## The California

## Mathematics Council,

 Community Colleges39th 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. Estimation Walk/Run in Lobby 8:15-10:00 a.m. Registration in Exhibit Area *Student Poster Session: 9:30 a.m. to 4:00 p.m. 9:00-10:00 a.m. First Breakout Session 10:00-10:30 a.m. Break 10:30-11:30 a.m. Second Breakout Session 11:30-11:45 a.m. Break

11:45-12:45 p.m.
$12: 45-2: 15$ p.m.
2:30-3:30 p.m.
3:30-4:00 p.m.
4:00-5:00 p.m.
5:00 - 6:00 p.m.

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

## The Portola Hotel and Spa



Welcome to the 39th Annual Fall Conference! If this is your first CMC ${ }^{3}$ 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 ${ }^{3}$, 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 | Business Liaison: | Mark Harbison |
| :--- | :--- | :--- | :--- |
| Past-President: | Larry Green | MAA Liaison: | Wade Ellis |
| President-Elect \& Monterey | Newsletter Editor: | Jay Lehmann |  |
| Conference Chair: | Susanna Gunther | Adjunct Advocate: | Tracey Jackson |
| Secretary: | Greg Daubenmire | CMC Liaison: | Jenny Freidenreich |
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| Mont. Speaker Chair: Wade Ellis | AMATYC Liaison: Marcella Laddon |  |  |
| Conference AV Specialist \& Tahoe | Articulation Breakfast: Steve Blasberg |  |  |
| Conference Chair: | Michael Eurgubian | Web Page Coordinator: Larry Green |  |
| Campus Reps Coord: Tracey Jackson | Foundation President: Cynthia Speed |  |  |

## Special Thanks to:

## Portola Plaza Hotel \& Spa

In-kind Donations:
American Mathematical Association of
Two-Year Colleges

- bags

Family Members of Susanna Gunther

- envelope stuffing

Solano College

- printing

Evergreen Valley College

- printing

Pearson Higher Education

- Friday evening "after party"


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The
California
Mathematics

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## CMC ${ }^{3}$ PRESIDENTS

$1973-1974$
$1974-1977$
$1978-1980$
$1980-1981$
$1982-1983$
$1984-1985$
$1986-1987$
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$2006-2007$
$2008-2009$
$2009-$ Present

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
Larry Green
Barbara Illowsky

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
Santa Rosa Junior College
San Joaquin Delta College
Napa Valley College
Santa Rosa Junior College
Los Medanos College
Las Positas College
Skyline College
Evergreen Valley College
Lake Tahoe College
De Anza College

## $C M C^{3}$ DISTINGUISHED SERVICE AWARD RECIPIENTS

Ray Wuco
Frank Denney
Wade Ellis Jr.
Brandon Wheeler
Patrick Boyle
Arthur Dull
Hal Andersen
Sister Clarice Sparkman
James Curl
Guy De Primo
Allen Utterback
Barry Wood
Denny Burzynski
Chris Burditt
Wei Jen Harrison
Marilyn McBride
Michael Eurgubian
Lois Yamakoshi
Debra Landre
Dave Johnson
Chris Barker
Rick Hough
Jim Spencer

San Joaquin Delta College
Chabot College
West Valley College
Sacramento City College
Santa Rosa Junior College
Diablo Valley College
Santa Rosa Junior College
San Jose City College
Modesto Junior College
City College of San Francisco
Cabrillo College
Santa Rosa Junior College
West Valley College
Napa Valley College
American River College
Skyline College
Santa Rosa Junior College
Los Medanos College
San Joaquin Delta College
Diablo Valley College
De Anza College
Skyline College
Santa Rosa Junior College

## CMC ${ }^{3}$ PRESIDENT'S AWARD RECIPIENTS

Barry Wood
Chris Barker
Noelle Eckley
Barbara Illowsky
Zwi Reznik
Sandi Nieto
Randy Taylor
Mark Harbison
Jim Spencer
Robert Knight

Santa Rosa Junior College
De Anza College
Lassen College
De Anza College
Fresno City College
Santa Rosa Junior College
Las Positas College
Sacramento City College
Santa Rosa Junior College
Evergreen Valley College

## 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 $C M C^{3}$ Board for 17 years as Monterey Conference Speaker Coordinator, Past President, President, CMC ${ }^{3}$ PresidentElect, Foundation President, Membership Chair, Scholarship Chair, and Awards Chair. In addition to $C M C^{3}$, 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.

# 푼웅 $x y z t e x t b o o k s$ <br> Problem Solved. 

Introducing three new books from award-winning authors


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## 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 ${ }^{3}$ 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!


## 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 $^{3}$ 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

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

Normal vs. $\dagger$ distributions from Bock, Velleman, and Deveaux: Sample distribution are $\dagger$
The Distributive Law from Rebecca Wong, Stan Benkoski, Bruce Copperstein $\ln (2)$ in Memphis at an AMATYC conference Calculus: Mathematics and Modeling: Integration by Parts
Developmental Mathematics: Solving Equations
Synthetic Geometry from Alfred Manaster

## 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<br>University of Califomia-Los Angeles<br>Statistics<br>Jay Lehmann<br>College of San Mateo<br>Developmental Math<br>Lynn Marecek<br>Santa Ana College<br>Developmental Math<br>\section*{Bob Prior}<br>Riverside Community College<br>Developmental Math<br>MaryAnne Anthony-Smith<br>Santa Ana College<br>Developmental Math<br>George Woodbury College of the Sequoias Developmental Math

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

 $3^{\text {rd }}$ Annual Pearson Education Game NightThis event is open to everyone. The Pearson math \& stats team invites you to an evening of games, hors d'oeuvres, and drinks at CMC ! 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 www.cmc3.org to find:

- Updated Conference Info
- Speaker Proposal Forms
- Presider Proposal Forms
- Other CMC ${ }^{3}$ 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.
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 <br> Mission College ianwvmedu@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

Redwood II
Hunter College
(Technology)
sgentile@hunter.cuny.edu
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.

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. http://mdtp.ucsd.edu/OnlineTests.shtml

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

## Wolfram Mathematica: A Solution for Every Classroom



Creating a Dynamic Classromm Re energbe your disses whith Masherowita fedhe softwere that les you and your studerit compure and visurl be just bout anything. Eplore conoqts in math, physles economks Hologs ting ineeting and more

## Stap by the Wolfrem boath to leam mare...

## whwelfram.cemsolutiontriteolleg: 

## 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

## 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 <br> Perris Union High School District ccathree@msn.com <br> 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
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 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
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.


## 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.

(3)WILEY

## Welcomes You To CMC ${ }^{3}$ !

At Wiley, 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 <br> Stanford University

> Beautiful Math - How Successful Teaching Approaches Change Students' Lives

Presider: Susanna Gunther, CMC 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<br>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 <br> Citrus College <br> atussy@citruscollege.edu |
| :--- |
| Bonsai III <br> (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<br>De Anza College illowskybarbara@deanza.edu

## Portola <br> (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

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

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


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 sersion 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 dassroom.
IEARN 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

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

 DocumentsWhat 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
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 <br> 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 counterintuitive 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.

Roderic Taylor<br>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<br>Santa Rosa Junior College meurgubian@santarosa.edu<br>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

## 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
(Technology)
JTheSmith@comcast.net
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.

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

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

Please join the $C M C^{3}$ Board and your colleagues for door prizes \& post conference gathering.


The
California
Mathematics
Council Community
Colleges


The California Mathematics Council Community Colleges Foundation is annually providing several dozen scholarships to honor our mathematics and science students and we need your financial help. We rely on your generosity and donations to fund the Scholarship Program. Please consider making a donation to our CMC3 Foundation Scholarship Fund. Contributions are tax deductible as provided by law and our tax ID Number is 94-3227552.

Kindly mail your donation to CMC3 Foundation Treasurer Professor Wade Ellis,Jr.
4562 Alex Drive
San Jose, California 95130

## 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<br>University of Califomia-Los Angeles<br>Statistics

Jay Lehmann
College of San Mateo
Developmental Math
Lynn Marecek
Santa Ana College
Developmental Math
Bob Prior
Riverside Community College
Developmental Math
MaryAnne Anthony-Smith
Santa Ana College
Developmental Math

## George Woodbury

College of the Sequoias
Developmental Math
www.pearsonhighered.com/math

## MARK YOUR CALENDARS!

## CMC ${ }^{3} 16^{\text {th }}$ Annual Recreational Mathematics Conference

$$
\text { April } 29 \text { - April 30, } 2011
$$

MontBleu Hotel and Casino Stateline, Nevada Overlooking Beautiful Lake Tahoe


For information contact:
Michael Eurgubian, Conference Chair
Santa Rosa Junior College
meurgubian@santarosa.edu (707) 527-4747
The California Mathematics Council, Community Colleges www.cmc3.org

