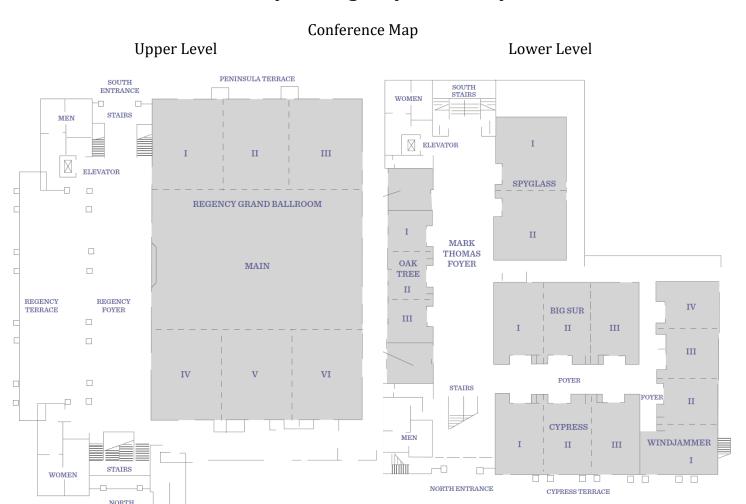


cmc <sup>3</sup>	4:00 - 5:00 pm	Roundtable Discussion on the Impact of AB705 & AB1705: Where do we go from here?  Moderated by James Sullivan Sierra College	No Session	Inferential Statistics: What's the Upshot?	Kevin Brewer Solano Community College Bob Lombard	No Session	No Session	No Session	
Cultural Identity Central to Native American Persistence in STEM Dr. Nizhoni Chow-Garcia Dr. Naomi Lee CSU Monterey Bay & Northern Arizona University Cortney Schultz (CMC3 Conference Chair)	2:30 - 3:30 pm	Voice In the cess an Hawkins	Cultural Competency: Providing Equitable Math Instruction through Cultural Relevance Dr. India White Big Ideas Learning, LLC Erie, PA	Undergraduate Research during the First Two Years of College: Why and How to Make Infere	Guillermo Alvarez Pardo Cuesta College	Closing Equity Gaps in Calculus for Life Sciences Course by Emphasizing Contextualization, Active Learning and Supporting Student Motivation Alexander Alekseenko, Scarlet Sarkissian, Humberto Raya Mendoza, Bamdad Samii CSU Northridge, LA Valley College, LA Mission College	Family of Curves, Envelope and Applications in Wildfire Modeling Ying Lin Santa Rosa Junior College	How to Get Started with MyOpenMath Emilie Hein Skyline College	Manny Kang
Saturday Keynote 1:15 - 2:15 pm Regency Main	10:30 - 11:30 am	STUDENT POSTER CONTEST	Learning-Focused Grading Lesile Banta Mendocino College	One Idea to Rule Them All: Teach Me Videos Tor Retention, Success, Equity and Rigor	Andre Bazos Sacramento City College Manny Kang	Teach Students to Fish: Informational Interviews to Gain Cultural Capital to Enhance Career Awareness Abigail Zoger Santa Rosa Junior College	Napier's Bones and Napier's Abacus Heidi Meyer Modesto Junior College	Fundamentals of Data Science Eric Van Dusen UC Berkeley	Anne Palmer
50th Anniversary Celebration Reflections, Anecdotes and Advice for Future Educators CMC3 Past Presidents: Barbara Illowsky, Michael Eurgubian, Barry Wood James Sullivan (CMC3 President)	9:00 - 10:00 am	The 411 on AB1705 Wendy Brill-Wynkoop & Virginia May FACCC and ASCCC	Windows and Mirrors: Instructor-Led Planning to Close Opportunity Gaps Reflected in Disaggregated-Instructor Level Data Mitra Sapienza & Micheline Pontious City College of San Francisco	Community building and 'off-topic' talk	Megan Selbach-Allen & Jeff O'Connell Stanford University & Ohlone College Menny Kang	Undercover Mathematician: What Can We Learn about Math in Gen Chem? Michael Venn & Sunil Konath Community College of Baltimore County	Fun with 0D-4D+ Trey Cox & Scott Adamson Chandler-Gilbert Community College	Crowdmark, Hands Down - A Win for All Donna Smith Sierra College	
Topic Speaker		Topic Speaker School Presider	Topic Speaker School	Topic	Speaker School Presider	Topic Speaker School Presider	Topic Speaker School Presider	Topic Speaker School	Presider
Friday Keynote 7 - 9:30 pm Regency I-III	Saturday	Sessions Regency I (Relevant Math Legislation & Advocacy)	Regency II (Equity)	=	(Pedagogy)	Regency IV (Supporting students in STEM)	Regency V (Math Appreciation)	Regency VI (Technology & Data Science)	

#### Welcome to the 50th Annual Fall Conference!

## The Hyatt Regency Monterey



The *California Mathematics Council Community Colleges Foundation* annually provides **scholarships** to honor our mathematics and science students. We need your financial help. We rely on your generosity and donations to fund the Scholarship Program.

Please consider making a donation to our CMC<sup>3</sup> Foundation Scholarship Fund. Contributions are tax-deductible, as provided by law. Our tax ID # is 94-3227552.

Please donate in-person at the Foundation table! Or donate using PayPal or AmazonSmile









CMC <sup>3</sup> Board and Conference Committee			
President:	James Sullivan	Membership Chair:	Kevin Brewer
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President-Elect	Cortney Schultz	Newsletter Editor:	Joshua Rhodes
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Conf AV Specialist:	Steve Blasberg	Spring Speaker Chair:	Katia Fuchs
Adjunct Advocate:	Chantal Cimmiyotti	Member at Large:	Manjit Kang
*At-Large Board Members			

CMC <sup>3</sup> Presidents				
1973 – 1974	James Curl	Modesto Junior College		
1974 – 1977	Raymond Wuco	San Joaquin Delta College		
1978 – 1979	Brandon Wheeler	Sacramento City College		
1980 - 1981	Hal Andersen	Santa Rosa Junior College		
1982 - 1983	Art Dull	Diablo Valley College		
1984 – 1985	Pat Boyle	Santa Rosa Junior College		
1986 – 1987	Shirley Trembley	Bakersfield College		
1988 - 1989	Wade Ellis, Jr.	West Valley College		
1990 – 1991	Denny Burzynski	West Valley College		
1992 – 1993	Barry Wood	Santa Rosa Junior College		
1994 – 1995	Debra Landre	San Joaquin Delta College		
1996 – 1997	Chris Burditt	Napa Valley College		
1998 – 1999	Michael Eurgubian	Santa Rosa Junior College		
2000 – 2001	Lois Yamakoshi	Los Medanos College		
2002 – 2003	Randy Taylor	Las Positas College		
2004 – 2005	Rick Hough	Skyline College		
2006 – 2007	Rob Knight	Evergreen Valley College		
2008 – 2009	Larry Green	Lake Tahoe Community College		
2010 – 2011	Barbara Illowsky	De Anza College		
2012 - 2013	Susanna Gunther	Solano Community College		
2014 – 2015	Mark Harbison	Sacramento City College		
2016 – 2017	Joseph Conrad	Solano Community College		
2018 – 2019	Katia Fuchs	San Francisco City College		
2020 - 2021	Jen Carlin-Goldberg	Santa Rosa Junior College		
2022 - present	James Sullivan	Sierra College		

# Past CMC<sup>3</sup> President's Awardees (selected by the CMC<sup>3</sup> President)

2002	Barry Wood	Santa Rosa Junior College
2003	Chris Barker	De Anza College
2004	Noelle Eckley	Lassen College
2005	Barbara Illowsky	De Anza College
	Zwi Reznik	Fresno City College
2006	Sandi Nieto	Santa Rosa Junior College
2007	Randy Taylor	Las Positas College
2008	Mark Harbison	Sacramento City College
2009	Jim Spencer	Santa Rosa Junior College
2010	Robert Knight	Evergreen Valley College
2011	Larry Green	Lake Tahoe Community College
2012	Michael Eurgubian	Santa Rosa Junior College
2013	Ken Seydel	Skyline College
2014	Rebecca Fouquette	De Anza College
2015	Jay Lehmann	College of San Mateo
2016	Leslie Banta	Mendocino College
2017	Larry Green	Lake Tahoe Community College
2018	James Sullivan	Solano Community College
2019	Darryl Allen	Solano Community College
2020	Tracey Jackson	Santa Rosa Junior College
2021	Jay Lehmann	College of San Mateo

# Past CMC<sup>3</sup> Distinguished Service Awardees (selected by the CMC<sup>3</sup> board)

1992	Ray Wuco	San Joaquin Delta College
1993	Frank Denney	Chabot College
u	Wade Ellis, Jr.	West Valley College
ш	Brandon Wheeler	Sacramento City College
1994	Patrick Boyle	Santa Rosa Junior College
и	Arthur Dull	Diablo Valley College
1995	Hal Andersen	Santa Rosa Junior College
и	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
2011	Randy Taylor	Las Positas College
2012	Cynthia Speed	Mendocino College
2013	Rob Knight	Evergreen Valley College
2014	Barbara Illowsky	De Anza College
2015	Noelle Eckley	Lassen Community College
2016	Debbie VanSickle	Sacramento City College

#### Past CMC<sup>3</sup> Distinguished Service Awardees (continued)

2017	Susanna Gunther	Solano Community College
2018	Rebecca Fouquette	De Anza College
2019	Marcella Laddon	Carrillo College
2020	Joseph Conrad	Solano Community College
2021	Gregory Daubenmire	Las Positas College



# 2022 Distinguished Service Award Jenny Freidenreich

Jenny Freidenreich has been a math instructor at Diablo Valley College (DVC) in Pleasant Hill, for 20 years. She served on the CMC³ board for 7 years (2008-2015) as the CMC liaison and Membership Chair. At DVC, Jenny has created accelerated sequences in developmental math (when there was Dev Ed Math), and she implemented assessment prep courses (when there was assessment for placement). When pathway acceleration evolved into pre-statistics courses, Jenny wrote curriculum and taught Path2Stats at DVC, and more recently she helped create curriculum for the corequisite support courses for transfer-level math at DVC. She wrote a textbook, "Corequisite Math for

Trigonometry: Reviewing What's Necessary" during her sabbatical in 2020. Jenny has co-chaired DVC's Developmental Education Committee and she also co-chaired the Adult Education Consortium at DVC. She knows not every path through mathematics is well-paved; her commitment to student success is

what propels her work. Currently, Jenny serves as an Interest Area Faculty Lead at the Math & Engineering Student Center at DVC, creating events that support student learning and success.

The event organizers are people *just like you* from various community college mathematics departments across Northern California. We are always looking for more volunteers with new ideas. Please consider getting involved with CMC<sup>3</sup> by contacting a board member any time or emailing <a href="mailto:president@cmc3.org">president@cmc3.org</a>.

Like us on Facebook and follow us on Twitter and keep up-to-date with CMC<sup>3</sup>, our Foundation, regional math conferences and Friday comics.

www.facebook.com/cmc.cubed/ www.twitter.com/CMC3N





**Enjoy the conference!** 

## **CONFERENCE PROGRAM - FRIDAY**

4:30 – 6:30 pm Registration	Regency Foyer
-----------------------------	---------------

7:00 - 8:00 pm Dessert Reception Regency I - III

8:00 - 9:30 pm 50th Anniversary Celebration Regency I - III

# Friday Night 50<sup>th</sup> Anniversary Celebration Reflections, Anecdotes, and Advice for Future Educators

CMC<sup>3</sup> Past-Presidents: Barbara Illowsky, Michael Eurgubian, Barry Wood

As this year is our 50th annual fall conference and our first conference back in person, we have much to celebrate! This night is to give space for our members to reconnect with each other and find common ground after teaching through a pandemic and isolating for the last two years. We also want to celebrate you for supporting our organization for these past 50 years.

The Friday night festivities will kick off with a welcome from our AMATYC West VP, Edouard Tchertchian. After which, a couple of long-time CMC<sup>3</sup> board members will speak of their experiences being involved with CMC<sup>3</sup>, their careers as educators, how roles of math educators have changed over the years, teaching anecdotes, and the best teaching advice that anyone has ever given them.

After the presentations, attendees will collaborate to make a time capsule to be opened at the 75<sup>th</sup> CMC<sup>3</sup> Fall Conference. The capsule will include the best teaching advice from current and past faculty members to pass on to future generations of educators.

Barry Wood CMC<sup>3</sup> President (1992 & 1993)



Michael Eurgubian CMC<sup>3</sup> President (1998 & 1999)



Barbara Illowsky

CMC<sup>3</sup> President (2010 & 2011)



50th Annual Fall Conference

# Silent Auction Supporting Student Scholarships

Stop by the Foundation Booth on Saturday for a look at our silent auction items.

Please bid using your first name and phone number. Bidding closes at 4:00 pm.

Items are ready for pickup at 4:30 pm.

Items not picked up by 5:30 pm will be transferred to the second highest bidder. If the second highest bidder is not present, items may be forfeited.

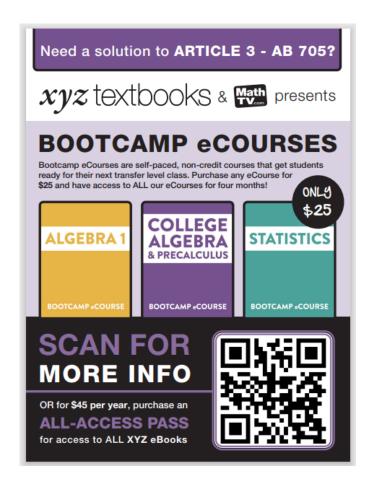
Bid early and often!

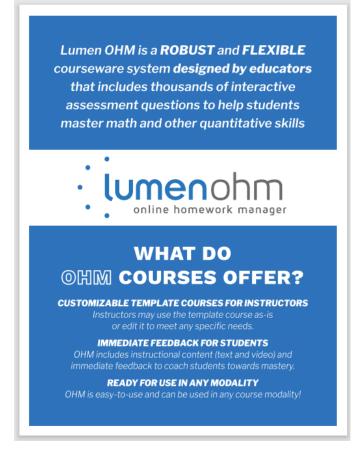
9:30 pm - 11:30 PM

Regency IV - VI

### Friday BINGO Night!

Fill your Friday evening with fun, food and friends! Join us for BINGO night after the Friday keynote speakers. There will be prizes, snacks, and a no-host bar. Catch up with your fellow conference attendees and join in the fun!





#### **CONFERENCE PROGRAM - SATURDAY**

7:15 am Estimation Walk/Run Meet by the Hotel Front Desk

On Saturday morning, before the conference presentations begin, everyone is invited to join the Estimation walk/run. You can choose between a 1, 2, or pi miles and before you start, you will submit your estimation of how long it will take you. The winner is not necessarily the person who goes the fastest, but rather the person who finishes at a time closest to their estimate. Participants meet at 7:15 am in the hotel lobby.

7:30 am – 9:00 am Morning Refreshments Regency Foyer 8:15 am – 9:30 am Registration Regency Foyer 8:30 am – 1:00 pm, Exhibits open Regency Foyer

2:00 pm - 5:15 pm

### First Session: 9:00 - 10:00 am

Regency I

(Relevant Math Legislation & Advocacy)

Wendy Brill-Wynkoop Virginia May

FACCC / ASCCC

president@faccc.org
mayv@scc.losrios.edu

#### The 411 on AB1705

In 2017, AB 705 (Irwin, 2017) was signed into law with a goal of closing equity gaps, especially for students from Latinx and Black populations by ensuring equitable access to transfer-level English and mathematics courses for students entering California community colleges. AB 1705 (Irwin, 2022) was introduced to "clean up" the language of AB 705 and to ensure that most students are placed and enrolled in transfer-level English and mathematics courses. How might emerging legislation, regulations, and guidance impact various educational programs in areas such as STEM preparation and career and technical education? Join colleagues to discuss the opportunities, challenges, and ways to make sure the needs of the diverse student population in the California community colleges are met.

Regency II (Equity)

Mitra Sapienza Micheline Pontious

City College of San Francisco

msapienz@ccsf.edu mpontious@ccsf.edu

# Windows and Mirrors: Instructor-Led Planning to Close Opportunity Gaps Reflected in Disaggregated-Instructor Level Data

Walk through one full day of professional development training focused on analyzing disaggregated-instructor level data and ways that faculty can examine their perceptions of their students and of themselves as instructors, in order to reflect on their practice and work on ways to better serve disproportionately impacted student Equity groups. While the session examples focus on supporting English faculty, all materials can be adapted to other disciplines.

Regency III (Pedagogy)

Megan Selbach-Allen Jeff O'Connell

Stanford University
Ohlone College

mselbach@stanford.edu joconnell@ohlone.edu

## Community building and 'off-topic' talk

This presentation will discuss the environment in a community college mathematics course that has had a very high success rate at bringing pre-calculus students through the calculus series. We will focus on the various community building practices of the instructor and the efficacy of class time spent talking about non-math topics such as general study habits, course registration, and expectations for follow-on classes.

## First Session: 9:00 - 10:00 am, continued

Regency IV

(Supporting students in STEM)

Michael Venn Sunil Konath

Community College of Baltimore
County

mvenn@ccbcmd.edu skonath@ccbcmd.edu

### **Undercover Mathematician:**

#### What Can We Learn about Math in Gen Chem?

What happens when a mathematics professor takes a general chemistry course for professional development? Come find out from the undercover mathematician and the chemistry professor who taught him. What can we learn from chemistry about teaching mathematics? What higher mathematics can we abstract from general chemistry?

#### Regency V

(Math Appreciation)

Trey Cox Scott Adamson

Chandler-Gilbert Community
College

trey.cox@cgc.edu s.adamson@cgc.edu

#### Fun with 0D-4D+

The classic, mathematical "romance", Flatland, was written by Edwin Abbott in 1884 but is still most relevant in today's world. Come see some short clips from a recent Pixar-type, animated "Flatland" film and let's have some fun discussing "what if's"! In this presentation, we will do what we often do not do and that is to put ourselves into "other" dimensional worlds! We will inject ourselves into 0D (Pointland), 1D (LineLand), 2D (Flatland), 3D (Sphereland), and dip our toes into 4D and Higher Dimensions. The outcome will be to experience a unique way to help our students first to consider what a dimension is and second to take up various spatial (and non-spatial) vantage points helping them better understand geometric figures and solids - as well as the views and opinions of others.

#### **Regency VI**

(Technology & Data Science)

**Donna Smith** 

Sierra College

dosmith@sierracollege.edu

## Crowdmark, Hands Down - A Win for All

Have you ever been grading an exam and taken off points for a question and had to rifle back through the papers to see if a student made the same error and how much you deducted? Have you had several students make the same mathematical error and wish there was a way to respond using LaTeX rather than repeatedly handwriting a response? Have you ever had students read the feedback on an assessment, let alone tell you that "it was easy and clear to read"? In comes Crowdmark to save the day. The robust feedback, including LaTeX, images, and hyperlinks, faster turnaround times for grading, and anonymous grading, which reduces bias, make it a game-changing software. It has reduced my stress and increased my productivity. With Crowdmark, I could see the light at the end of a very stressful tunnel. The Canvas integration is another benefit.

Join this workshop to see how Prof. Smith uses this digital grading platform with three teaching modalities. Specifically, learn how Crowdmark kept Prof. Smith from a meltdown while teaching Calculus I face-to-face after a ten-year hiatus while teaching online trigonometry and a hyflex college algebra course.

#### Reminders

8:30 am - 1:00 pm & 2:00 pm - 5:15 pm

**Exhibits open** Regency Foyer 9:30 am - 1:00 pm

**Student Posters on Display** 

Regency Foyer

The American Mathematics
Association of Two-Year Colleges
(AMATYC) will hold their next annual
conference in Omaha, NE on
November 9 - 12, 2023.

Conference Theme: Math's A Hit

Just Announced, the 2025 AMATYC Conference will be in Reno, NV!



#### SPECIAL THANKS TO ...

- \* Santa Rosa Junior College [printing]
- \* AMATYC [tote bags]
- \* All of our Silent Auction and Foundation Donors!

#### Thanks to our Exhibitors!

CMC<sup>3</sup> Foundation
Maplesoft
Pearson
Lumen Learning
XYZ Textbooks

Thank you to Cengage, who will be providing us with a special presentation and a raffle during the conference!

## Second Session: 10:30 - 11:30 am

**Regency I** 

(Student Posters)

**Moderator: Katia Fuchs** 

City College of San Francisco

efuchs@ccsf.edu

### **Student Poster Presentations**

In this session, students will present their posters for the Student Poster Contest. Please come and support our students!

Regency II

(Equity)

**Leslie Banta** 

Mendocino College

lbanta@mendocino.edu

## **Learning-Focused Grading**

Wondering how you can change your grading practices to entice students to have a more learning-focused outlook? Can changing the way you grade assignments actually make a difference? In this talk, we'll take a look at strategies used in 3 different courses in STEM, SLAM, and Math Success that you can easily begin using next term. Small changes in your practices and the manner in which you present grades to students can provide big returns when it comes to learning.

## Second Session: 10:30 - 11:30 am, continued

**Regency III** 

(Pedagogy)

**Andre Bazos** 

Sacramento City College

bazosa@scc.losrios.edu

# One Idea to Rule Them All - Teach Me Videos for Retention, Success, Equity and Rigor

With the help of many of my amazing colleagues, I (Andre Bazos - Prof. Dre) have found an interesting way to engage students in a class both in person and online that I want to share with all of you. I assign weekly Teach Me Videos in my Calculus 1 and Statistics classes where my students work on one problem a week for me from a set of challenging problems and make me a Teach Me Video. These videos have transformed the way I teach from lecture style to a flipped model. This idea started because I was tired of online teaching, where I would show up to zoom class to see a sea of blank screens. I wasn't getting to know my students, and I was tired of the lack of interaction. Though these Teach Me Videos started out as a selfish act, I quickly became aware that they were doing more than bringing back interactions with my students, it made my class AMAZING! Come join me and explore the shocking benefits of these Teach Me Videos for our students. Through these videos, I have found that my Retention Rates increased, my Success Rates increased, my Equity Gaps seem to be shrinking, my Rigor has increased beyond what I ever thought possible, and my students and I are having a blast doing them.

**Regency IV** 

(Supporting students in STEM)

**Abigail Zoger** 

Santa Rosa Junior College

azoger@santarosa.edu

# Teach Students to Fish: Informational Interviews to Gain Cultural Capital to Enhance Career Awareness

All faculty share an important role in facilitating students' career awareness. This informational interview skill can be incorporated into any transfer-level course to better guide our students toward their career goals. We have a Canvas module and straight forward instructions that can be easily adapted to different courses and disciplines.

(Award Number:1742635 and NSF support)

Regency V

(Math Appreciation)

Heidi Meyer

Modesto Junior College

meverh@vosemite.edu

## Napier's Bones and Napier's Abacus

In Napier's book Rabdologiae, he created three methods (other than his logarithms) for quick calculation. Napier states in the introduction that performing calculations is a difficult and lengthy process that deters many from the study of mathematics and that he has always tried with his strength and talent to expedite calculation. We will be looking at two of those three methods in this talk: Napier's Bones and Napier's Abacus. This will be an active session in which you are provided manipulative materials for carrying out calculations (including finding square roots) with the bones and with the abacus. A brief bio of Napier will be given as well.

**Regency VI** 

(Technology & Data Science)

Eric Van Dusen

UC Berkelev

ericvd@berkelev.edu

### **Fundamentals of Data Science**

This presentation will cover a UC Berkeley curriculum that is being taught at a set of community colleges. Data Science is currently the 3rd biggest major at UC Berkeley and there has been extensive course and curriculum development. Attendees will learn elements of the Fundamentals of Data Science through the UC Berkeley Data 8 curriculum. Topics will cover Python, Jupyter Notebooks, the textbook and the computational infrastructure. This curriculum is currently being piloted at 7+ community colleges and articulates at 3 UCs.

### Luncheon: 11:45 am - 12:30 pm

## 11:45 am - 12:30 pm Buffet

#### Regency Main

Lunch will be served on the outdoor terrace (weather permitting) and guests will eat in Regency Main (Mention to one of the servers if you have special dietary needs not met by the buffet.)

## General Session: 12:30 - 2:15 pm

12:30 - 1:15 pm Poster awards, CMC<sup>3</sup> awards Regency Main 1:15 - 2:15 pm Keynote Regency Main

## Dr. Naomi Lee & Dr. Nizhoni Chow-Garcia

<u>naomi.lee@nau.edu</u> <u>nchow-garcia@csumb.edu</u>

# Cultural Identity Central to Native American Persistence in STEM

Native Americans are the least represented population in science fields. In recent years, undergraduate and graduate level summer research programs that aimed to increase the number of Native Americans in science have made some progress. As new programs are designed, key characteristics that address science self-efficacy and science identity and provide supports for Native American students' commitment to a scientific career should be considered. Based on our analysis, we propose an Indigenous science internship model and recommend that agencies target funding for culturally tailored programs from high school through early-investigator levels as well as provide inclusive programmatic and mentoring guidelines.









# CMC<sup>3</sup> Needs You!

# Because YOU are the lifeblood of CMC<sup>3</sup>

CMC<sup>3</sup> has a long tradition of supporting Community College Math faculty and students. This work cannot be done without you.

We want to hear your voice! We want to hear your voice in our Newsletters, at our Conferences, and in our Board Meetings.

For more information on how you can become involved, please head to:

<a href="http://www.cmc3.org">http://www.cmc3.org</a>
Or contact Cortney Schultz at cschultz@santarosa.edu

2:00 - 5:15 pm

Exhibits open

Regency Foyer

### **Third Session: 2:30 - 3:30 pm**

**Regency I** 

(Relevant Math Legislation/Advocacy)

Wendy Brill-Wynkoop Evan Hawkins

**FACCC** 

president@faccc.org ehawkins@faccc.org

## Advocacy: Amplifying Faculty Voice In the State Legislative Process

Over the past decade, California Community Colleges have undergone dramatic changes resulting from legislative reform and the budget process. While these policies are well intended, they are often made without sufficient understanding of the role of practitioners in our students' educational success. It is essential for faculty to be strong advocates at the state level with a fundamental understanding of policy development. The session will begin with the nuts and bolts of the state legislative process, provide assistance in following and tracking legislation, and then focus on sharing the voice of faculty to connect with local and statewide representatives effectively.

## Third Session: 2:30 - 3:30 pm, continued

**Regency II** 

(Equity)

**India White** 

Big Ideas Learning, LLC.

iwhite@larsontexts.com

# Cultural Competency: Providing Equitable Math Instruction through Cultural Relevance

Scores from the National Assessment of Educational Progress suggest that if current educational practices in math classrooms remain the same, the achievement gap between Caucasians and African descent learners will be eliminated by around 217 years. To close the academic achievement gap for all students, teachers must be equipped with methods to conduct equitable instruction that is culturally relevant.

Regency III

(Pedagogy)

Guillermo Alvarez Pardo

Cuesta College

guillermo alvarezpar@cuesta.edu

# Undergraduate Research During the First Two Years of College: Why and How to Make it Work

This presentation explains how undergraduate research (UR) can strengthen your students' academic and professional careers and your college's mission and vision. It also provides a formula to make it work in Mathematics: how to involve students, where to find open problems accessible to students and opportunities for dissemination or publication of results. It also shows samples of the results obtained at a particular community college where this work originated, sponsored by the National Science Foundation.

#### Regency IV

(Supporting Students in STEM)

Alexander Alekseenko Scarlet Sarkissian Humberto Raya Mendoza Bamdad Samii

CSU Northridge Los Angeles Valley College Los Angeles Valley College Los Angeles Mission College alexander.alekseenko@csun.edu
sarkissk@lavc.edu
rayameha@lavc.edu
samiib@lamission.edu

# Closing Equity Gaps in Calculus for Life Sciences Course by Emphasizing Contextualization, Active Learning and Supporting Student Motivation

A team of PIs from three California institutions of higher education, California State University Northridge, Los Angeles Mission College, and Lost Angeles Valley College, is collaborating on a project to re-design Calculus for Life Sciences Course. Traditionally, Calculus courses at our institutions are taught in the lecture format, with instructors focused on covering material available in textbooks with little time given in class for students to explore material on their own. Traditionally taught, Calculus courses at our institutions have low matriculation rates (about 61% on average) and suffer from double digit racial and gender gaps in success rates. Supported by a grant from the California Educational Learning Lab, the team pursued several directions in the course re-design including adding strong emphasis on contextualization of the content by brining into focus applications of calculus concepts in life sciences and by connecting applications to needs of local communities when possible; introducing flipped classroom and elements of active learning through multiple life sciences inspired applied projects; and implementing interventions supporting student motivation in the course designed by a social psychologist on the team. The course re-design was complimented by 8-hour professional training in culturally responsive pedagogy that is offered to all faculty and recommended to the instructors teaching the course. The community colleges designed and implemented summer programs and site visits to CSUN. With the project in its second year and approaches are still being under construction, our early results suggest positive effects of the implemented changes.

## Third Session: 2:30 - 3:30 pm, continued

Regency V

(Math Appreciation)

**Ying Lin** 

Santa Rosa Junior College

ylin@santarosa.edu

## Family of Curves, Envelope and Applications in Wildfire Modeling

The study of families of curves is a classic topic in differential geometry. Once a family of curves (such as lines) is obtained by varying a single parameter, one can define the envelope to be the curve that is tangent to all the curves within the family. In this talk, we will explore some of the definitions of envelope and examine their connections to concepts in Calculus 3, such as tangent planes and implicit surfaces. We will then explore one particular application of envelopes in the modeling of wildfires, by defining the fire perimeter as the envelope of individual fire fronts. Simulations based on actual landscape and vegetation data will be used to illustrate the efficacy and limitations of such an approach.

Regency VI

(Technology & Data Science)

**Emilie Hein** Skyline College

heine@smccd.edu

## How to get started with MyOpenMath

Are you looking for a free and openly licensed homework system adapted for your math courses? MyOpenMath is easy to integrate in your Learning Management System and has already been populated with complete course templates and more. Join us for an overview of MyOpenMath designed for beginners to learn how to adopt the system and even create your own problems.

## Fourth Session: 4:00 - 5:00 pm

Regency I & II James Sullivan (All Faculty Roundtable)

Sierra College

jsullivan@sierracollege.edu

# Roundtable Discussion on the Impact of AB705 & AB1705: Where do we go from here?

Hear fellow California Community College Mathematics faculty discuss AB 705's impact on their district's students and programs. Attendees are invited to join the discussion and share their department's current approaches, supports, and outcomes, as well as any future plans in response to AB 1705.

**Regency III** 

(Pedagogy)

**Kevin Brewer** 

Solano Community College

kevin.brewer@solano.edu

## Inferential Statistics: What's the Upshot?

Introductory statistics textbooks often conclude confidence interval computations with a conclusion statement such as, we are 95% confident that the interval contains  $\mu$ . Hypothesis tests are often concluded with a statement such as, we have sufficient evidence to reject the null hypothesis.

These conclusion statements might strike you as obviously correct, or as clearly following from the work which precedes them. These statements, however, actually hint at different interpretations or concepts of probability – namely (i) probability as a measure of strength of belief and (ii) probability as a measure of evidence or of a confirmation relation between statements. These conceptions of probability are distinct from the frequency view of probability which plays such a central role in the theory we teach.

The talk will explore some of these "other" interpretations of probability. At the end we will revisit the conclusion statements mentioned above. The new perspective gained from our study of probability will help us understand what these statements actually say and why it is far from obvious that they are appropriate assessments of statistical methods which are built around a frequency interpretation of probability.

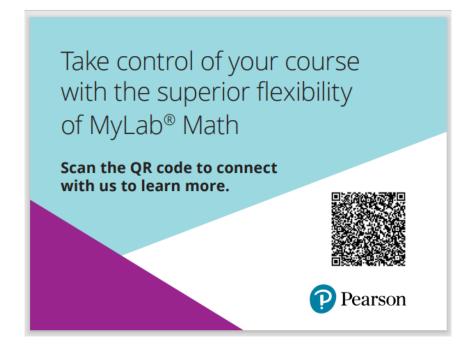
4:30 – 5:30 pm Pick-up Silent Auction Items Regency Foyer

6:00pm - Midnight Free shuttle downtown Conference Center Entrance

## Mark Your Calendar!



CMC<sup>3</sup> 26<sup>th</sup> Annual Recreational Mathematics Conference Friday, April 28 to Saturday, April 29, 2023 Lake Tahoe Community College



### ~ **NOTES** ~



The CMC<sup>3</sup> Foundation would like to acknowledge the following individuals and organizations for their generous cash donations to the Scholarship Fund during the last fiscal year.



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