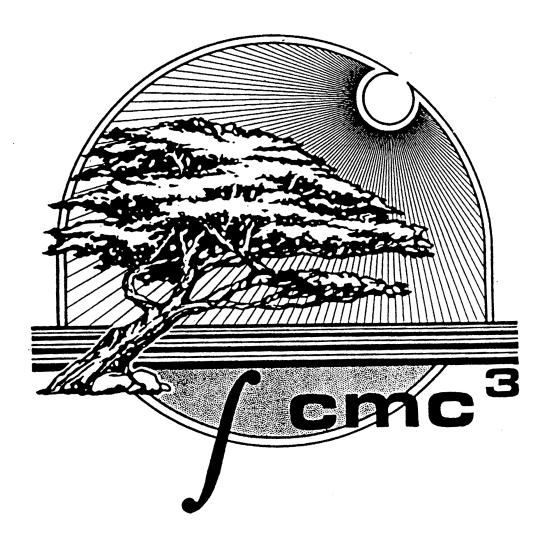
# The California Mathematics Council, Community Colleges

39th Annual Fall Conference



December 9 - 10, 2011

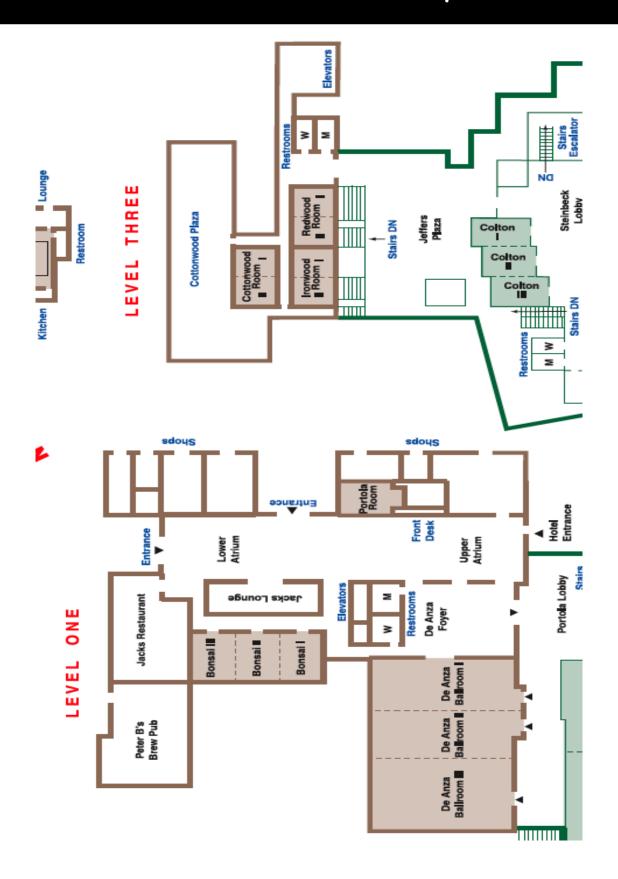
Portola Hotel and Spa Monterey, California http://www.cmc3.org

# SATURDAY'S OVERVIEW AND SESSIONS AT-A-GLANCE

7:30 a.m. Es	timation Walk/Run in Lobby n. Registration in Exhibit Area	11:45 – 12:45 p.m.	Lunch in the Atrium
8:15 - 10:00 a.n	n. Registration in Exhibit Area	12:45 – 2:15 p.m.	General Session in
*Student Poster Se	ssion: 9:30 a.m. to 4:00 p.m. First Breakout Session Break		the Atrium
9:00 – 10:00 a.m.	First Breakout Session	2:30 - 3:30 p.m.	Third Breakout Session
10:00 – 10:30 a.m.	Break	3:30 - 4:00  p.m.	Break
10:30 – 11:30 a.m. 11:30 – 11:45 a.m.	Second Breakout Session	4:00 - 5:00 p.m.	Fourth Breakout Session
11:30 – 11:45 a.m.	Break	5:00 - 6:00 p.m.	Reception in the Exhibit
			Area

ROOM	9:00-10:00	10:30-11:30	2:30-3:30	4:00-5:00
Bonsai II (General Interest)	Preparing Students to Succeed in Calculus: An Intervention and Study	Answers to the Questions We All Dread	Measuring Success One Stu- dent at a Time: Course Redesign with a Power Cord and a Pencil	Large Numbers and Acker- man's Function
	Marilyn Carlson Arizona State University	Dave Sobecki Miami University, Hamilton	Andreana M. Grimaldo Quinsigamond Community College	Roderic Taylor De Anza College
Bonsai III (Potpourri)	State and National Projects  – Do You or Your  Students Care?	The Incomparable Bernoul- lis and a Marvelous Spiral	The Eureka Experience - Instructional Techniques That Encourage It!	What Are We Doing?
	Ian Walton Mission College	John Martin Santa Rosa Junior College	Alan Tussy Citrus College	Michael Eurgubian Santa Rosa Junior College
Portola (Basic Skills Mathematics)	Math Performance Success	Dynamic Algebra	Contextualized Learning in Mathematics	
	Diane Mathios De Anza College	Chris MacKenzie Perris Union High School District	Barbara Illowsky De Anza College	
Redwood I (Precalculus and Above)	The Future of College Text- books	Bubbles for Precalculus and Beyond	Bringing Calculus Alive with Interactive "Action- Consequence" Technology Documents	Did We Go Over This?
	Bruce Cooperstein UC Santa Cruz	Lalu Simcik Cabrillo College	Thomas Dick Oregon State University	Glenn Pico American River College
Redwood II (Technology)	Using Assessment to Better Implement Online Systems in Developmental and Collegiate Mathematics Courses	Integrating a Computer Algebra System (CAS) into Developmental Mathematics Courses	Reasoning with Data	Clickers: Use Them Wisely!
	Scott Gentile Hunter College	Wade Ellis West Valley College	Gail Burrill Michigan State University	Jenny Friedenreich Diablo Valley College
Ironwood (Statistics)	Principles of Data Analysis	Technology in Elementary Statistics: How Much is Too Much?	You Go First. No, You Go First!	Developing Data Skills
	Peter Avery MiraCosta College	Barry Monk Makon State College, Georgia	Charles Barnett Las Positas College	Robert Gould UC Las Angeles

# The Portola Hotel and Spa



**Welcome** to the 39<sup>th</sup> Annual Fall Conference! If this is your first CMC<sup>3</sup> conference, we send you an even bigger welcome. Your board has been hard at work planning a fabulous program. We have some returning speakers, as well as new ones. If you are interested in getting involved with CMC<sup>3</sup>, please speak to one of the board members or fill out the bottom part of the evaluation. Have a great time and consider speaking or presiding next year.

#### **Board and Conference Committee**

President: Barbara Illowsky
Past-President: Larry Green
President-Elect & Monterey

Conference Chair: Susanna Gunther Secretary: Greg Daubenmire Treasurer: Rebecca Fouquette

Mont. Speaker Chair: Wade Ellis Conference AV Specialist & Tahoe Conference Chair: Michael Eurgubian

Conference Chair: Michael Eurgubi Campus Reps Coord: Tracey Jackson Membership Chair: Joe Conrad

Mark Harbison **Business Liaison:** MAA Liaison: Wade Ellis Newsletter Editor: Jay Lehmann Adjunct Advocate: Tracey Jackson CMC Liaison: Jenny Freidenreich Awards Coord: **Ekaterina Fuchs** AMATYC Liaison: Marcella Laddon Articulation Breakfast: Steve Blasberg Web Page Coordinator: Larry Green Foundation President: Cynthia Speed

Special Thanks to:

#### Portola Plaza Hotel & Spa

#### **In-kind Donations:**

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**Evergreen Valley College** 

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Pearson Higher Education
- Friday evening "after party"

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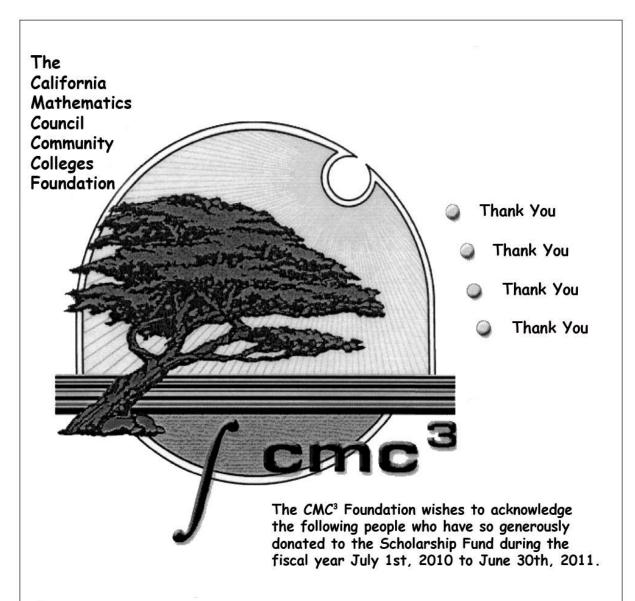
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  Cynthia Speed
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  Noelle Eckley
  Janet Lee Handel
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  Binh Truong

## CMC3 PRESIDENTS

1973 - 1974 1974 - 1977 1978 - 1980 1980 - 1981 1982 - 1983 1984 - 1985 1986 - 1987 1988 - 1989 1990 - 1991 1992 - 1993 1994 - 1995 1996 - 1997 1998 - 1999 2000 - 2001 2002 - 2003 2004 - 2005 2006 - 2007	James Curl Raymond Wuco Brandon Wheeler Hal Andersen Art Dull Pat Boyle Shirley Trembley Wade Ellis, Jr. Denny Burzynski Barry Wood Debra Landre Chris Burditt Michael Eurgubian Lois Yamakoshi Randy Taylor Rick Hough Rob Knight	Modesto Junior College San Joaquin Delta College Sacramento City College Santa Rosa Junior College Diablo Valley College Santa Rosa Junior College Bakersfield College West Valley College West Valley College West Valley College Santa Rosa Junior College San Joaquin Delta College Napa Valley College Santa Rosa Junior College Santa Rosa Junior College Los Medanos College Las Positas College Skyline College Evergreen Valley College
2006 – 2007 2008 – 2009	Rob Knight Larry Green	Evergreen Valley College Lake Tahoe College
2009 – Present	Barbara Illowsky	De Anza College

## CMC3 DISTINGUISHED SERVICE AWARD RECIPIENTS

1992	Ray Wuco	San Joaquin Delta College
	•	
1993	Frank Denney	Chabot College
	Wade Ellis Jr.	West Valley College
4004	Brandon Wheeler	Sacramento City College
1994	Patrick Boyle	Santa Rosa Junior College
	Arthur Dull	Diablo Valley College
1995	Hal Andersen	Santa Rosa Junior College
	Sister Clarice Sparkman	San Jose City College
1996	James Curl	Modesto Junior College
1997	Guy De Primo	City College of San Francisco
1998	Allen Utterback	Cabrillo College
1999	Barry Wood	Santa Rosa Junior College
2000	Denny Burzynski	West Valley College
2001	Chris Burditt	Napa Valley College
2002	Wei Jen Harrison	American River College
2003	Marilyn McBride	Skyline College
2004	Michael Eurgubian	Santa Rosa Junior College
2005	Lois Yamakoshi	Los Medanos College
2006	Debra Landre	San Joaquin Delta College
2007	Dave Johnson	Diablo Valley College
2008	Chris Barker	De Anza College
2009	Rick Hough	Skyline College
2010	Jim Spencer	Santa Rosa Junior College

## CMC3 PRESIDENT'S AWARD RECIPIENTS

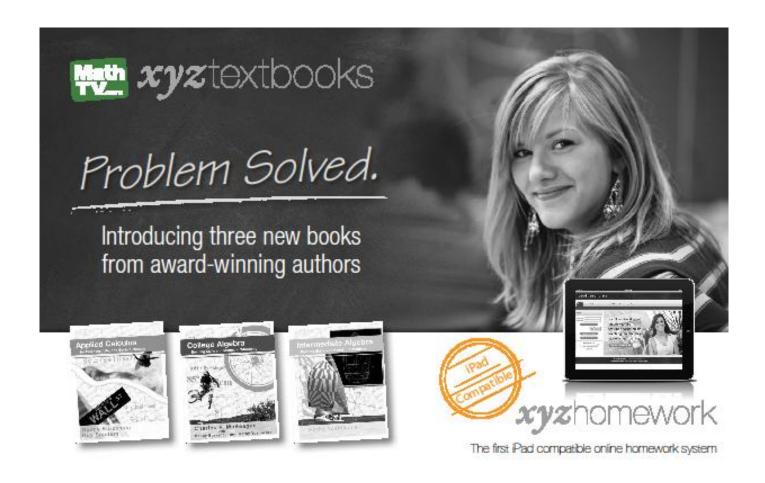
Barry Wood	Santa Rosa Junior College
Chris Barker	De Anza College
Noelle Eckley	Lassen College
Barbara Illowsky	De Anza College
Zwi Reznik	Fresno City College
Sandi Nieto	Santa Rosa Junior College
Randy Taylor	Las Positas College
Mark Harbison	Sacramento City College
Jim Spencer	Santa Rosa Junior College
Robert Knight	Evergreen Valley College
	Chris Barker Noelle Eckley Barbara Illowsky Zwi Reznik Sandi Nieto Randy Taylor Mark Harbison Jim Spencer

#### 2011 DISTINGUISHED SERVICE AWARD



Randy Taylor has been a Mathematics Instructor at Las Positas College for 22 years where he has been a mentor to new full-time and part-time Mathematics faculty. He served on the  $CMC^3$  Board for 17 years as Monterey Conference Speaker Coordinator, Past President, President,  $CMC^3$  President-Elect, Foundation President, Membership Chair, Scholarship Chair, and Awards Chair. In addition to  $CMC^3$ , Randy served AMATYC in the following positions: West Vice President, Foundation Board member, Technology in Mathematics

Education Committee, Education Committee, Program Issues Committee, Mathematics Excellence Award Committee, Nominating Committee, and was a delegate to the AMATYC Delegate Assembly for 16 years. Randy is a prolific speaker, having presented approximately three dozen times.



### CONFERENCE PROGRAM - FRIDAY

Registration: 2:30 - 6:30 p.m. Portola Hotel & Spa Lobby

Cengage Event: 3:00 - 5:00 p.m. Portola Room

New Features and Best Practices of Enhanced WebAssign

All CMC<sup>3</sup> attendees are welcome to a presentation by Roy Simpson of Cosumnes River College

iLearn Math Event: 3:00 - 5:00 p.m. Cottonwood I Room

Prescriptive Technology Based Learning Support that Yields Faster

Developmental Math Completion Rates

Anyone can drop-in. Learn why iLearn Math is a fundamentally different model that accelerates time in Dev Math. iLearn Math's efficient use of modularization is designed to motivate students to "do the math" with an emphasis on conceptual understanding coupled with procedural. This approach keeps the student from having "leaps of logic" and supports their understanding for higher level math concepts. We do not just teach rules and steps. There will be a drawing for a free trial at the workshop!

CASIO Event: 3:00 - 5:00 p.m. Redwood I Room

Using the ClassPad to Explore Mathematics

Everyone is welcome. If you are wondering what the ClassPad is or if it will help students better visualize mathematics, please attend. This will be a hands-on workshop. One ClassPad 330 handheld and one CASIO Exilim camera will be given away during the workshop!



39th Annual Fall Conference

## RECEPTION: 7:00 - 9:00 p.m. in De Anza III Room

Coffee and Tea will be enjoyed at the reception. Those not attending the reception are welcome to attend the talk at approx 8:00 p.m.

# KEYNOTE SPEAKER



# Wade Ellis West Valley College

#### Mathematics I Have Learned as a Community College Instructor

Presider: Barbara Illowsky, CMC<sup>3</sup> President

De Anza College

Community College instructors in California all have extensive mathematics backgrounds, but there is much mathematics that we can learn. We can learn from our students, from our colleagues, from articles and books, over coffee, in the car, running on a track, at lunch, and in the shower. Wade will relate some of the interesting mathematics he has learned: why he learned it, who he learned it from, and/or where he learned it.

#### Possible topics

Ken Ross in Seattle: Solutions to Polynomial Equations

Michael Colvin in San Diego: isoclines Richard Guy in San Antonio: eigenvalues

Walter Garnieri at West Valley College: all the points whose distances from 2 pts.

2:1

 $r = \ln(\theta)$  at West Valley College

Normal vs. t distributions from Bock, Velleman, and Deveaux: Sample distribution are t

The Distributive Law from Rebecca Wong, Stan Benkoski, Bruce Copperstein In(2) in Memphis at an AMATYC conference

Calculus: Mathematics and Modeling: Integration by Parts

Developmental Mathematics: Solving Equations Synthetic Geometry from Alfred Manaster

39th Annual Fall Conference





**③** 

# PEARSON MATHEMATICS AND STATISTICS

Count on the best authors in the country, including many from California. Visit our display booth to check out our latest offerings.

#### Robert Gould

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#### **Jay Lehmann**

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#### **Bob Prior**

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Developmental Math

#### MaryAnne Anthony-Smith

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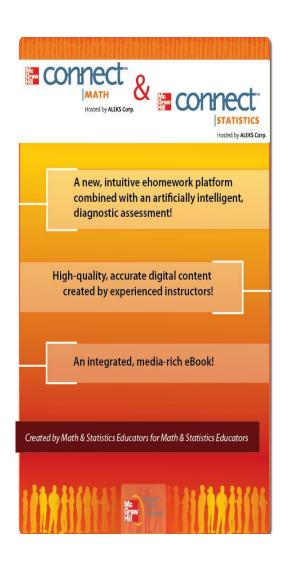
#### Pearson Education Event: 9:00 p.m.- 12:00 a.m. Bonsai Room

#### 3rd Annual Pearson Education Game Night

This event is open to everyone. The Pearson math & stats team invites you to an evening of games,

hors d'oeuvres, and drinks at  $CMC^3$ ! Join our team and our authors for food, conversation, and fun. There will also be board games and a raffle for a Wii!





Please visit our website at <u>www.cmc3.org</u> to find:

- Updated Conference Info
- CMC<sup>3</sup> Newsletters
- Speaker Proposal Forms
- Presider Proposal Forms
- Other CMC<sup>3</sup> Information

#### CONFERENCE PROGRAM - SATURDAY

Estimation Walk/Run: 7:30 a.m. Meet in the Hotel Lobby!

Registration: 8:15 - 10:00 a.m. Exhibit Area

Student Poster Session: 9:30 a.m. - 4:00 p.m. Exhibit Area

Students will be available to answer questions about posters from 12:30 - 12:45 p.m.

### FIRST SESSION: 9:00 - 10:00 a.m.

Marilyn Carlson
Arizona State University
marilyn.carlson@asu.edu

Bonsai II (General Interest)

Preparing Students to Succeed in Calculus: An Intervention and Study

The foundational understandings and problem solving abilities that have been documented to be critical for learning calculus guided the development of precalculus and college algebra teacher tools and student activities. These resources and the results of a study of teacher knowledge and student learning in this instructional context will be shared

Ian Walton

Mission College

ianwymedu@redshift.com

Bonsai III

(Potpourri)

State and National Projects - Do You or Your Students Care?

Join us to take a look at current state and national projects and discuss how they might affect our students and classrooms. State examples might include the transfer degree and the latest course descriptors - or the progress of the statewide assessment instrument proposal - or the UC Berkeley basic skills case studies project. National examples might include the effect of K-12 common core standards, the revision of the GED math test and possible implications (again) for our associate degree graduation competencies. Who wants to go there....?

# Diane Mathios De Anza College mathiosdiane@deanza.edu

### Portola (Developmental Ed)

#### Math Performance Success

De Anza College's MPS program serves between 220-250 students each year and has been running for over a dozen years. It successfully takes high-risk students who have failed prealgebra or elementary algebra at least once, more often twice, and gets them through their transfer mathematics course. Come learn how to adopt and adapt MPS for your college.

\_\_\_\_\_\_

Bruce Cooperstein
UC Santa Cruz
coop@ucsc.edu

Redwood I (Precalculus & Above)

#### The Future of College Textbooks

This interactive presentation will focus on how the digital platforms such as the ipad, iphone, HP and Android tablets can make possible a fundamental change in the form and nature of college mathematics textbooks. Possible consequences are less expensive texts with which students can interact in a dynamic fashion, have immediate access to definitions of concepts as well as methods procedures and algorithms and test skills. These features will be illustrated with a digital text in elementary linear algebra.

Scott Gentile
Hunter College
sgentile@hunter.cuny.edu

Redwood II (Technology)

Using Assessment to Better Implement Online Systems in Developmental and Collegiate Mathematics Courses

Hunter College conducts assessment each semester in College Algebra, Precalculus, and Calculus to ascertain what combination of written and online homework promotes the highest rates of student success. This talk will describe how we use assessment to analyze our online homework usage, what changes have been made as a result of our research, and how this has impacted students' performance.

# Peter Avery MiraCosta College pavery@miracosta.edu

# Ironwood (Statistics)

#### Principles of Data Analysis

The process of analyzing quantitative data can be simplified to the same few guiding principles, whether working with data in one variable or investigating the relationship between two variables. We will focus on these major ideas when looking at some student learning outcomes and assessments. Bring your graphing calculator.

#### CSU/UC

#### **Mathematics Diagnostic Testing Project**

MDTP tests measure readiness for mathematics courses and are approved for use by California Community Colleges until 2012

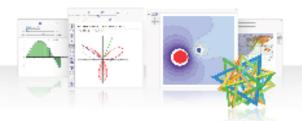
- The Algebra Readiness Test assesses preparation for first year algebra courses.
- The Elementary Algebra Diagnostic Test assesses preparation for second year algebra courses.
- The Intermediate Algebra Diagnostic Test assesses preparation for precalculus and other courses at that level.
- The Precalculus Diagnostic Test assesses preparation for calculus. This test is available in a 40-item version and a 60-item version.

MDTP has two on-line practice tests available to anyone with Internet access. Students can use the on-line tests to help prepare for precalculus and calculus level courses.

<a href="http://mdtp.ucsd.edu/OnlineTests.shtml">http://mdtp.ucsd.edu/OnlineTests.shtml</a>

For more information, contact
MDTP's California Community College Coordinator
MaryAnne Anthony at (714) 564-6646
or e-mail to cccmdtp@attglobal.net
<a href="http://mdtp.ucsd.edu">http://mdtp.ucsd.edu</a>

# Wolfram Mathematica A Solution for Every Classroom



#### Creating a Dynamic Classroom

Re-energize your classes with Mathematica, fledble software that lets you and your students compute and visualize just about anything. Explore concepts in math, physics, economics, biology, engineering, and more.

Stop by the Wolfram booth to learn more...

www.wolfram.com/solutions/precollege

#2011 Wifes Broads, he Malandle is a sphired industrial Wifes Insent, inc

#### SECOND SESSION: 10:30 - 11:30 a.m.

Dave Sobecki
Miami University, Hamilton
dsobecki@cinci.rr.com

Bonsai II (General Interest)

#### Answers to the Questions That We All Dread

Why do I have to learn this stuff? Is this going to be on the test? Why should I care about proofs? Don't these common questions just make you cringe? Teaching math, like life, is much easier when you look for opportunities where others see obstacles. I'll talk about how these questions can be used to motivate students and improve your teaching.

John Martin Santa Rosa Junior College jmartin@santarosa.edu Bonsai III (Potpourri)

#### The Incomparable Bernoullis and the Marvelous Spiral

The Bernoulli family dominated the mathematical scene during the closing years of the seventeenth century and throughout most of the eighteenth. The two most famous members, Jacob and Johann, were brothers and bitter rivals. In this talk, we will explore the accomplishments of this remarkable family and examine some of the reasons behind their personal feuds.

Chris MacKenzie
Perris Union High School District
ccathree@msn.com

Portola
(Developmental Ed)

#### Dynamic Algebra on a Spreadsheet

Using an Excel spreadsheet students will have an opportunity to observe dynamic graphs. For example, simple sliders will control the motions of a quadratic graph so that engaged students can ask thought provoking questions and quickly see how the graph responds. Participants will observe and create their own graphs. Bring a jump drive, a series of graphs will be provided, they are all free! These tools can be used by the instructor as an aid our by the students to help with assignments.

\_\_\_\_\_

# Lalu Simcik Cabrillo College lasimcik@cabrillo.edu

# Redwood I (Precalculus & Above)

Bubbles for Pre-Calculus and Beyond

The mathematical similarity between a corral, regular polygons, rectangular box, regular polyhedra, and spherically optimized enclosures are simple and full of wonder. To show this, the talk includes a bubble demonstration from a master bubble blower. Participants will have the opportunity to practice their own bubble blowing techniques.

Wade Ellis West Valley College

Redwood II (Technology)

wellis@ti.com

Integrating a Computer Algebra System (CAS) into Developmental Mathematics Courses

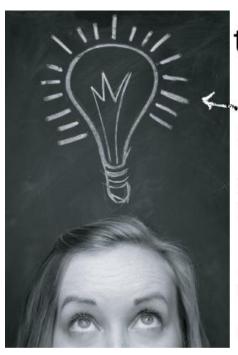
Student use of a CAS that performs symbolic algebraic computations is little appreciated by Development Mathematics instructors. Students can develop an understanding of a variety of developmental mathematics symbolic manipulations using such software. This presentation will look at mathematical applets that promote student understanding of central topics in developmental mathematics.

Barry Monk
Makon State College, Georgia
barry.monk@maconstate.edu

Ironwood (Statistics)

Technology in Elementary Statistics: How Much is Too Much?

Technology in the Elementary Statistics classroom is sometimes a double-edged sword. Technology brings into reach a wealth of examples. However, technology can also sometimes replace students' understanding of the concepts with its effortlessness and foster a "just push the button" mentality. The question is not whether technology should be included in the classroom, but rather to what degree and how does one keep it from taking over.



the ah-ha moment

Get more of these in your class.

Stop by Thinkwell's booth to learn how.

Instructional math videos that students love.

www.thinkwell.com

LUNCHEON: 11:45 a.m. - 12:45 p.m.

# An Italian Buffet will be provided in the Atrium.

Tickets will be required to enter the lunch buffet.

Each person is allowed one meal plate and one dessert plate.

The Exhibit Hall will be closed during lunch.



# Welcomes You To CMC<sup>3</sup>!

A tWiley, you'll find a pride of craftsmanship, a higher level of understanding, and a dedication to the educational process that is unique among publishers.

We invite you to come by the Wiley booth to see some of our latest titles. You can also try a hands-on demo of *WileyPLUS*, our popular online teaching and learning environment.

We hope to see you at the booth!

### GENERAL SESSION: 1:00 - 2:15 p.m. in the Atrium

CMC3 Announcements, Awards, and Business Meeting

# KEYNOTE SPEAKER



Jo Boaler Stanford University

Beautiful Math - How Successful Teaching Approaches Change Students' Lives

Presider: Susanna Gunther, CMC<sup>3</sup> 2011 Monterey Conference Chair

Solano College

In this presentation I will take the opportunity to look across the different research studies I have conducted in the US and the UK, which have studied different teaching approaches and their impact on student learning. We will consider together the qualities and characteristics of successful mathematics teaching and the research evidence for the ways that students are impacted by different approaches. Together we will watch students engage in problem solving, considering the ways that students' lives are changed when they are introduced to the beauty and diversity of mathematics.

## THIRD SESSION: 2:30 - 3:30 p.m.

Adreana M. Grimaldo Quinsigamond Community College agrimaldo@qcc.mass.edu Bonsai II (General Interest)

Measuring Success One Student at a Time: Course Redesign with a Power Cord and a Pencil

Quinsigamond Community College received a 5-year, Title III grant to strengthen their developmental program. By standardizing curriculum, employing technology, creating an instructor resource CD, mandating assessment, and employing a developmental math coaching model, Quinsigamond was able to improve their student success rates in both developmental and college-level math.

Alan Tussy
Citrus College
atussy@citruscollege.edu

Bonsai III (Potpourri)

The Eureka Experience - Instructional Techniques That Encourage It!

Watch two of your colleagues participate in an intriguing experiment designed by an educational psychologist. Learn about the successive stages that your students go through to assimilate mathematical terms and concepts. Witness the Eureka! experience the point in the learning process when students confidently claim, "Now I understand it!"

Barbara Illowski
De Anza College
illowskybarbara@deanza.edu

Portola (Developmental Ed)

#### Contextualized Learning in Mathematics

Learn how and why our students benefit from integrating career and basic skills courses and programs. Learn the purposes, theory and strategies of contextualized teaching and learning and how such programs can increase the retention, success and learning enjoyment of our students. Participate in developing the next steps for contextualized teaching and learning, including how to develop your own contextualized learning activities that you can take right back into your classes.



# Visit the Cengage Learning booth at CMC3 North to learn about our new titles for 2012 and innovative new learning solutions and teaching tools.



Cengage YouBook is a Flash-based eBook version of the text that is interactive and customizable, and is fully integrated into Enhanced WebAssign!

To learn more, visit cengage.com/ewa
To watch a demo, visit
cengage.com/community/stewartyoubook



Brand-new Algebra Beginning and Intermediate Algebra text by Mark Clark and

New editions by Allan 3. Tussy and R.



Learn more about Cengage Learning's roster of California authors at our booth @CMC3.



New editions by Richard N. Aufmann and

Come Visit the Cengage Learning Booth and enter into a competition to win an iPad!

Take the Math Across the Spectrum Challenge.

## PLEASE ATTEND A PRESENTATION BY CENGAGE LEARNING AUTHOR ALAN TUSSY:

Saturday, December 10, 2012 2:30 – 3:30 pm Third Session.

The Eureka! Experience-Instructional Techniques that Encourage It

This session will offer specific instructional techniques that you can employ to promote the Eureka experience in your students. You will leave with a few new ideas that you can

put to use in your classroom.

LEARN MORE ABOUT SOME OF THE NEW
FEATURES OF ENHANCED WEBASSIGN:

Friday, December 9, 2012

3:00 - 5:00 pm - Portola Room.

Roy Simpson of Cosumnes River college will be giving a presentation on the new features and the best practices to use this valuable tool in a course.

# Thomas Dick Oregon State University tpdick@math.oregonstate.edu

Redwood I (Precalculus & Above)

Bringing Calculus Alive with Interactive "Action-Consequence" Technology Documents

What makes a math "applet" interactive? Quite simply, it must allow the user to take a purposeful and mathematically meaningful action and see a mathematically meaningful consequence. In this presentation we'll demonstrate several TI-Nspire interactive documents developed on this principle and available as a free resource to calculus teachers.

Gail Burrill Michigan State University

Redwood II (Technology)

burrill@msu.edu

Reasoning with Data: The Role of Technology

As access to data increases, statistical reasoning is becoming increasingly important in nearly every career, but many statistical concepts remain elusive for students.

Interactive dynamic technology can be a productive tool to engage students in activities that enable them to make sense of core concepts from correlation to sampling distributions

Charles Barnett
Las Positas College
cjbarnett2@comcast.net

Ironwood (Statistics)

You Go First. No, You Go First.

The coin-flip process (Bernoulli process) is the simplest non-trivial stochastic process, but it is unreasonably important in probability theory and yields many counter-intuitive results. I will discuss some of those results that entail the interaction between finite-length patterns. Members of the audience will be able to calculate odds for first occurrence for some simple patterns via aids distributed at the talk and will thereby, perhaps, get some ideas for student exercises.

## FOURTH SESSION: 4:00 - 5:00 p.m.

Roderic Taylor

De Anza College

taylorroderic@fhda.edu

Bonsai II (General Interest)

Large Numbers and Ackerman's Function

We will explore the use of iteration to construct higher order function for lower order functions, and to construct incomprehensibly large numbers.

\_\_\_\_\_

Michael Eurgubian Santa Rosa Junior College meurgubian@santarosa.edu Bonsai III (Potpourri)

What Are We Doing?

Through visitations and communication, I engaged in a purely objective study of mathematics departments across the California Community College system, encompassing the mathematics teaching environments of each school, student and instructor demographics, delivery systems, curriculum, equivalencies, campus layout, book selection, academic standards, student preparation and success, on-line classes and homework, student services related to mathematics, and matriculation.

I will share with the group the many things we are all doing alike and differently, as well as general trends I have observed and new ideas that we are trying. There will be also a chance the share what your department is doing as well.

\_\_\_\_\_

Glenn Pico
American River College
PicoG@arc.losrios.edu

Portola (Developmental Ed)

Did We Go Over This?

In this talk we will briefly go over the difficulty students have using analytical reasoning and solving problems. We will then go over some practical teaching techniques and problems that teachers can use in their class to encourage critical thinking and understanding. It is also my hope to facilitate a humorous, but thought provoking discussion regarding student learning.

# Jenny Friedenreich Diablo Valley College JTheSmith@comcast.net

Redwood II (Technology)

Clickers: Use Them Wisely!

Students love clickers, but will you love them, too? Come see how learning can be accelerated in the classroom. I'll demonstrate topics that lend themselves particularly well to clickers. We'll use eInstruction clickers for demonstration purposes, but I hope you'll see use for any clicker.

you it see use for unly chenci.

Robert Gould
UC Los Angeles
rgould@stat.ucla.edu

Ironwood (Statistics)

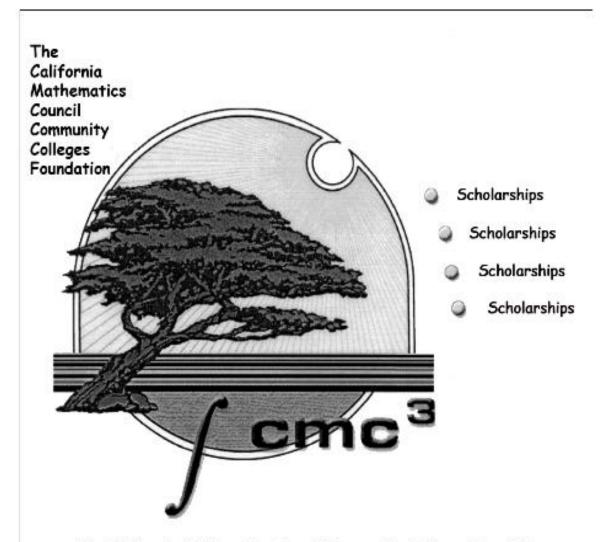
Developing Data Skills

The American Statistical Association's Guidelines for Assessment and Instruction in Statistics Education place data front-and-center in introductory statistics. But working with data is not easy, particularly for those without training in the empirical sciences. What skills should students learn in a first class? How can these be taught? We'll demonstrate the use of software to develop some basic data-handling skills, useful for any student.

### RECEPTION & PRIZES: 5:00 - 6:00 p.m. in the Exhibit Hall

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