

FRIDAY'S PROGRAM AT-A-GLANCE

ROOM	9:00-10:00	10:30-11:30	2:30-3:30	4:00-5:00
Ferrante I and II (General Interest)	Math to Math Resuscitation: Ideas to Bring Your Class Back to Life Joe Vasta Custas College	Teaching Math to Students with Visual Impairments Gaeir Dietrich & Sean Keegan High Tech Center Traing Unit, De Anza College	Mathematics Can Be Fun? Prove It! Bruce Armbrust Lake Tahoe Community College	Math Class Returns to Hollywood John Hornsby University of New Orleans
Ferrante III (Developmental Math)	Not Traditional, Not Online, Go Hybrid Mina Yavari Allan Hancock College	Blow Their Minds: Curve Fit Authentic Situations Jay Lehman College of San Mateo	"The definite integral, from zero to success, of Math + English + ESL with respect to you?" Dale Boercker and Teresa Henson Las Positas College	"What's Math Good For?" Tell Students "Solving the World's Problems" Patty Leitner Diablo Valley College
Colton I and II (Panels)	Sacramento Scene Barbara Illowsky & Zwi Reznik DeAnza & Fresno City Colleges	Pathways Through Algebra Terrie Teegarden San Diego Mesa College	International Conferences: Another World of Mathematics Steve Krevisky and Wade Ellis Middlesex Community & West Valley Colleges	Mathematics Departments and SLOs: Compliance or Engagement Wade Ellis West Valley College
Colton III (Trig/PreCalc)	A History of Logarithms Bob Stein California State University, San Bernadino	Finding the Radius of the Earth Mark Dugopolski Southeastern Louisiana University	Parametric Equations for Demonstrations in Precalculus Allan Bellman U.C. Davis	Are They really Conic Sections? David Bush Shasta College
Ironwood I and II (Calculus and Above)	Tablet Technology in Calculus Leads to Inquiry and Discovery Despina Prapavessi Diablo Valley College	Show Me, Don't Tell Me - Formulas Get Graphic Dan Bach Diablo Valley College	Stimulating Critical Thinking in Calculus Mark Turner Cuesta College	The Jack Lumberman Poster Series John Jacobs College of Marin
Redwood II (Statistics)	Stat Projects that Actually Work (and what makes them Work) Ken Brown College of San Mateo	What is a Margin of Error and Why Are They Changing the Formula Ann Watkins California State University, Northridge	How Often Does a 1- Sample Beat an n-Sample? Charles S. (Chuck) Barnett Las Positas College	Statistics in the News and Media Duane Hinders Foothill College
Cottonwood I and II (Technology)	Riding the Technology Wave: Beginning Algebra Wade Ellis Jr. West Valley College	"Developmental/Remedial Algebra Enhanced Teaching/Learning through Graphing Calculator Application Software" Ed Laughaum The Ohio State University	Technology Workshop: Data, Differences, and Differential Equations: Newton's Cooling Law Joe Fiedler Californai State University, Bakersfield	

FIRST SESSION: 9:00 A.M. – 10:00 A.M.

"Math to Math Resuscitation: Ideas to Bring Your Class Back to Life"

Ferrante I and II

Speaker: Joe Vasta
Cuesta College
jvasta@cuesta.edu

What do irrational numbers have to do with the Fibonacci sequence? What do logarithms have to do with a counting problem? What do exponents have to do with ripping paper? How can probability show you that being polite helps you win the game? How can bugs be effective calculus teachers? How can you use topology to turn your shirt inside out while handcuffed? How can a person give an hour talk over so many topics and more?

Presider: TBA
TBA

"Not Traditional, Not Online Go Hybrid"

Ferrante III

Speaker: Mina Yavari
Alan Hancock College
myavari@hancockcollege.edu

Even with the best placement test, students enrolled in an elementary algebra course have very different backgrounds in their level of mathematics. The traditional teaching method can bore the better students and a fast paced or more challenging course may scare the under-prepared ones. This presentation will demonstrate the advantages of a hybrid course over a strictly traditional or online course. The combination of lectures and one-on-one facilitation, along with the use of the internet results in a much higher success rate.

Presider: TBA
TBA

Colton I and II

The Sacramento Scene

Speaker: Janet W. Tarjan
Zwi Resnik
Fresno City College
zwi.reznik@fresnocitycollege.edu

A review of actions by the State Legislature, Academic Senate and other bodies which impact mathematics instruction in the community colleges.

In addition, we will update you on the status of the movement in the State Academic Senate to raise the math requirements for an AA or AS degree.

Colton III

"A History of Logarithms"

Speaker: Bob Stein
California State University, San Bernardino
bstein@csusb.edu

Today's students are usually taught that logarithms are exponents and natural logarithms are integrals (Could anything be less natural?) In fact, logarithms were invented long before exponents and integrals. We will look at some of the remarkable work of Bürgi, Napier, Briggs, St. Vincent, and others. The story is entertaining, and it offers pointers for teaching today's students.

Presider: TBA
TBA

Ironwood I and II

"Tablet Technology in Calculus leads to Inquiry and Discovery"

Speaker: Despina Prapavessi
Diablo Valley College
dprapave@dvc.edu

Under a 2005 HP Technology for Teaching grant, D. Prapavessi is piloting a redesign of the Calculus II

curriculum using Wireless Tablet Technology. The redesign involves five different types of collaborative activities. Students

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- Record data in science labs and use it to find evidence in the calculus theory
 - Use web based Mathematica notebooks and java applets during class to conceptualize the theory.
 - Access a class yahoo group site for collaboration and communication.
 - Give class presentations using Mathematica, Excel, and Powerpoint.
 - Take field trips to industries, businesses and organizations that use calculus in their practices and discuss the knowledge and experience gained.
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Research has shown that learning is effective when it is experiential, personally meaningful, and when students are partners in learning and gain confidence that they can succeed, and the results in this project are constantly reaffirming these findings.

In the classes taught with the redesign a 98% attendance is observed along with 86% retention (up from ~75%), and significantly increased student involvement; 17% of the students have improved their performance by 1-2 letter grades since the employment of the technology.

Presenter: TBA
TBA

be fairly easily accessible, rich enough to allow the application of the statistical techniques learned to be applied. The work done by the students should be tied in with the course. One project that meets most of these requirements involves the analysis of the prices of used cars. We describe the administration of this project (including marking schemes) as well as a number of others. We also investigate the implications of various policy choices for potential learning.

Presenter: Rick Kavinoky
Santa Rosa Junior College

Cottonwood I and II

Riding the Technology Wave: Beginning Algebra to Linear Algebra

Speaker: Wade Ellis
West Valley College
wade_ellis@wvmccd.cc.ca.us

The presenter will provide examples of the use of handheld and computer technology to teach concepts and skills in the two-year college curriculum from beginning algebra to linear algebra. Examples will use the TI-84, TI-89, Derive, and Maple.

Presenter: TBA
TBA

Redwood II

"Stats Projects that Actually Work (and what makes them work)."

Speaker: Ken Brown
College of San Mateo
brownkm@smccd.net

Projects for the Introductory Stats course seems an obviously good idea, if it can be done. But what kinds of projects actually work? Where are the data to be found? What kinds of policies and expectations can one have? How does one handle the marking? Data need to

SECOND SESSION: 10:30 A.M. – 11:30 A.M.

"Teaching Math to Students with Visual Impairments"

Ferrante I and II

Speakers: Gaeir Dietrich & Sean Keegan
High Tech Center Training Unit
gdietrich@htctu.net
skeegan@htctu.net

Mathematics is often considered an extremely visual subject; however, blind and visually impaired students can access that same information of structure, symbol, and form using auditory and tactual frames of reference. Come learn what technology and techniques are available to the blind and visually impaired mathematics student.

Presider: TBA
TBA

Ferrante III

"Blow Their Minds: Curve Fit Authentic Situations"

Speaker: Jay Lehman
College of San Mateo
mathnerdjay@aol.com

Amaze algebra students by curve fitting authentic situations (e.g. global warming, grade inflation, the social security system crisis, and the death penalty) that beg compelling questions. Then up the ante by comparing implications of various models and identifying model breakdown. This approach leads to 75% success rate in subsequent courses.

Presider: TBA
TBA

Colton I and II

Pathways Through Algebra

Speaker: Terrie Teegarden
San Diego Mesa College
tteegard@sdccd.edu

The Pathways Taskforce is pleased to introduce the current mentees in the project. This past year 9 colleges have been working to implement one of the three interventions: study skills, peer tutoring, computer assisted learning. Come hear the trials and successes of these colleges. See what the data is showing us.

Presider: TBA
TBA

Colton III

"Finding the Radius of the Earth"

Speaker: Mark Dugopolski
Southwestern Louisiana University
dugopolm@bellsouth.net

Eratosthenese calculated the radius of our planet over 2000 years ago. Since that time many different methods have been devised to accomplish this task. This talk will discuss some of those methods both historically and mathematically.

Presider: TBA
TBA

Ironwood I and II

"Show Me, Don't Tell Me - Formulas Get Graphic"

Speaker: Dan Bach
Diablo Valley College
dan@dansmath.com

There are enough formulas and theorems to fill a book! The Pythagorean Theorem, Euclid's Algorithm, highly composite numbers, space curves, tangent planes, and nested circles can really benefit from a computer-graphical shot in the arm. Mathematica, QuickTime, and Infini-D will help visualize and bring these formulas, many from calculus, to life.

Presider: TBA
TBA

instructor developed data programs on the graphing calculator.

Presider: TBA
TBA

Redwood II

"What is the Margin of Error and Why Are They Changing the Formula?"

Speaker: Ann Watkins
California State University, Northridge
ann.watkins@csun.edu

What does it mean when a poll says that 48% of those surveyed approve, with a margin of error of 3%? You will work through activities you can use with your students to explain the basic concept of margin of error. We will discuss why textbooks are changing to a new formula.

Presider: TBA
TBA

Cottonwood I and II

"Developmental/Remedial Algebra Enhanced Teaching/Learning through Graphing Calculator Application Software"

Speaker: Ed Laughbaum
The Ohio State University
elaughba@math.ohio-state.edu

Recent research in cognitive/neuro sciences suggests that learning is enhanced through visualizations, enriched teaching environment, associations, pattern building, and attention. These concepts will be implemented through appropriate lessons developed for StudyCard, Transformation, and Cabri Jr. apps; and

THIRD SESSION: 2:30 P.M. – 3:00 P.M.

Ferrante I and II

"Mathematics Can Be Fun? Prove It!"

Speaker: Bruce Armbrust
Lake Tahoe Community College
armbrust@ltcc.edu

Who says Mathematics can't be fun? The majority of our students. But there is no reason that we cannot change their minds. This talk will share examples of stories, analogies, props, and even downright silliness that can help overcome math anxiety and or math hatred. All levels from Arithmetic to Calculus will be addressed.

Presider: TBA
TBA

Ferrante III

$$\int_0^{\text{success}} (\text{Math} + \text{English} + \text{ESL}) d\text{You}$$

Speaker: Dale Boerker and Teresa Henson
Las Positas Collage
dboercher@clpccd.cc.ca.us
thenson@clpccd.cc.ca.us

The Integrated Learning Center (ILC) is the student-centered place where help in reading, writing and mathematics is readily available six days and four nights a week. It was begun by a consortium of Math, English and ESL faculty and is staffed by instructors from those disciplines. Find out how we did it, what we do, and how it's working.

Presider: TBA
TBA

Colton I and II

"International Conferences: Another World of Mathematics"

Speaker: Steve Krevisky and Wade Ellis
Middlesex Community & West Valley College
skrevisky@mxcc.commnet.com
wade_ellis@wvmccd.cc.ca.us

If you want information about international mathematics conferences, then this session is for you! The speakers have attended 6 International Congress on Mathematics Education (ICME) conferences, 5 International Conference on Teaching Statistics (ICOTS), and 3 International Derive Conferences, plus both speakers have given talks at these conferences, Learn tips on how to successfully submit speaking proposals, how to apply and obtain travel grants, and how to couple a vacation with attending an international conference. Information about ICME-11, scheduled for Monterrey Mexico, on July 6-13, 2008, will be available.

Presider: TBA
TBA

Colton III

"Parametric Equations for Demonstrations in Precalculus"

Speaker: Allan Bellman
U.C. Davis
aebellman@ucdavis.edu

Motion activities provide contexts that enable students to relate pre-calculus to the real world. Learn how to create easy demonstrations using parametric equations that bring clarity to these activities.

Presider: TBA
TBA

Ironwood I and II

"Stimulating Critical Thinking in Calculus"

Speaker: Mark Turner
Cuesta College
mturner@cuesta.edu

This session presents individual and group activities designed to encourage critical thinking among first year calculus students. Participants will work within small groups to experience many activities first hand. Handouts suitable for classroom use will be made available. Bring your graphing calculator.

Presider: TBA
TBA

"Technology Workshop: Data, Differences, and Differential Equations: Newton's Cooling Law"

Speaker: Joe Fiedler
California State University, Bakersfield
jfiedler@csub.edu

This hands-on workshop will collect, analyze, and model changes in temperature, using techniques applicable to College Algebra, Calculus, and Differential Equations courses. The TI Voyage 200 and CBL 2 will be used.

Presider: TBA
TBA

Redwood II

"How Often Does a 1-Sample Beat an n-Sample?"

Speaker: Charles L. (Chuck) Barnett
Las Positas College
Cjbarnett2@comcast.net

Common knowledge in the statistical world says that "things get better" as the square root of n , where n is the sample size. A less well known measure of goodness compares the relative performance of a 1-sample against an n -sample by determining the probability that an n -sample will be closer to the population mean than an independent 1-sample. The results defy intuition and have somewhat discouraging implications in some applications of statistics. Although proof of the results requires calculus, students in an elementary statistics course can demonstrate the relative performance via simulation on, for example, a TI-83 or 84 calculator.

Presider: TBA
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Cottonwood I and II

FOURTH SESSION: 4:00 P.M. – 5:00 P.M.

Ferrante I and II

"Math Class Returns to Hollywood"

Speaker: John Hornsby
University of New Orleans
ejohnhornsby@aol.com

This sequel to the first two installments offers many new, never-before viewed scenes from film and television, focusing on uses and misuses of mathematics in the mainstream media. Suggestions on how to use these in classes will be provided.

Presider: Barbara Illowsky
De Anza College

Ferrante III

"What's Math Good For? Tell Students 'Solving the World's Problems' "

Speaker: Patty Leitner
Diablo Valley College
pleitner@dvc.edu

Another algebra class, another student lurking in the back row, arms crossed, demanding, "What's math good for?" Learn how the speaker uses overpopulation as one dramatic example of why understanding mathematics - in particular, fractions, percents, tables, graphs, exponential functions, and modeling - is crucial to making informed social choices.

Presider: TBA
TBA

Colton I and II

"Mathematics Departments and SLOs: Compliance or Engagement"

Speaker: Wade Ellis
West Valley College
wade_ellis@wvmccd.cc.ca.us

Student Learning Outcomes (SLOs) have become an integral part of the accreditation process. This evidence-based process intends to incrementally improve student performance by measuring student learning of what we as mathematics instructors deem to be important mathematical concepts, skills, and attitudes. Part of this ongoing cyclical SLO process is a discussion of course modification, including both content and pedagogy, based on measured student performance. This presentation will anchor the Student Learning Outcomes approach in our understanding of mathematics and the mathematical concepts, skills, and attitudes we want our students to master and value.

Colton III

"Are They Really Conic Sections"

Speaker: David Bush
Shasta College
dbush@shastacollege.edu

Conic Sections are determined by cutting a cone, but we generally create the equations by using a distance definition. Are these really the same? We will prove that they are.

Presider: TBA
TBA

Ironwood I and II

"The Jack Lumberman Poster Series"

Speaker: John Jacobs
College of Marin
johnjacob@mailx.marin.cc.ca.us

These 5 foot by 8 foot posters present *in detail* certain problems central to the development of algebra, calculus, geometry, and physics in a clearly written form, supplemented with high quality, visually revealing, drawing and figures. On display will be: The Exponential Function, Newtonian Mechanics and the Kepler Problem, Laws from Classical Electrodynamics, The Geometry of Scalar and Vector Fields, The Conic Sections, Propositional Logic, Most Roots are Irrational Numbers, and the Binomial Theorem.

This presentation will describe the mathematics presented on several of these posters, discuss how the posters can be used to span and supplement several different courses, and describe briefly how some of the posters were produced. All the posters will be on display at the conference.

Presider: TBA
TBA

Redwood II

"Statistics in the News and Media"

Speaker: Duane Hinders
Foothill College
dhinders@comcast.net

There have been numerous instances of probability and statistics being used for good and evil in the media. This talk will look at some of those and how they might be used in the classroom

Presider: Marnie Francisco
Foothill College

Cottonwood I and II

Cottonwood I and II

"Technology Workshop: Data, Differences, and Differential Equations: Newton's Cooling Law"

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Presider: TBA
TBA
