even before the hardware comes to your room.

3-8 | INT | 405 | Saturday, 1:30 - 3:00 | Asilomar, Evergreen | \$

### Morris, Kathy — Associate Professor, Sonoma State Univ Powers of Art: Multiplication for Middle Grades

Inspired by Warhol & Mondrian, learn to visualize multiplication through art! Cut, glue and paint your way through a variety of art projects that develop conceptual understanding for middle grades' multiplication. Aesthetic representations illustrate different mathematical models, emphasizing the commutative, associative, and distributive properties, as well as exponents. This hands-on session will enliven and enrich your math teaching! Non-artists are especially welcome!

3-8 | WkS | 514 | Saturday, 3:30 - 5:00 | Asilomar, Surf & Sand Co-presenter: Gena Richman — Teacher, Petaluma City Schools

Moskowitz, Stuart — Mathematics Educator, Humboldt State Univ

### Two Birthday Parties in One Day? Problem Simulations on TI-Nspire $^{\circ}$

The results of the Birthday Problem are counter-intuitive; most people are surprised at how few people it takes to find matching birthdays. We'll explore this with a Tl-Nspired probability simulation that is accessible to middle and high school students. Then, we'll extend the Birthday Problem to ask: Are four digits enough? When your teacher posts only the last four digits of everybody's SS#, what's the chance that two will be the same?

8-C | WkS | 207 | Saturday, 9:30 - 10:30 | Asilomar, Acacia | \$
Co-presenter: M. Edwards — Mathematics Educator, Miami Univ

#### **PROGRAM CHANGES**

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

### Muller, Eric — Science/Math Educator, Exploratorium Teacher Institute

#### **Exposing Exponents: Really Big and Small Numbers in Science**

Math is used all the time in science. Often the numbers collected (data) or calculated can only be used practically in exponential form. Join us for a workshop of exploration and application of exponents in science. From earthquakes to outer space and from atoms to light, participants will engage in a potpourri of science activities from The Exploratorium Teacher Institute. Activities presented are rich in content, simple to assemble, and are created with easily obtainable and cheap materials.

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

### Murray, Tom — Math Consultant/Facilitator, San Mateo-Foster City SD

#### How Likely Is It? Probability Games of Fun and Chance

Probability is one of the most exciting and motivating math standards to investigate. Come join the fun as we explore a wide range of hands-on games and activities from a variety of sources. Our examination of this fascinating concept will include the use of dice, spinners, coins, and more. Through these activities students will learn how to interpret graphs, make predictions, and analyze data. Connections to other areas of the curriculum, and challenges for gifted students will be discussed.

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

#### Neufeld, Rudy — Author/Consultant, Thames Valley/Neufeld Learning Systems Inc. **Teach, Don't Tell: Understand, Don't Memorize**

Teachers hold the key to improving student learning and achievement and hence the equity in mathematics. They must know "mathematics for teaching" in order to make mathematics accessible to all. We will share strategies from school projects (American, Canadian, Australian) in which teachers "teach rather than tell", in order to get students to "understand rather than to memorize" concepts of fractions, decimals, measurement, and algebraic thinking. Get a CD of ON and OFF computer material.

3-8 | WkS | 141 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 21Lab | \$

### Build It, Draw It, Write It, Talk It...Own the Equity!

Engage students with a wide range of ability levels and learning styles with technology. We will use hands-on computer activities to build student confidence and understanding using interactive software along with high-yield instructional strategies in a variety of instructional settings. Participants will examine how to apply this student-centered, interactive approach to a variety of concepts including whole numbers and fractions. Participants will receive a CD for classroom use.

3-5 | WkS | 241 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 21Lab | \$

### Novelli, Barbara — Instructor, George Fox Univ Stirring Up Place Value Understanding and Success

Place value can become a major road block for our students' confidence and competence in mathematics. Understanding place value helps students make the important connections to decimals and percentages. Barbara will share many strategies, activities and games which will help your students develop long lasting understandings related to place value.

3-5 | INT | 303 | Saturday, 11:00 - 12:00 | Asilomar, Heather | BT

#### Mixing Up Math Success for All Learners

The key ingredient to math success for all is to diversify instruction. This session will be filled with a mixture of games, songs, math/science investigations and great literature. Barb will share a planning template which will help you support all your students in being successful mathematicians.

PK-2 | INT | 403 | Saturday, 1:30 - 3:00 | Asilomar, Heather | BT

### Olkin, Julia — Assistant Professor, CSU East Bay What's Holding This Up? Using Underlying Math Structures

Is this a new problem or is there a structure underneath here somewhere? Strengthen students' ability to identify the underlying mathematical structure in a problem. Taking advantage of this structure can ease the solution process, and sometimes is the only way to solve a problem. We will learn how the same parent structure can be used to add cognitive complexity. We will create classroom-ready activities for your subject of interest: Algebra I/II, Geometry and Pre-Calculus.

8-12 | INT | 433 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 4
Co-presenter: Lilian Metlitzky — Professor, CSU Pomona

#### Pernin, Patricia — Coordinator, Los Angeles Unified SD Enhancing Collaborative Workgroups Through Targeted PD

For more than 25 years, educators have struggled to build the capacity of teachers to deliver standards-based K-12 mathematics instruction that meets the needs of all students. During this interactive session, we will identify the key instructional and professional development strategies, including collaborative teacher-led groups, leading to increased student achievement in K-12 mathematics.

Ldrshp | INT | 135 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 6

### Petersen, Bob — Assistant Director, Mentor Teacher, CPM Educational Program

#### Algebra Connections: All Students Can Learn Algebra

This session will demonstrate problem-based, student-centered lessons written for use with collaborative learning teams. Learn how to use structured student roles, multiple representations of ideas, and questioning strategies that draw out contributions from all students. Every student is smart—the task is to give them opportunities to show how. Based on the CPM Algebra Connections (Algebra I) Program.

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

#### **CONFERENCE EVALUATION FORM**

Evaluation (pg 41) returned during the conference will be entered in a drawing for FREE conference registration and on-grounds housing for next year. The winners for this year's free registration and housing are Kimberly Kirley and Katie Sutton.

#### Petrak, Cliff — Teacher Emeritus, Brother Rice HS, Chicago, IL. (retired)

#### Don't Slow Me Down with that Calculator, Part 1

Learn to master a multitude of little-known, super shortcut computational techniques along with their derivations involving addition, subtraction, fractions, squaring and multiplication that will leave your calculator-dependent friends in the dust. (Attend session #542 at 3:30 p.m. for squaring and multiplication-related techniques.)

3-8 | PRS | 137 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 10

#### Don't Slow Me Down with that Calculator, Part 2

Learn to master a multitude of little-known, super shortcut computational techniques and strategies involving squaring and multiplication that will leave your calculator-dependent friends in the dust. (Attend session #137 at 8:00 a.m. for addition, subtraction and fractions-related techniques.)

3-8 | PRS | 542 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 22

#### Picciotto, Henri — Math Dept Chair, The Urban School of San Francisco

#### **Escape from the Textbook! Sharing and Collaboration Network**

Almost every off-book activity we plan is well received and leads to greater interest and motivation. Freeing ourselves from set-in-stone curricula allows us to respond to the realities of our classrooms, tackle heterogeneous classes, and implement cooperative and hands-on learning. However pressures of coverage, lack of time, and isolation can undermine our efforts. Join an online and in-person network to help each other escape from the textbook for a lesson, a unit, or an entire course.

6-12 | PRS | 317 | Saturday, 11:00 - 12:00 | Asilomar, Nautilus West Co-presenter: Carlos Cabana — Teacher, Mission HS

### Preston, Robert — Math Coach, McManus ES, Chico Unified SD Room for Alternative Algorithms: Multiplication & Division

Many students struggle with multiplication and division, particularly involving multi-digit numbers. As a 6th grade teacher, I have routinely used alternative algorithms to increase student understanding of the big four operations; addition, subtraction, multiplication, and division. This session will follow the pedagogical model used with students (focus is on multiplication and division, starting concretely and slowly moving towards the abstract), in their search for understanding.

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

### Raff, Cynthia — Center for Mathematics and Teaching, Inc. **Making Sense of Integer Operations**

Help your struggling students understand integer operations by using familiar contexts and a model. Learn how to create bridges to understanding between concrete thinking and abstract ideas associated with integers.

6-8 | WkS | 533 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 4

Ramos, Jeanne — Math Supervisor, South Gate HS, Los Angeles Unified SD Making Mathematics Accessible for All Students: Focus on English Language Learners

This session will focus on the use of specific strategies to increase English learners' access to rigorous mathematics tasks, while developing their academic language proficiency.

6-8 | INT | 131 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 1 | BT

### Resek, Diane — Professor Emerita, San Francisco State Univ Developing Deductive Thinking Before High School

We often move from the concrete to the representational to the abstract in teaching arithmetic, so let's try that with deductive thinking. The session will feature work on problems requiring deductive thinking. Some are best solved with concrete objects; others with charts; and others need written explanations.

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

### Ritchie-Reese, Patricia — Math Instructor, Sierra College String Polyhedra with a Twist: A Make-It, Take-It Session

Come make polyhedra using straws and elastic thread that allow the shapes to twist and flex. You will be amazed at how you can transform a 3-D shape into a 2-D shape or into other 3-D shapes hidden inside the original. Each year many participants return to create new polyhedra to take home and explore! There will be many wonderful student samples, showing student-group investigations into various areas of polyhedral properties. The possibilities are endless!

GI | MITI | 430 | Saturday, 1:30 - 3:00 | PG Middle School, Library

### Roddick, Cheryl — Associate Professor, San Jose State Univ Using the Singapore Bar Model to Solve Word Problems

The Singapore Bar Model is a helpful way to approach a variety of word problems in elementary school through algebra. Students can learn to use bar models to help them make sense of the problems, come up with algebraic equations (if needed), and guide them throughout the solution process. The bar model is the missing link between the concrete and symbolic representations. It has become a valuable teaching technique to reach a variety of learners!

3-8 | INT | 217 | Saturday, 9:30 - 10:30 | Asilomar, Nautilus West | BT Co-presenter: Christina Silvas-Centeno — Math Curriculum Specialist, San Jose Unified SD

#### Rogers, Paul — Math Teacher, MIT Academy, Vallejo City Unified SD Smartboards for Dummies

I am not now, nor have I ever been in the employ of an interactive white board company. I have been a teacher for 30 years. I'm still a teacher and the thing I want to be when I grow up is a good teacher. When I started teaching I learned to run a ditto machine and now I'm learning the Smartboard. I will share the good things I have found using this technology and encourage others to share their own experiences. A disk of the items will be given to those heroic enough to last out the hour.

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

#### Romanek, Brenda — Math Teacher, Arroyo Valley HS, San Bernardino City Unified SD **Powerful Problem Solving: Functions in Algebra II**

Participants will experience several activities concerning functions in an Algebra II class. These will include using a human graph to explore functions, domain and range, and asymptotes. There will be a function carousel, silent board game and some team problems to work on involving graphs of parabolas, hyperbolas, exponentials, absolute value, and logarithms. Teachers will receive ideas and materials that they can use in their own classrooms.

8-12 | WkS | 507 | Saturday, 3:30 - 5:00 | Asilomar, Acacia

Rossi Becker, Joanne — Professor Mathematics Education, San Jose State Univ

#### **Math Specialist Credential: Creating CA Programs**

The California Commission on Teacher Credentialing (CCTC) will promulgate new elementary math specialist program guidelines this year. Come to hear details of requirements from a member of the math panel that developed recommendations to the CCTC, and share with others ideas of how to build a program from existing coursework at your university to meet new requirements. Please bring any preliminary work already done at your institution to share. Plenty of time will be allotted for participant discussion.

Tchr Ed | PRS | 409 | Saturday, 1:30 - 3:00 | Asilomar, Marlin Co-presenter: Kathy Morris — Professor Mathematics Education, Sonoma State Univ

#### Sarcona, Lisbeth — Math Support Teacher, Chapman ES, Chico Unified SD

#### **Strategies for Discussion and Writing in Mathematics**

What are your students really thinking about math? Learn about ways speaking and writing can strengthen and clarify students' math knowledge. The focus will be on promoting the use of academic language by both the teacher and the student and on developing a classroom climate that includes discussion and sharing of mathematical thinking orally and in writing. The importance of enhancing clarity and accurate academic language for all students, especially English learners, will be discussed.

3-5 | INT | 436 | Saturday, 1:30 - 3:00 | PG Middle School, Rm7 Co-presenter: Katy Early — Math Specialist, CSU Chico

# Selby, Victor — Author/Curriculum Consultant-Math/Science Integration, Carmel HS (retired), Carmel Unified SD Game Theory: Building a Universal Conceptual Model

Enrich units on probability and proof by including the mathematics of competition and cooperation. Use topics from game theory to motivate and provide model building experience in Algebra I, Geometry, and Algebra II. Have students write about the connection of games to the human condition, and strengthen their understanding of why mathematics is the language of science.

8-12 | PRS | 305 | Saturday, 11:00 - 12:00 | Asilomar, Evergreen

#### Serra, Michael — Author/PD Workshop Leader, Key Curriculum Press

#### **Investigations in Geometry for 2010**

Does every pentomino tile the plane? What are all the Archimedean tilings? What is Pick's Formula? What is Origamics? Can you solve some of the challenging geometry constructions needed to design the stained glass windows and tracery of Gothic cathedrals? If any of these are new to you, come join us as we explore some not-so-typical and very cool geometry investigations.

8-12 | INT | 553 | Saturday, 3:30 - 5:00 | PG Middle School, Auditorium | BT

#### Shreve, Barbara — Teacher, Author, San Lorenzo HS, San Lorenzo Unified SD

#### **Developing Linear Relationships**

Experience some of the developmental problems that lead to understanding linear relationships. We will use activities from the new CPM middle school program, Making Connections: Foundations for Algebra, Year 2. You will see how the developmental focus is on conceptual understanding that leads to solving proportions, determining the slope of a line, and solving systems of equations.

6-8 | WkS | 344 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 25 | \$

#### Silverman, Sandy — Coordinator, San Diego COE Big Math for Little Kids: Sorting and Patterns

Preschool and kindergarten children constantly try to understand their world. Sorting and recognizing patterns are important processes. Learn the developmental sequences and have fun with hands-on activities you can use tomorrow. All activities support California kindergarten standards and preschool learning foundations. PK-2 | WkS | 315 | Saturday, 11:00 - 12:00 | Asilomar, Triton

#### Smiler, Helen — National Projects Coordinator, Project SEED The Power of Exponents to Create Mathematical Opportunities

Exploring the rules of exponents creates engaging and challenging opportunities for students of all ability levels to develop mathematical thinking and master grade level standards. Experience how starting with exponents can lead you and your students into investigations involving place value, negative numbers, fractions, decimals and algebraic thinking. Learn about Project SEED's interactive, discovery teaching methods that encourage high levels of enthusiasm, participation, and understanding.

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

### Smith, Keith — Math Program Specialist, Pacent Learning Solutions

#### **Going Beyond Algorithms for Area of Polygons**

This session will use geoboards and graph paper to define area, and establish relationships between finding the area of rectangles, parallelograms, and triangles. Participants will work in teams on a series of area problems as the presenter models strategies for guiding students to engage with increasingly difficult problems. Participants will receive a CD with electronic copies of all materials presented, and will be able to retain any manipulatives used in the session.

3-8 | WkS | 349 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 31 | BT Co-presenter: Thomas Bjorkman — Math Program Specialist, Pacent Learning Solutions

#### **ASILOMAR PATHWAYS**

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



#### Starnes, Daren — Mathematics Department Chair Making Sense of Inference for Sampling and Experiments

The topic of statistical inference comprises about 40 percent of the AP Statistics course outline. In this session, we will explore the issues that make confidence intervals and significance tests so difficult for students. We'll also examine strategies for helping students choose the correct inference method, check required conditions, and write clear conclusions in context. The appropriate use of technology in solving AP exam questions will be discussed, so bring your calculator.

8-C | INT | 307 | Saturday, 11:00 - 12:00 | Asilomar, Acadia

#### **Probability and Risk: Increasing Access via Simulation**

Probability is more than clever counting rules and fancy formulas. It is a powerful tool for making decisions in the face of uncertainty. In this session, we will use simulation to unravel applications of probability in everyday life. Technology will help us do many trials quickly and confirm our results mathematically—so bring your calculator!

8-12 | INT | 407 | Saturday, 1:30 - 3:00 | Asilomar, Acacia

### Tamez, Modesto — Teacher in Residence, The Exploratorium Integrating Proportions Across the Curriculum

All educated citizens need to know how and when to use proportions. This session will use an activity-based approach to do many sorts of proportional problems. The power of proportions is impressive, with few tools and a little ingenuity we can do very sophisticated calculations. We can go from measuring the diameter of a human hair to calculating the distance between the Sun and the Earth. Proportions transcend math and science. We will also show how to use proportions for our daily life.

6-12 | WkS | 404 | Saturday, 1:30 - 3:00 | Asilomar, Oak Shelter

### Tobes, Jeff — Teacher, Wright Charter School, Wright SD **Math and Carpentry for the Young**

This session explains and shows how every sixth grader in this inner-city class made a sturdy, cool step stool of which they were proud. It emphasizes measurements and fractions. Handouts will be distributed explaining the supplies necessary, and the schedule and process of actually making a step stool. A photo documentary will be shown and distributed. The students learned and experienced the importance of accuracy, working as a class, that good things take time, and an appreciation of wood and patience.

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

#### Tuska, Agnes — Mathematics Educator, CSU Fresno **Empowering Teachers to Ensure Educational Access to Students**

We will discuss the development of teacher leaders in rural areas and in low-performing schools through multi-year intensive collaboration, focusing on lesson study (Supporting Teachers to Increase Retention grant). Highlights will be shared from standards-based, student-centered lessons that successfully engaged all students in the learning process and from professional development experiences for the teachers.

Ldrshp | INT | 447 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 28 Co-presenter: Baljit Gill — Mathematics Teacher, Caruthers HS

### Vierra, Vicki — Math Specialist, Ventura COE From Passive Spectator to Productively Engaged

Develop the many facets of adaptive reasoning—thinking logically about the relationships among concepts and situations; considering alternative perspectives, multiple representations and patterns; selecting appropriate procedures to solve contextually accessible problems; and justifying solution decisions.

Tchr Ed | WkS | 505 | Saturday, 3:30 - 5:00 | Asilomar, Evergreen

Co-presenter: Helen Shimato — Math Consultant, Retired, Westside Union

### Walker, Juanita — Elem Math Specialist, Santa Ana Unified SD **Building a Bridge from Elementary Mathematics to Geometry**

Hands-on activities and strategies will be presented to help the elementary student, including English language learners and those considered at-risk, to master the geometric principles necessary to be successful in higher level mathematics courses.

3-8 | WkS | 539 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 12 Co-presenter: Barbara Post — CSU Fullerton

#### Watts, Carleen — Math Teacher, Regional Occupational Center, Kern High SD Fractions: For Those Who Need to See It to Believe It

Do your students need to see it to believe it? Help your students develop a conceptual understanding of fractional operations with manipulatives that you already have in your classroom-rulers.

3-8 | INT | 449 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 31

### Wenrick, Melanie — Assistant Professor, CSU Fresno EEEK! There's a Buggy Algorithm in My Math Class!

What types of strategies do second graders use for multi-digit addition and subtraction? How do your instructional methods and resources (including textbooks) contribute to these correct and incorrect strategies? Using data from student interviews and classroom observations, we will explore instructional solutions to address common errors and misconceptions.

PK-2 | INT | 551 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 33 Co-presenter: Jean Behrend — Professor, CSU Fresno

### West, Rick — Math Instructor, UC Davis Preparing for Algebraic Success Using Function Machines

Children can recognize patterns at a young age. They can also detect the pattern connecting inputs to outputs of a function machine. Come learn the art of introducing function machines as an accessible challenge for all learners. You'll see how to use function machines to practice basic arithmetic skills, develop a sense of variables and to introduce some basic algebra skills—even simultaneous linear equations! We'll share teaching experiences working with 1st through 6th grade students.

PK-5 | PRS | 304 | Saturday, 11:00 - 12:00 | Asilomar, Oak Shelter Co-presenter: Deb Stetson — Project Director & Instructor, CSU Sacramento Math Project

#### **SPEAKER PROPOSALS**

Interested in presenting at the 2011 Asilomar Mathematics Conference? Submit speaker proposals on-line by April 10, 2011 at www.cmc-math.org/activities/north\_speakers.html

#### Wilkins, Glenda — Math Teacher, Arroyo Valley HS, San Bernardino City Unified SD A Logical Approach to Proofs: All Students Achieve Success

This topic will help your students develop strategies, draw conclusions, think logically, communicate and justify their reasoning. We start with logic games and then develop reasoning for whether a crime has been committed. We will prove triangles similar before proving congruence, therefore moving from the simple to the complex. Flowchart proofs are introduced first and then lead to two-column proofs.

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

#### Winicki-Landman, Greisy California State Polytechnic Univ, Pomona Fun and Powerful Geometry Activities for All

In this session several field-tested activities to teach geometry will be implemented. These activities are mathematically rich, standards-based, educationally flexible and super fun! Participants will experience the fun of discovering geometric properties and develop academic vocabulary. Templates of the materials used will be provided and teachers will be able to use them the next day in their own classrooms.

6-12 | WkS | 134 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 5

### Wu, Zhonghe — Associate Professor, National Univ **Differentiating Instruction: A Way to Close the Learning Gap**

Successfully using differentiated mathematics instruction in K-8 classrooms helps close student achievement gaps. This presentation discusses practical instructional methods in the regular classroom to achieve learning goals for five kinds of students: top achievers, average achievers, low achievers, students with special needs, and English language learners. Examples of activities and assessment of learning will be discussed.

PK-5-8 | PRS | 247 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 28 Co-presenter: Shuhua An — Professor, CSU Long Beach

### Yates, Christl — Teacher, Chico State Research Foundation Reaching All Learners: Math as a Second Language

Teaching math to a diverse population of ELs is challenging. Participate in a modeled interactive geometry lesson as a language learner. Experience the EL strategies and how math content and academic vocabulary can be made accessible to ALL students. Discussion and reasoning for the strategies follows lesson. Strategies presented can be used cross curriculum.

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

#### **SESSION CAPACITY/SEATING**

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

#### Youngs, Dave — Fresno Pacific Univ

#### Teach Arithmetic Using Algebra for Exponential Learning

Bridge the gap between arithmetic and algebra by using interesting patterns, sequences, and mathematical micro-worlds as you help grades 3-5 students construct an understanding of algebraic concepts like rules, generalizations, functions, equations, and variables.

3-5 | INT | 346 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 27

#### Yu, Julie — Staff Scientist, Fresno Pacific Univ Geometry of Nature: Exploring Patterns, Shapes and Symmetry

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

6-12 | WkS | 237 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 10

#### Zaccaro, Ed — Author

#### Five Real-Life Math Investigations that will Astound Students

Gifted children typically are not given the opportunity to see the wondrous side of mathematics because it is often taught as all scales and no music. Help students discover the danger of short-term loans. Hear the true story of how a math mistake led to a commercial jet running out of fuel at 41,000 feet. Learn the surprising answer to how much money a hybrid car will save its owner. These and other fascinating math investigations will allow a student to see the power of mathematics.

6-12 | PRS | 116 | Saturday, 8:00 - 9:00 | Asilomar, Nautilus East

#### How We Are Lied To: Cheated and Manipulated by Statistics

Because statistics are based on mathematics, they are very appealing in our evidence-based culture. Unfortunately they are often employed to sensationalize, confuse and make false assertions seem true. In this session you will not only learn several fascinating techniques that are used to manipulate statistics, but you will also learn the power of honest statistics and how they have saved millions of lives.

6-12 | PRS | 216 | Saturday, 9:30 - 10:30 | Asilomar, Nautilus East

#### Zahner, William — Doctroal Candidate, UC Santa Cruz **Designing Tasks and Norms for Cooperative Learning with English Language Learners**

This hands-on session will bring together research on cooperative learning, principles for designing group worthy tasks, and video case studies to analyze how groups can be used productively in linguistically diverse math classrooms. Participants will collaborate and do a high quality task that they can use with their students. We will close by discussing how other tasks can be designed using similar principles.

6-12 | INT | 231 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 1

#### **ASK ME!**

Need assistance on the day of the conference? Look for the attendees with "Ask Me" stickers.

#### Zeller



#### Zumwalt

#### **CONFERENCE NOTES**

### Zeller, Erich — Content Specialist, MIND Research Institute The Number Line? Animate it to Teach and Reach

Use the Animated Number Line to build non-language based, visual understanding of number relationships, difference, place value, and multi-digit addition. This interactive session will show how to develop number sense, count money, and show computation through handson activities that use the number line to increase understanding and retention for all students. CD with animations and handouts provided. PK-2 | WkS | 446 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 27

### Zumwalt, Joan — Math Coach, Tehama CDE Let's Make Junk Sequences

Junk Sequences are just that, a model of a sequence made out of JUNK or whatever you have available around the classroom/home. It might be toothpicks, metal washers, paper clips, pattern blocks, square tiles, pennies, colored chips, elbow noodles or anything that you can glue into a folder to create the sequence. When participating in the activity the students will be asked to create the next figure in the sequence with the JUNK provided and then use multiple representations to find the rule for the sequence. This hands-on approach brings algebraic thinking within the grasp of your students. In this Make-It, Take-It session you will first experience using the junk sequence folders as if you were a student in the classroom. Then you will be given time and the materials needed to create several of your own junk sequence folders to take home and use Monday in your classroom.

GI | MITI | 530 | Saturday, 3:30 - 5:00 | PG Middle School, Library | BT Co-presenter: Hope Bjerke — Math Coach, Tehama CDE

#### **NAME BADGES!**

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

#### **PROGRAM CHANGES**

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

#### **CELL PHONES AND PAGERS**

Out of respect for presenters and other participants, please turn off cell phones and pagers during sessions.

#### **SPEAKER PROPOSALS**

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#### SESSIONS AT A GLANCE

			Target Audience							
Speaker	Presentation Title (Refer to alpha section for presentation description.)	K-2	3-5	8-9	9-12	College	Ldshp/TchEd	GI	Beginning Tchr.	Comm. Product
Albrecht, Masha	Student Centered Projects to Enrich a Pre-Calculus Class			✓	✓	✓				
An, Shuhua	Using Model-Strategy-Application Approach to Assess Diverse		✓	✓						
Anderson, Jody	Who, What, When & How to Assess K-1 Students Efficiently! New!	✓								
A .l . IZ	It's All Connected: Similarity as a Geometric Building Block			✓	✓					✓
Arth, Karen	Equity for K-2 Students Through Lesson Study and CG I	✓								
Beeman, Bix	Scaffolding a Square = Success^2			✓	✓				✓	
5.11	Differentiation in Your Algebra Class is Easier Than You Think			✓	✓				✓	
Bellman, Allan	Interactive Learning Objects on a Handheld Device!			✓	✓					
Beyronneau, Michelle	Accessing Algebra I Through Multiple Representations			✓	✓					
Biehl, L Charles	Empowering Students Outside the Box: Math Behind NUMB3RS			✓	✓					✓
Bintz, William	Equity or Rigor: Which Comes First?							✓		
Bjorkman, Thomas	Diamond Problems Across the Grades		✓	✓					✓	
Blachman, Nancy	Fun Ways to Learn Math Facts: Alternatives to "Drill and Kill"		✓							
Boaler, Jo	The Psychological Prisons from Which They Never Escape?							✓		
Bonsangue, Marty	Surprising Problems for Those Not Easily Surprised			✓	✓					
Brady, Victoria	Solar Calendar Geometry—It's All Angles!			✓	✓				✓	
Brown, Ron	Rock Your Math Class!	✓							✓	✓
Brown Brooks, Gloria	A Math Circle to Foster Equity in the ELL Math Classroom						✓			
Brutlag, Dan	Getting Algebra into the Adolescent Brain			✓	✓					
CadwalladerOlsker, Todd	Making Negatives Tangible Before and During 6th Grade		✓							
Cagle, Peg	Building Modular Origami = Building Spatial Reasoning			✓	✓					
Calahan, Heather	Perspectives on California's New Math Standards							✓		
Canty, Luana	The Art of Units: Arrays, Areas and Angles		✓							
Carlson, Ron	Engage Your Students with Real Data			✓	✓					
Carlyle, Ann	Grids, Games and Arrays	✓							✓	
	Activities for Making Algebraic Reasoning Engaging			✓					✓	✓
Carpenter, Carrie	Hot Off the Press! Behind that Math Concept is a Great Story	✓	✓							✓
Carroll, Cathy	Developing and Supporting Teachers' Mathematical Knowledge for						✓			
Casey, Christopher	Number Sense and the Days of School		✓	✓						✓
Chamberlin, Ruth	What's Vocabulary Got to Do with Equity in Mathematics?		✓	✓						
Childs, Leigh	Engaging Activities+Strategies = Numerically Nimble Students		✓						✓	
Choate, Laura	Effective Games and Practices that Lead to Student Success	✓								
Coes, Loring	Picturing Proportions: Visual Tasks for Algebra and Geometry			✓	✓					
Coggins, Debra	Strategies for Supporting English Learners' Algebra Success			✓	✓					
Cohen, Bruce	An Introduction to Projective Geometry			✓	✓	✓				
Collie, Jamie	Logarithms: Much More Than Just a Button on the Calculator!			✓	✓					

#### Sessions at a Glance

			T	Target Audience					chr.	luct
Speaker	Presentation Title (Refer to alpha section for presentation description.)	K-2	3-5	8-9	9-12	College	Ldshp/TchEd	Ð	Beginning Tchr.	Comm. Product
	Speaking Math			<b>√</b>	✓				✓	
Cook, Joshua	Mathematical Modeling Using the TI-Nspire©			✓	✓	✓			✓	
	Mathematics Spoken Here!			✓					✓	
Cook, Marcy	Algebraic Experiences for All		✓						✓	
Costa, Elmano	Exponential Opportunities for ELLs with Comprehensible Input							✓	✓	
Cummins, Jerry	Equity as it is Related to Appropriate Levels of Rigor							✓		
Dagler, Clay	Turning Problems into Puzzles Using Graphic Organizers			✓	✓					
Daro, Philip	Common Core Standards: What is the Difference?							✓	✓	
De Laby, David	Making Linear Functions Meaningful			✓	✓					
Dinov, Ivo	Technology-Enhanced Mathematics, Probability and Statistics			✓	✓	✓			✓	
Dirksen, Jennifer	Field Trips: Taking Math to the Real World			✓	✓					
Dorf, Carol	Mathematics and Poetry			✓	✓					
Eisenberg, Gary	Singing, Dancing, and Playing Through K-3 Math	✓							✓	
Elias, Emad	Closing the Achievement Gap with Math Simulations		✓	✓						
Elsner, Priscilla Jo	Empower Diverse Learners to Access the Math Spectrum						✓		✓	
Erickson, Sheldon	Conceptual Algebra: Teach More, Better, Faster			✓					✓	
Erickson, Tim	Mathematical Modeling in "Regular" Stats			✓	✓	✓				
Erlandson Block, Staci	Explore Engaging Opportunities to Meet the Needs of ELLs		✓							
Etterbeek, Wallace	Probability Problems with Surprising Solutions			✓	✓					
Farrand, Scott	Developing Fraction Sense in Secondary Students			✓	✓					
Fenton, Michael	Imagine: Wikipedia for Mathematics Assessment Questions			✓	✓				✓	
Fish, Shairlyn	Revealing the Mystery of the Unknown for All Students		✓	✓						
Flood, Linda	Flip Books, Magic Books and More! A Fun Way to Learn Math		✓							
Foster, David	National Core Standards—WYTIWYG							✓		
Foster, Halcyon	An Active Mathematics Intervention			✓	✓					
Freathy, Mark	Building the Foundation for Algebra: Using Factors and Terms			✓	✓				✓	
	Graphic Organizers for Teaching Algebra			✓					✓	
Fulton, Brad	Losing Your Marbles: Function Fun for Everyone		✓	✓						
Gale, Mardi	Aiming at Algebraic Intervention: Not Business as Usual			✓	✓					✓
Gernes, Jeffrey	Prepare Your Calculus Students for AP Success			✓	✓					
Giganti, Paul	Algebra: Concrete to Abstract-Blocks to Formulas			✓						
Gillespie, Janet	A Number Sense Approach to X Facts = Success for All		✓							
Gladis, Karie	Practical Applications: Differentiation Strategies for Math							✓	✓	✓
Gojak, Linda	Life's Too Short for Long Division		✓	✓					✓	
Goldenstein, Donna	Mathematics and the Arts: Thinking and Reasoning Through Art		✓							
Gomez, Emiliano	Filling Bottles with Water			✓	✓					

#### SESSIONS AT A GLANCE

			Target Au	Target Audience					Ichr.	duct
Speaker	Presentation Title (Refer to alpha section for presentation description.)	K-2	3-5	8-9	9-12	College	Ldshp/TchEd	l9	Beginning Tchr.	Comm. Product
Good, Leslie	Teaching the Standards Through Stories	✓							✓	
Goodman-Orcutt, April	At-Risk Students: Technology and Nontraditional Curriculum			✓						
Goularte, Renee	Giant Story Problems: Visualizing the Language of Math	✓	✓							
Greco, Jim	Common Core California Standards							✓		
Grzegorczyk, Ivona	Fun in Algebra Class!			✓	✓					✓
Guzik, Randy	Building a Winning AP Calculus Team			✓	✓	✓				
Gwaltney, Melissa	How to Make "Extra-Credit" a Meaningful Learning Experience			✓	✓					
Hamo, Matthieu	Standards-Based Mini Projects for All		✓	✓					✓	
Hirsch, Maria	Practical Solutions to Make Math Accessible to All Learners			✓						
Ho, Alice	Key Factors to Singapore World-Class Mathematics System						✓			✓
Holman, Lynda	Graphs: More Than Pretty Pictures		✓							
Hunter, Kelley	Math Intervention: Ideas That Work!			✓	✓					
Jacobs, Harold	Mathematical Snapshots of 2010							✓		
Jalalpour, Kathleen	Singapore Math: An Overview	✓	✓							
	Math Contests Build Better Students (and Teachers) Nine Ways		✓	✓	✓				✓	
Kalman, Richard	Are You Smarter Than a 5th Grader (2010 edition)?		✓	✓	✓				✓	
Kirley, Kim	Building Number Sense in the K-1 Classroom	✓								
Kise, Jane	Differentiated Coaching: Every Teacher Helping Every Student						✓			
Kriegler, Shelley	Making Sense of Slope and the Linear Function			✓	✓					✓
Kysh, Judith	Performance Assessment as Support for Preservice Teachers						✓			
Lambertson, Lori	Geometry in Playgrounds		✓	✓						
Lane, Deborah	Math Intervening: Lessons Learned	✓	✓							
Latulippe, Christine	Improving Achievement Through the Power of Number Sense			✓						
Leinwand, Steven	Glimpses of Instructional Excellence							✓		
Lim, Brian	Instructional Strategies to Increase Cognitive Complexity			✓	✓					
Loew, Robert	Student Signaling Systems						✓			✓
Lutz, Michael	CAMTE Business Meeting						✓			
Mackenzie, Christopher	Algebra Using Dynamic Illustrations on Excel Spreadsheets			✓	✓	✓			✓	
Malankowski-Smith, B.	Every Number Wants To Be a Ten or a Close Relative	✓							✓	
Manderscheid, Darrell	Level the Algebra Playing Field by Teaching Fractions			✓	✓					
Manderscheid, Marilynn	Visual, Auditory, and Kinesthetic Cures for Scrambled Brains		✓							
Martin, John	A Piece of Pi			✓	✓	✓				
Mason, Pam	Effective Practices in Algebra That Create Success for All			✓	✓					
Mathurin, Andre	Ways to Naturally Revisit Geometry Proofs in Algebra Class			✓	✓					
Matsumoto, Brandon	From Multiplication to Factoring: Strategies for Factoring			✓	✓				✓	
McDonald, Bob	The Importance of Language, Culture and Power in Mathematics							✓		

#### Sessions at a Glance

			Target Au		Target Aud				:e		chr.	nct
Speaker	Presentation Title (Refer to alpha section for presentation description.)	K-2	3-5	8-9	9-12	College	Ldshp/TchEd	GI	Beginning Tchr.	Comm. Product		
McGuire-Paulson, Nancy	Fun Factoring: Strategies that Make Sense to All Students!		✓	✓					✓			
	Level the Playing Field for All Using Math Games!			✓	✓				✓			
McLean, Peggy	It's a Tangram World		✓									
McNamara, Julie	Beyond Pizzas and Pies: Supporting Fraction Sense		✓							✓		
Meyer, Dan	Math Curriculum Makeover							✓	✓			
Miller, Jim	The Power of One in Teaching Fractions			✓								
Miller, Lisa	Working Together to Provide Opportunities for All Students							✓				
	Algebra for All: Engage Students and Ensure Understanding			✓	✓					✓		
Moore, Sara	Virtual Manipulatives? What Does Hands-on Really Mean?		✓	✓						✓		
Morris, Kathy	Powers of Art: Multiplication for Middle Grades		✓	✓								
Moskowitz, Stuart	Two Birthday Parties in One Day? Problem Simulations on TI-Nspire©			✓	✓	✓				✓		
Muller, Eric	Exposing Exponents: Really Big and Small Numbers in Science			✓	✓	✓						
Murray, Tom	How Likely Is It? Probability Games of Fun and Chance		✓	✓								
	Teach, Don't Tell: Understand, Don't Memorize		✓	✓						✓		
Neufeld, Rudy	Build It, Draw It, Write It, Talk ItOwn the Equity!		✓							✓		
	Stirring Up Place Value Understanding and Success		✓						✓			
Novelli, Barbara	Mixing Up Math Success for All Learners	✓							✓			
Olkin, Julia	What's Holding This Up? Using Underlying Math Structures			✓	✓							
Pernin, Patricia	Enhancing Collaborative Workgroups Through Targeted PD						✓					
Petersen, Bob	Algebra Connections: All Students Can Learn Algebra			✓	✓				✓	✓		
	Don't Slow Me Down with that Calculator, Part 1		✓	✓								
Petrak, Cliff	Don't Slow Me Down with that Calculator, Part 2		✓	✓								
Picciotto, Henri	Escape from the Textbook! Sharing and Collaboration Network			✓	✓							
Preston, Robert	Room for Alternative Algorithms: Multiplication & Division		✓	✓					✓			
Raff, Cynthia	Making Sense of Integer Operations			✓								
Ramos, Jeanne	Making Mathematics Accessible for All Students: Focus on ELLs			✓					✓			
Resek, Diane	Developing Deductive Thinking Before High School		✓	✓								
Ritchie-Reese, Patricia	String Polyhedra with a Twist: A Make-It, Take-It Session							✓				
	Using the Singapore Bar Model to Solve Word Problems		✓	✓					✓			
Roddick, Cheryl	Fractions, Fair Trades, and Pattern Blocks		✓						✓			
Rogers, Paul	Smartboards for Dummies			✓	✓					✓		
Romanek, Brenda	Powerful Problem Solving: Functions in Algebra II			✓	✓							
Rossi Becker, Joanne	Math Specialist Credential: Creating CA Programs						✓					
Sarcona, Lisbeth	Strategies for Discussion and Writing in Mathematics		✓									
Schwartz, David	Putting the "Wonder" Back in Wonderful: Math Happens When Children							✓				
Selby, Victor	Game Theory: Building a Universal Conceptual Model			✓	✓							

#### Sessions at a Glance

		Target A	arget Audience					chr.	uct	
Speaker	Presentation Title (Refer to alpha section for presentation description.)	K-2	3-5	8-9	9-12	College	Ldshp/TchEd	l9	Beginning Tchr. Comm. Product	Comm. Product
Comp. Mislaged	Investigations in Geometry for 2010			✓	✓				✓	
Serra, Michael	Problem Solving Featuring Polya's Problem			✓	✓				✓	
Shreve, Barbara	Developing Linear Relationships			✓	✓					✓
Silverman, Sandy	Big Math for Little Kids: Sorting and Patterns	✓								
Smiler, Helen	The Power of Exponents to Create Mathematical Opportunities		✓	✓						
Smith, Keith	Going Beyond Algorithms for Area of Polygons		✓	✓					✓	
6. 0	Probability and Risk: Increasing Access via Simulation			✓	✓					
Starnes, Daren	Making Sense of Inference for Sampling and Experiments			✓	✓	✓				
Tamez, Modesto	Integrating Proportions Across the Curriculum			✓	✓					
Tobes, Jeff	Math and Carpentry for the Young							✓		
Tuska, Agnes	Empowering Teachers to Ensure Educational Access to Students						✓			
Vierra, Vicki	From Passive Spectator to Productively Engaged						✓			
Walker, Juanita	Building a Bridge from Elementary Mathematics to Geometry		✓	✓						
Watts, Carleen	Fractions: For Those Who Need to See It to Believe It		✓	✓						
Wenrick, Melanie	EEEK! There's a Buggy Algorithm in My Math Class!	✓								
West, Lucy	Academic Discourse—It Ain't Just for Kids							✓	✓	
West, Rick	Preparing for Algebraic Success Using Function Machines	✓	✓							
Wilkins, Glenda	A Logical Approach to Proofs: All Students Achieve Success			✓	✓					
Willebrand, Sheri	Common Core Standards for K-2: How Are They Different?	✓							✓	
Winicki-Landman, Greisy	Fun and Powerful Geometry Activities for All			✓	✓					
Wu, Zhonghe	Differentiating Instruction: A Way to Close the Learning Gap	✓	✓	✓						
Yates, Christl	Reaching All Learners: Math as a Second Language							✓	✓	
Youngs, Dave	Teach Arithmetic Using Algebra for Exponential Learning	✓	✓							
Yu, Julie	Geometry of Nature: Exploring Patterns, Shapes and Symmetry			✓	✓					
7 5	Five Real-Life Math Investigations that will Astound Students			✓	✓					
Zaccaro, Ed	How We Are Lied To: Cheated and Manipulated by Statistics			✓	✓					
Zahner, William	Designing Tasks and Norms for Cooperative Learning with ELLs			✓	✓					
Zeller, Erich	The Number Line? Animate it to Teach and Reach	✓								
Zumwalt, Joan	Let's Make Junk Sequences							✓	✓	

#### **ASILOMAR PATHWAYS**

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



# **COMMERCIAL EXHIBITS**

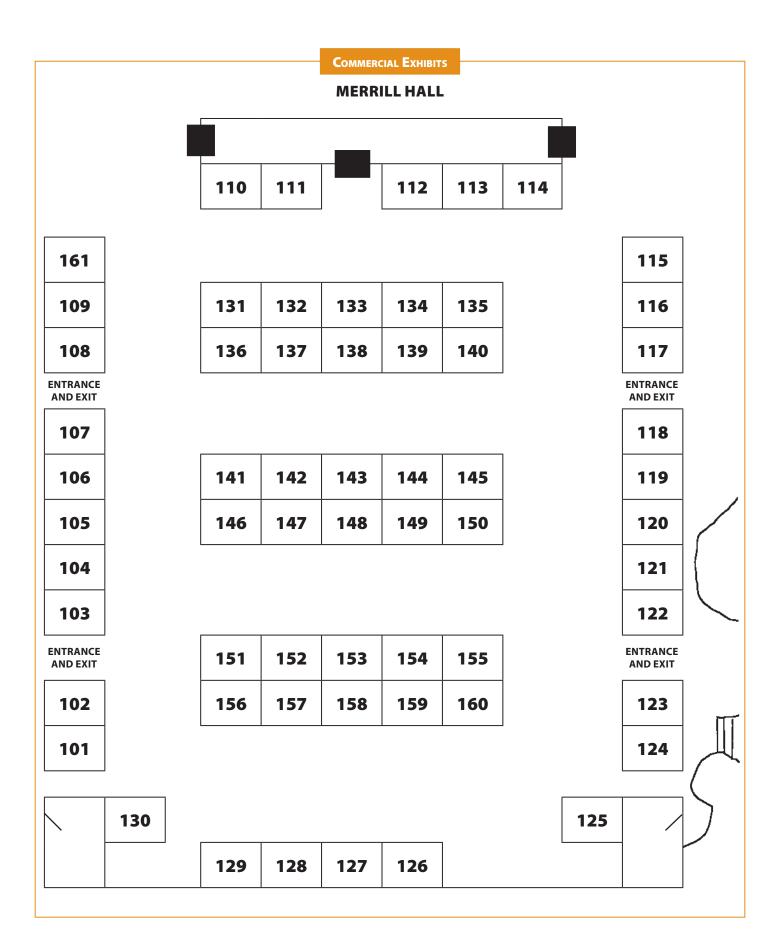
Company	Asilomar Merrill Hall	PG Middle Gym	Company	Asilomar Merrill Hall	PG Middle Gym
CMC Asilomar T-Shirts	Admin.		Intelli-Tunes		255-256
CMC ComMuniCator	Admin.	276	Key Curriculum Press	146-147	
CMC Check In Bags and Badges	Admin.	204-205	Math Teachers Press, Inc.	154-155	
Activity Resources Co., Inc.		221-224	Mathematics Diagnostic Testing Project	142	
AIMS Education Foundation		214-216	MathType by Design Science		226-227
ALEKS Corporation	144		MIND Research Institute	157	
America's Choice, Inc.	150		Moore Educational Resources	156	
Bedford, Freeman & Worth Publishers & W.H., Freeman & Co.	104-105		NASCO		211-212
California Casualty Auto and Home Insurance	106		NCTM		218-219
Carnegie Learning	107		Neufeld Learning Systems, Inc.	151	
Cengage Learning	143		Pacent Learning Solutions	152	
Center for Mathematics and Teaching, INC	135		Pearson	158-160	
CGP Education, Inc.	148-149		Qwizdom, Inc.		237
CK-12 Foundation	103		Saxon	131-132	
CMC Common Core Standards	125-130		Stokes Publishing Company		267-268
Conceptua Math	141		Teacherwear		271
CPM Educational Program	133-134		Texas Instruments		242-244
Curriculum Associates	145		The BizWorld Foundation		260
Emines, Inc.		272	The Markerboard People	136-137	
Enterprising Ideas		239	The Pi-Dye T-Shirt Shop		213
Frog Publications		235	TODOS		275
Heinemann Publishers	153		Wholemovement		229
Houghton Mifflin Harcourt	138-140		Xtreme Math Games		258
Industry Initiatives for Science and Math Education (IISME)		274	YMIR Inc./The Ultimate Puzzle		249
Instructional Images		232-233			

Pacific Grove Middle SchoolFriday / 5:00 - 7:15 p.m.Saturday / 8:00 a.m. - 5:30 p.m.Merrill Hall, AsilomarFriday / 3:00 - 7:00 p.m.Saturday / 8:00 a.m. - 4:00 p.m.

Exhibits close promptly at times listed above so visit early!

### ~ NAME BADGES ~

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



# **PACIFIC GROVE MIDDLE SCHOOL**

270	271	272	273	274	275	276	

EXIT & LADIES ROOM

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ENTRANCE
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Due to construction this configuration may change.

EXIT & MENS ROOM

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# ■ Presidential Awards, www.cmc-math.org/PAEMST

One elementary or one secondary awardee, chosen from several mathematics teacher finalists, get a trip for two to the White House and over \$10,000 in awards. The award alternates between the two levels: secondary in odd years, elementary in even.

### 2009 Presidential Award for Excellence

**SEAN NANK** — El Camino High School, Oceanside Unified School District

# **2011 Secondary Teacher Nominations**

Elementary and secondary awards are alternating. The nominations for the 2011 Presidential Award for Excellence in Mathematics and Science Teaching are now being accepted. Please encourage your colleagues to apply. A good candidate:

- · Gets students excited about math
- Skillfully uses a variety of teaching techniques
- Engages students in meaningful mathematics
- Regularly reflects on lessons and seeks professional development
- Is actively involved in mathematics education at the local, state, and/or national levels

# ■ California Math Council, www.cmc-math.org/awards

We are also grateful to the following winners of CMC's awards for educators who have given sustained service to the students of California and to the mathematics education community.

# Logothetti Award

Spencer Adkisson — High Desert Monessori School
Timothy John Ebendick, II — California Math Council to the Far North
Ms. Shaundra Mille — Alameda Contra Costa County Math Educators
Camille Upton — Mt. Lassen Math Council

### 2009 Walter Denham Memorial Award

Susie Hakansson

There were no applicants for The Lurie Center Scholarship.

To nominate someone go to: www.cmc-math.org/awards

For more information about awards, or to nominate, visit:

Presidential Awards: www.cmc-math.org/PAEMST

or

California Math Council: www.cmc-math.org/awards

# **California Mathematics Council — Northern Section**

# 53<sup>rd</sup> Annual Asilomar Mathematics Conference

Please comment on any of the following to help us improve our conference. We do read every form returned and tabulate all comments, positive and negative. Please return this form by depositing it in the evaluation box in the Administration Building, the Middle School, or the Exhibit Hall.

**NOTE:** All evaluations returned during the conference will be entered in a drawing for FREE Conference Registration and On-Grounds Housing for next year. This year's free registration and housing winners are Kimberly Kirley and Katie Sutton.

Please comment on the general quality of the speakers, session	s and workshops.
What were the conference highlights for you?	
What changes, if any, would you like to see?	
Using a scale of 1 (very useful) to 5 (not useful), please rate the uprogram: Matrix (pages 10-13) Alphabetical Sp	usefulness of <u>each</u> of the following sections of the peaker Listing (pages 14-31)
Sessions at a Glance (pages 32-36) Conference Pla  Comments	nner <b>(page 9)</b> Site Maps <b>(pages 46-48)</b>
<ul> <li>I would like to enter the drawing for FREE Conference Regists and On-Grounds Housing.</li> <li>Name:</li> </ul>	In case you carry this form home, mail no later than December 31, 2010 to:
E-mail:	Rebecca Hubbell 2345 Fair Street

Chico, CA 95928

### **CALENDAR OF MATH EVENTS 2010-11**

### January 27-29, 2011

Association of Mathematics Teacher Educators (AMTE)
Annual Conference
Hyatt Regency Hotel, Irvine, CA
Susan Gay, sgay@ku.edu

### February 25-26, 2011

CMC-Central STEMposium, Fresno, CA 888-CMC-Math or cmc-math@sbcglobal.net

### February 26, 2011

Mathematics Educators of Solano County (MESC)
Annual Conference, Fairfield, CA
Julie Crozier, julie4mesc@aol.com

### March 5, 2011

Sacramento Area Mathematics Educators (SAME)
Annual Conference, CSU Sacramento, CA
http://edweb.csus.edu/projects/same/

Council of Mathematics and Science Educators of San Mateo County (CMSESMC) Annual Conference, Cañada College, Redwood City, CA April Cherrington, 650.802.5359 acherrington@smcoe.k12.ca.us

#### April 13-16, 2011

NCTM 89th Annual Conference Indianapolis, IN

http://www.nctm.org/conferences

### November 4-5, 2011

CMC-South Conference, Palm Springs, CA 888-CMC-MATH or cmc-math@sbcglobal.net

### December 2-4, 2011

CMC-North Conference, Asilomar, CA 888-CMC-MATH or cmc-math@sbcglobal.net

### April 25-28, 2012

NCTM 90th Annual Conference Philadelphia, PA **www.nctm.org** or 703.620.9840 x143

For information and links to these math events go to: www.cmc-math.org/calendar

### **COMMUNICATOR SALES**

The following items are for sale Friday afternoon and Saturday at the Asilomar Administration Building and all day Saturday at the Middle School:

- 2010-11 Special Edition: Mathematical Thinking Across the Grades, K-12 (\$5)
- 2009-10 Special Edition: Activities Across the Strands, Grades K-12 (\$5)
- 2008-09 Special Edition: Probability and Statistics Across the Grades, K-12 (\$5)
- 2007-08 Special Edition: Geometry and Measurement Across the Grades, K-12 (\$5)
- 2006-07 Special Edition: Algebraic Thinking Across the Grades, K-12 (\$3)
- Post-It Cubes (\$5)

The following are \$2 each, or three for \$5:

- 2005 Classics Publications: Grades 3-6
- 2004 Special Edition: More Standards-Based Activities for the Classroom, K-12
- 2003 Special Edition: Standards-Based Activities for the Classroom, K-12
- 1998 Special Editions
- Back issues of the ComMuniCator
- Pi poster



# **California Mathematics Council - Northern Section**

**Purpose** CMC-N wishes to encourage creativity and innovation among Northern California

educators for the purpose of developing mathematically powerful students.

**Who** CMC-N members from any public or private school or district

**Qualifications** ✓ Must be current members

✓ Can only apply once per school year

✓ Should have additional sources of funding

✓ Application completed in full

**Proposal** 1. Title Page, complete the form on page 44.

**Format** 2. Project Description

a. Project Goals—What will the project seek to accomplish?

b. Statement of need as related to your students.

c. Project activities and timeline.

d. Impact—Who and how many will be effected?

e. Evaluation/Dissemination Plan—How will you assess and then document the outcomes of the project? What plans do you have for sharing?

3. Project Budget—provide an itemized budget listing support from other sources.

4. Amount requested. Partial funding likely.

# Applications must be limited to five pages including the cover form.

### Send to:

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

# MINI-GRANTS

Mini-Grants for CMC-N members are available for up to \$500 to encourage creativity and innovation among Northern California educators for the purpose of developing mathematically powerful students.

Deadline: January 31 and November 1 of next year.

For information and applications visit

**www.cmc-math.org/awards** or contact FaraLee Wright at faralee.wright@sbcglobal.net

# **California Mathematics Council - Northern Section**

Mini-Grant Deadlines: January 31 - \$500

November 1 - \$500 Title of Grant \_\_\_\_\_ Name of Grant Leader: CMC Member # Home phone: ( ) Home e-mail: School name: School address: \_\_\_\_\_\_Fax: \_\_\_\_\_ School e-mail: The Grant will impact the following: Number of students: Number of teachers: Percent members of minorities: Maximum amount requested to implement the grant:\_\_\_\_\_\_ Include the following information in your request: Item(s) to be purchased: Expected vendor and prices: Short narrative about how these items will be used: Grant requests may be only partially funded. Additional funding sources available to you. NOTE: Grant covers materials only, not teacher work time or compensation. Only one Mini-Grant can be awarded per applicant per school year. Grant is limited to current CMC-N members and to school sites in the CMC-N area. **Approval Signature:** Grant Leader \_\_\_\_\_ Building Site Administrator Name and Title \_\_\_\_\_

### Send to:

CMC-N Grants, c/o FaraLee S Wright, PO Box 2738, Suisun, CA 94585-5738, or faralee.wright@sbcglobal.net

### **SPECIFICS:**

- ✓ Earn 1.5 quarter hours (= 1 sem hr) of college credit for your Asilomar participation.
- ✓ Credit is from CSU East Bay Extension Division. Generally it can not be applied toward a degree program, but can be used as:
  - professional growth units for your credential, and,
  - district credit for step advancement. Check with your district regarding its policy on accepting these units.
- ✓ Credit will be given in the Winter Quarter. Grades will not be available until April. Please do NOT call before that time. After February 1, you may send an e-mail to be sure your materials were received.
- ✓ Grades are CR/NC only.
- ✓ You must complete each of the requirements below.

### **REQUIREMENTS:**

- 1. Register for the conference.
- 2. Register for credit/no credit by downloading the form at http://www.cmc-math.org/activities/north\_conference.html. Complete the form on your computer. Then print, sign, and mail with credit card information or your check for \$125.00 (payable to CSU East Bay).
- 3. Attend the opening session Friday evening 7:30-9:00 p.m. at Pacific Grove Middle School Auditorium.
- 4. Attend at least three sessions on Saturday, visit either exhibit area, and attend a Sunday closing session.
- 5. Type a paper as described below. Save a tree: single spacing is fine. Include your name, address and phone number on it in case of problems.

#### **PAPER:**

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

#### **REMEMBER:**

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

Mail the registration form, payment, and paper in a single packet by January 30 to:

CMC, PO Box 880, Clayton, CA 94517-0880 Attention: Mike Contino or cmc-math@sbcglobal.ne

# **Download form at** CALIFORNIA STATE UNIVERSITY, EAST BAY 25800 Carlos Bee Blvd, WA 804 | Hayward, CA 94542 | Phone: 510.885.3605 | Fax: 510.885.4817 Contract Credit Registration Form Student Information To enroll for credit, please complete and return to instructor. Fees must be paid in full for enrollment to be valid. (Please print clearly.) City Day Phon Employe ☐ High School Diploma/GED ☐ Bachelor Degree Gender: □ Male □ Female Course Information Year: 2011 Quarter: □Fall ⊠Winter □Spring □Summer Credit/No Credit Option: This course is credit/no credit (CR/NC) option only. Department Course No Section Course Title Math 7021 HA Asilomar Conference 2010 Payment Options (Check one Box) - NO REFUNDS ISSUED ON CONTRACT REGISTRATIONS □ Personal Check/Money Order (Make Payable to CSUEB) □ Paid by Employer. Attach either Company/Agency Check or Employer Purchase Order. Employer address information must be provided above Expiration Date. PRINT Cardholder Name: Cardholder Signature: \_Invoice \_ Cash \_ Check/MO#: \_

### **A**FFILIATED **G**ROUPS

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

### CA Math Council to the Far North (CMCN∞)

Mary Ann Sheridan, msheridan@nohum.k12.ca.us

### Mt. Lassen Math Council (MLMC)

Chris Dell, cdell@shastacoe.org

### Sonoma County Math Council (SCMC)

Ben Ford, ben.ford@sonoma.edu

### Sacramento Area Math Educators (SAME)

Rita Johnson, rjohnson@csus.edu

### Math Educators of Solano County (MESC)

Genele Rhoads, grhoads@solano.edu

# Alameda Contra Costa County Math Educators (AC<sup>3</sup>ME)

Elizabeth Brooking, esbrooking@yahoo.com

# Contra Costa County Association of Science Math Education (C<sup>3</sup>ASME)

Connie Loosli, cloosli@wildlife-museum.org

# Council Math & Science Educators San Mateo County (CMSESMC)

Julia King, jking@sbpsd.k12.ca.us

### Santa Clara Valley Math Association (SCVMA)

Trisha A. Bergthold, bergthold@math.sjsu.edu

### Monterey Bay Counties Math Education (MBCME)

Linda Dilger, Idilger@monterey.k12.ca.us

### Northern Nevada Mathematics Council (N<sup>2</sup>MC)

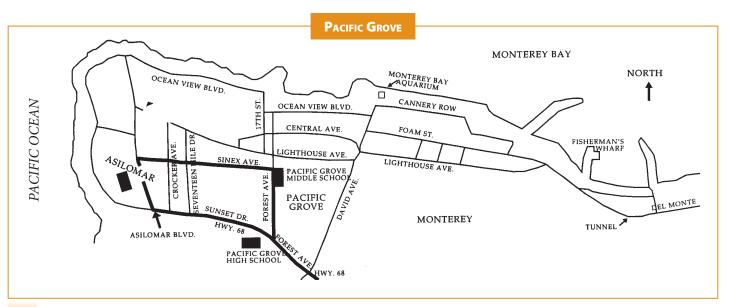
Denise Trakas-Wendt, denisewendt@gmail.com

### San Francisco Math Teachers Association (SFMTA)

Jason Murphy-Thomas, murphy-thomasj@sfusd.edu

### Bus Service

On Friday, bus service will run between the Asilomar grounds and Pacific Grove Middle School from 3:45-9:30 p.m. Busses will run between Asilomar and Pacific Grove Middle School all day Saturday.



### PACIFIC GROVE MIDDLE SCHOOL

