



California Mathematics Council Community Colleges

# CMC<sup>3</sup> NEWSLETTER

We want YOU to present at the 42th CMC<sup>3</sup> Monterey Conference!  
 Click on: <http://www.cmc3.org/conference.html> to submit a proposal.

## The President’s Message

Mark Harbison, Sacramento City College

Did you know that there are some new links on our web page with useful resources?

Please visit [www.cmc3.org/resource/CaliforniaNationalInitiatives.html](http://www.cmc3.org/resource/CaliforniaNationalInitiatives.html) for information about things such as

- \* the CA Common Core State Standards in Mathematics,
- \* the CA Student Success Task Force,

- \* Board of Admissions and Relations with Schools statements (BOARS), and
- \* resources for Statway, Path2Stats and Compressed courses.

CMC<sup>3</sup> is interested in statewide issues concerning Mathematics, Education and Community Colleges. Feel free to contact any of the 14 members of the Executive Board if you have any special requests. Please note our official Endorsement Policy [www.cmc3.org/resource/EndorsementPolicy.html](http://www.cmc3.org/resource/EndorsementPolicy.html).

But even more fun than debating policy is to attend one of our fantastic conferences! Many thanks to the organizers of the Annual Spring Recreational Mathematics Conference in S. Lake Tahoe last month. CMC<sup>3</sup> appreciates *Pearson* for donating canvas tote bags. Thanks also to *McGraw-Hill Higher Education* for sponsoring dessert. I heard that a good time was had by all who made it through the falling snow (see Larry Green's article in this issue).

I'm sorry that I missed it this year, since I was in Memphis, TN for an AMATYC business meeting. I flew home on Apr. 28, the same day as when big tornadoes caused a lot of damage in the region. The plane was delayed 30 minutes, but not too long. Did you know that pilots won't take off when a big storm

(see “President’s Message” on p. 3)

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## Mark Your Calendar:

### 42nd Annual CMC<sup>3</sup> Conference

December 5 and 6, 2014

Hyatt Regency Monterey  
Hotel and Spa

Volume 43, Number 2

Summer 2014

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## 2013 Distinguished Service Award

*Mark Harbison, President, Sacramento City College*

Dr. Robert Knight of Evergreen Valley College was honored to receive the CMC<sup>3</sup> Distinguished Service Award at the 41st Annual Fall Conference in Monterey, CA in December, 2013. He was elected CMC<sup>3</sup> Member-at-Large in 2002, President in 2006 and remained on the board until 2013.

He raised thousands of dollars in sponsorship money from college administrators.



Rob negotiated new contracts for CMC<sup>3</sup> to do business with hotels, caterers and a/v providers, including the first discounted internet service in the exhibit hall. He helped the CMC<sup>3</sup> Foundation manage dozens of scholarships for

student mathematics majors.

Prior to becoming a Mathematics/Statistics professor, Rob was a high school mathematics teacher and received his Master of Science Degree in Mathematics from Adelphi University through a grant from the National Science Foundation. He left high school teaching to attend Podiatric Medical School in San Francisco. After 20 years of surgical practice, Rob retired from medicine and re-entered teaching on the community college level. Today, Rob teaches at several colleges and universities while continuing to develop MyMathText. Along with his wife Marianne, Rob designed, developed and self-funded this free educational software program and created their educational software parent company, MYTEXT SOFTWARE. In the past year, it is conservatively

estimated that Rob has saved his students over \$100,000 collectively using MyMathText to replace costly textbooks.

CMC<sup>3</sup> is grateful to Rob for his service to our organization and beyond.

## President's Message

(continued from front p. 1)

with lightning is at the airport? It's nice to be home now.

Please plan on attending the 42<sup>nd</sup> Annual Fall Conference on December 5-6, 2014 at the Hyatt Regency Monterey Hotel (see Joe Conrad's article in this issue).

Rooms are a bargain: \$ 139 / night up to double occupancy, and there is no "resort fee". Reservations can be made by visiting <https://resweb.passkey.com/go/2014CMC3> and selecting "Attendee". Here are some of Hyatt's amenities:

- \* free self-parking
- \* free wireless internet in all guest rooms
- \* free wine tasting samples
- \* an in-room mini-refrigerator
- \* six tennis courts
- \* two swimming pools and two jacuzzi's
- \* a 24-person Hyatt/downtown shuttle dedicated to CMC<sup>3</sup> guests for 4 hours/night.

The next CMC<sup>3</sup> board meeting will be on Saturday, Sept. 20, 2014 at the extension campus of Sacramento City College in Davis, CA. We are faculty **just like you** who enjoy working to maintain a community of professionals dedicated to improving the lives of our students.

I am available anytime if there are questions or concerns: [harbism@scc.losrios.edu](mailto:harbism@scc.losrios.edu)

## 2014 Monterey Conference Announcement

*Joe Conrad, President Elect, Solano Community*



*College*

The 42<sup>nd</sup>

CMC<sup>3</sup> Fall

Conference will be held this year on

Friday December 5 and Saturday

December 6 at the

Hyatt Regency Monterey Hotel and Spa. We look forward to our annual conference and plan to have another great program! There are many details to be worked out, but here's what we know now.

Last year was our first year at the Hyatt and attendees enjoyed having all the talks in one area and especially enjoyed the quality of the food. We have arranged to have a continuously running shuttle to downtown each evening which will address the concern that some had about accessing the wharf and downtown area. Our room rate will stay at \$139 per night with free parking and wifi with no resort fee. Reservations can be made at <https://resweb.passkey.com/go/2014CMC3>. See Mark Harbison's article for more details about the hotel or go to their website at: <http://monterey.hyatt.com/en/hotel/home.html>.

We will be having a Friday night keynote again this year. Our speaker will be Alon Amit whose talk is titled "Randomness in Theory and Practice." Alon has worked for such companies as Google and Facebook and is currently with Origami Logic where he deals with the analysis of huge data sets. Saturday's lunch keynote will be James Stigler from UCLA. His title is "Changing the Culture of Teaching: Mathematics Teaching, and How to Improve It." This talk will address the educational culture in mathematics classrooms

in the United States and around the world and how it affects teaching and learning.

Saturday will feature our usual lineup of talks spread over six threads. We still have many openings for speakers and would love to have our own members present, so if you are interested in giving a talk in any area of community college mathematics, from basic skills, to statistics, to calculus, to methods or innovations in teaching, please submit a proposal on the website at: <http://www.cmc3.org/conference/callForProposalsMonterey.html>.

One other thing to keep in mind is the student poster session. Please encourage your students early this fall to develop a poster for presentation at the conference. We will also be having our biannual Adjunct Forum that will give tips for all the freeway flyers and updates on the latest job opportunities.

As we work on finalizing details, the latest will be posted on the conference website at



<http://www.cmc3.org/conference/Monterey14/Monterey14.html>. We expect the conference registration form will be posted before the end of the summer.

We look forward to seeing you in Monterey for another fabulous fall conference!

## What's Happening at Cabrillo College

*Jack Malokas*

The mathematics department at Cabrillo College continues to be a very busy place. We currently have 18 full-time and about 25 adjunct instructors staffing from 100 to 110 sections of math in a typical semester. The college supports about 19,000 students at three campuses: the main campus at Aptos, and two satellite campuses, one in Watsonville and the other in Scotts Valley. Our math department chair, Nancy Fetterman, recently retired and was succeeded in that position by Jennifer Cass. We also had Marcella Laddon, our AMATYC and CMC3 liaison retire and Mark Eastman is planning on retiring this year. We have hired Joe Caputo as a full-time instructor and Mark DeSmet got tenure and completed the AMATYC ACCESS program (our third instructor to do so). We are currently in the process of hiring another full-time instructor.

One of the changes to campus life recently at Cabrillo was the completion of the remodeling of Building 800. Building 800 now supports a large, renovated STEM (Science, Technology, Engineering and Math) Center. The STEM Center is also home to MESA (Math, Engineering and Science Achievement), the Physics Learning Center (PLC) and the CIS Labs and provides support to math and other students taking STEM classes through tutoring, workshops, support services, and other resources. In general, it provides an environment where STEM students and faculty can come together as a community in a comfortable, casual atmosphere.

Perhaps the most exciting new adventure for the math department at Cabrillo is the new class we have created in algebra. Our experience and discussions over the last couple of years led us to first consider and then, during this semester to implement a new class in intermediate algebra.

We felt we needed a non-STEM pathway for students who need to take an intermediate algebra class for their AA/AS degree or transfer program. We wanted the class to be data and application driven and to be less heavy on traditional symbol manipulation. Under consideration were some existing models like StatWay and Path2Stats, but in the end we decided to do our own variation. We wanted mathematical modeling focusing on linear models (constant rate of change) and



exponential models (constant relative rate of change). The text we decided to use is Jay Lehmann's book "Intermediate Algebra: Functions and Authentic Applications" (4<sup>th</sup> edition). In addition to the focus on applications and mathematical modeling, we have chosen to use TI-83 and TI-84 calculators heavily in class as a tool for visualizing data. We are using some other tools available on those calculators and are working on finding a good balance. The goal here is to have two pathways through intermediate algebra, one that is more traditional and is intended for students in the STEM fields heading toward pre-calculus and then calculus and beyond. Our newer alternative is intended for students heading toward other math classes such as statistics, survey of college math, or finite math. In both of our intermediate algebra classes and in beginning algebra we continue to offer A and B versions which spread the coursework over a year instead of a single semester. We think that this first semester with our new approach has been generally successful and intend to improve it in the future.

## What's Happening at Butte College

*Mark Mavis, Math Department Chair*

We successfully hired two new full-time math instructors in spring 2013. We now have 13 full-time instructors and around 35 part-time instructors.

We are adding a brand new math class to our course offerings—Discrete Math. The target audience for this class will be computer science majors, but it will be open to all students.

About a year ago, we successfully completed all the necessary requirements to offer an AS-T degree in Mathematics. This degree allows students to transfer to a CSU as an upper-division student without having to repeat any of the coursework.

We noticed we were one of the few community colleges offering a 3-unit Statistics course. The 4-unit version is the most common



with a few colleges offering 5-unit courses. In order to comply with the new state AS-T degree in math, our statistics course must cover the state-approved course outline. This will expand the topics we cover in our introductory statistics class. Starting fall 2014 we will begin the process of getting approval to convert to 4 units, expanding the course outline, and hopefully offer

our “new and improved” statistics class by fall 2015.

We continue to explore acceleration strategies. We have just completed our fourth



semester of offering an accelerated Intermediate Algebra/Statistics class. The class meets four days per week, two hours per day. The first 10.5 weeks is the Intermediate Algebra class, the remaining 6.5 weeks is the Statistics class. The two classes are not combined, but this still allows students to complete two math classes in one semester.

Our lowest level of math offered is now pre-algebra. We used to offer two levels below that: Basic Math and Arithmetic with Whole Numbers. Our pre-algebra classes have all been aligned so all instructors cover the same material each week. This allows students from any section to attend Supplemental Instruction (SI) workshops scheduled throughout the week. These workshops are run by trained SI students and provide pre-algebra students additional support outside of the classroom.

We also have SI leaders and workshops for our Calculus I and II courses and have found noticeable improvement in student understanding for those students that attend. It also has the positive benefit of forming a community of math students that learn, laugh, and eat together, something we all need to do more of.

## Mathematics and Student Success – What’s Next?

*Ginny May, Sacramento City College*

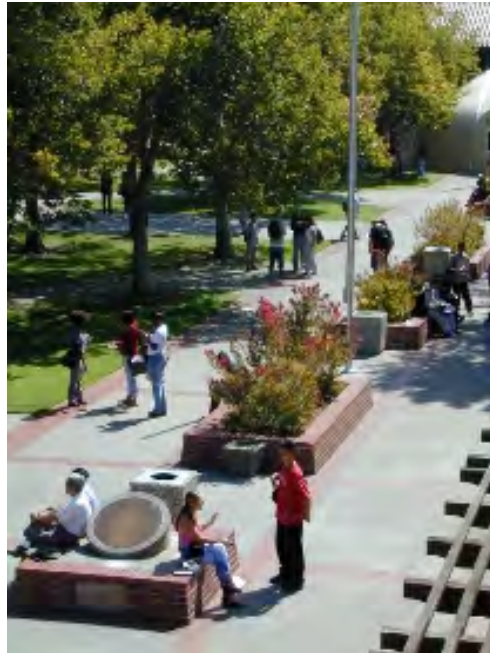
The Sacramento City College math department has numerous programs designed to improve student success in mathematics, as do many college math departments. Dedicated math faculty have labored many hours developing and piloting innovative student success programs. At SCC, these include, but are not limited to the following:

- \* Student Instructional Assistants in Basic Skills Classes,
- \* the Pass-that-Class Program for Algebra,
- \* a Mathematics Lab open 6 days per week,
- \* the Second Chance Programs for Algebra and Statistics,
- \* a Summer Success Academy,
- \* MESA Boot Camps,
- \* the Assessment Prep Program,
- \* a PALS Learning Community,
- \* an Allied Health Learning Community,
- \* Video Lectures for Distance Ed and Flipped Classrooms, and
- \* Addition of Lab time to Arithmetic and Intermediate Algebra courses.

In addition, SCC has a Basic Skills Initiative Program that helps to provide some of the funding, and other programs through Pathways, EOPS, RISE, and the Learning Resource Center.

Our District Chancellor recently attended our department meeting so that we could share with him descriptions of our student success programs. We were the fourth (and last) math department in our district to be visited by our Chancellor this spring. He gave an analogy referencing ships at sea: A ship with a limited supply of gunpowder is under attack by a pirate ship. It’s dark. So instead of firing off all the

cannons and hoping to hit the pirate ship, they fire off bullets until a “ding” is heard. Then fire the cannon in that direction so as to hit the pirate ship with one cannon ball, and not waste gunpowder on



cannon balls that may or may not hit the pirate ship. One interpretation of this analogy is that we (math departments) have been firing bullets (piloting innovative programs) waiting to hear a “ding” (significant student success). So, have we heard that “ding”? And if so, are we ready to launch the cannon ball (direct major resources to a particular program)?

Based on that math department discussion and an old cliché describing mathematics curriculum in the United States, “...a mile wide and an inch deep...”, I have the following questions: Is it time to invest our resources in a particular student success program? Is it better to do fewer programs better? And if so, will that be more or less beneficial for our students? Is the multitude of piloted innovative programs “a mile wide and an inch deep”? I don’t know the answers to these questions, but I do believe they are worth exploring.

## We Weren't Just Dreaming of a White Conference

By Larry Green, Lake Tahoe Community College



This spring's recreational math conference in Lake Tahoe looked more like winter than spring. The falling snow and the chain controls on highway 50 did not stop our members from driving into the Sierras to be

part of the annual conference. We were greeted with the always deep blue lake and got a special treat with the sparkling snow covered surroundings.

Once inside the warm MontBleu conference center, we enjoyed a Friday evening and Saturday all day program of cool things that can be done with mathematics. The conference began with Thomas Mattman getting us all knotted up with his presentation on knot theory. Several of us were volunteer demonstrators as we maneuvered across the stage attempting to untie ourselves. Professor Mattman then showed us how knot theory is used to understand how DNA efficiently unknots itself when it splits and recombines.

Immediately after the keynote talk, we went to the suite at the top of MontBleu where the first annual CMC<sup>3</sup> Foundation Gala was held. We all enjoyed ourselves as we connected with each other and partook of a full spread of munchies and plenty of beverages, alcoholic and non-alcoholic, for everyone. The proceeds from the CMC<sup>3</sup> Foundation Gala were put directly into the CMC<sup>3</sup> scholarship fund to give to our best math students.

On Saturday morning, we were dazzled with presentations on how math is used in art, music, sports betting and cryptography and we learned where the complex numbers originated.

After lunch, the keynote given by Professor William Dunham was all about Newton. We learned about the human side of Newton and not everything he did was angelic. We also heard about some of the original mathematics that Newton did and we now understand more about the historic birth of calculus. This was followed by another round of mathematical thrillers. We heard more about mathematics and art and photography, some math history, and were challenged with the mathematics problems that were given in the latest community college math competition. We were treated with a chocolate feast between the afternoon sessions and the student speaker's presentation.

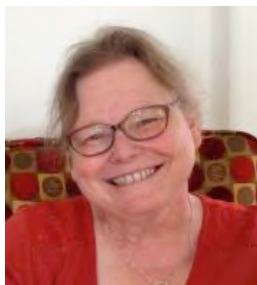
Instead of our traditional student speaker, we heard from a student at UC Davis, Kris Anaya, who began his college journey in pre-algebra at Sacramento City Community College and succeeded through their entire mathematics curriculum. He is now a mathematics major at the university. Kris spoke about the role of mathematics in music and his experiences coming from a very limited mathematics background. We have the generosity of Debra Landre, the leadership of the CMC<sup>3</sup> Foundation president Debbie Van Sickle, and the hard work from the rest of the CMC<sup>3</sup> Foundation for making the student speaker scholarship a reality.

I want to give special thanks to Greg Daubenmire who recruited the session speakers and Mark Harbison who took the charge of finding the two great keynote speakers. I also want to thank *McGraw-Hill Higher Education* for sponsoring the chocolate feast and *Pearson* for supplying us with conference bags and pens.

Mark your calendars for the nineteenth annual CMC<sup>3</sup> recreational math conference at Tahoe in 2015. The dates next year will be April 17 and April 18 and will be held at the same place, the MontBleu Resort Casino and Spa in Tahoe. I am sure it will be as wonderful as Tahoe 2014 was, but maybe not as snowy.



## CMC<sup>3</sup> Foundation Report



*Debbie Van Sickle, CMC<sup>3</sup>  
Foundation President,  
Sacramento City College*

### Scholarships

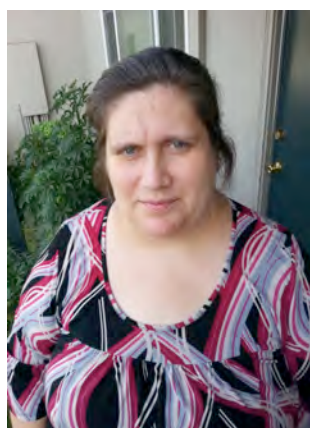
We have completed the process of awarding our

CMC<sup>3</sup> Scholarships for the 2013/2014 academic year. This year we invited all of CMC<sup>3</sup> members to nominate students from their colleges (see <http://www.cmc3.org/foundation.html#scholarships>). I would like to thank our two judges, Charles Duff, retired community college math professor, and Barbara Illowsky, on temporary assignment to the State Chancellor's office .

The following biographies of this year's winners were submitted by the member colleges.

Tied for first place and receiving \$2500 each:

**Nataliya Polichshuk, Cosumnes River College.**



Nataliya grew up in the former Soviet Union, enduring significant hardships and religious discrimination that threatened to derail her education. When she came to the United States,

she was in her thirties and the mother of six, but she was determined to continue her education. She started taking classes at Cosumnes River College and worked her way up through the entire lower division mathematics curriculum, maintaining a perfect 4.0 grade point average. She is currently the "go to" tutor in CRC's Math Center and plans on a career as a mathematics teacher.

**Amethyst Raybee, Mendocino College**



Amethyst is a student at Mendocino College, where she performs consistently as a top student in her math classes. Her passion for mathematics is evident not only in the classroom, but also when she is tutoring or leading MESA workshops. In addition to her work fostering mathematical excellence among her peers, Amethyst is actively involved in student government, where she serves as the President of the Associated Students, and as a member of both the Curriculum and President's Policy Advisory Committees. Amethyst has been accepted to UC Berkeley in the fall, where she will pursue a degree in Applied Mathematics with the goal to move on to earn a PhD in Math History. She would eventually like to develop math history curriculum for both K-12 and community college students.

Tied for third place and winning \$500 each:

**Huy Truong, Evergreen Valley College**



Huy Truong has a very strong passion for mathematics. He has quickly finished all the mathematics courses at Evergreen Valley College, all with grades of A, and finished many of them with honor's research projects. For the past year, he has chosen topics to study on his own with a faculty member. Recently, he has finished learning how to construct the real numbers from the rational numbers using Dedekind cuts and how to construct an ordered field containing the rational numbers that do not satisfy the Archimedean Principle. Huy is not just a single-minded mathematics student. He is also quite compassionate. In fact, he has done so much voluntary work that he has received a President's Service Award. This summer he will be an intern at a summer research program at the University of Wisconsin. In the fall, he will continue studying mathematics at UC Berkeley.

**Xinyu (Jason) Liu, Sacramento City College**



Jason is a first-generation college student, and only came to this country from China just over three years ago. He has served as a tutor in math, physics and computer programming. He is interested in digital technology and hopes to someday start his own company. He co-founded and served as president of the Sacramento City College Math Club and is a member of the Phi Theta Kappa Honor Society. Jason plans to attend UC Berkeley in the fall, majoring in computer science and math. His long term goal is to earn a PhD in computer science or applied physics.

## Fundraising

The Tahoe conference provided a successful end to our 2013/2014 fundraising season. We started a new tradition with our first annual Foundation Gala on the first night of the conference. I'd like to thank the following; Pearson Publishing, the MontBleu Hotel, CMC<sup>3</sup>, all those who helped with food and set up, and everyone who braved the blizzard and bought tickets to the Gala. As always, all money raised will be used to fund student scholarships.

**(see "CMC<sup>3</sup> Foundation" on p. 12)**

## CK-12 Foundation

[CK-12 Foundation](#) is a non-profit organization dedicated to increasing access to high-quality STEM educational materials for students all over the world on any device.

CK-12 offers free high-quality, standards-aligned, open content in the STEM subjects through an integrated set of tools for learning including digital textbooks, concept-based learning resources, simulations, interactive practice and more. These work across all platforms and devices including computers, tablets and smartphones. All products can be customized to match the needs of the student, educator, or school. CK-12 also has all the tools to help a teacher run a classroom virtually or flip it by offering groups, assigning digital practice and monitoring student achievement through a teacher dashboard. By providing these free resources, CK-12 is working toward educational equity for all.

At CK-12, not only will you find high-quality digital textbooks, but you'll also find content broken down to the concept level. CK-12 user, Andrea Pokryzwinski enjoys that CK-12 "material is broken down into bite-sized chunks versus traditional textbooks where each chapter has too much content and too many new vocabulary words."

Like many educators, CK-12 user, Arjan Harjani is moving in the direction of going paperless in his Biology classroom. He found CK-12 through a fellow teacher and as he says, "I fell in love with CK-12 the moment I signed up for it."

Curriculum heads and administrators like Anthony Griffith of Ontario, Canada love the amount of money they have saved with CK-12. Griffith was spending \$120 per textbook for the 1,000 students at his school.

That's \$120,000 just for a textbook that becomes out of date the moment it's printed! CK-12 also partners with several educational institutions, technology partners, LMS providers and teacher networks to provide its platform so that it can benefit teachers and students everywhere.

All CK-12, products and services including high-quality textbooks, videos, simulations and practice are 100% free. It's currently being used by students and teachers across thousands of schools both in the US and rest of the world. Although CK-12 content is intended for middle school and high school, many colleges and universities find the content useful for introduction and remedial courses.

To access CK-12's free library of STEM content, visit [www.ck12.org](http://www.ck12.org) and create a free account.

## Through the History Glass

J. B. Thoo, Yuba College, jthoo@yccd.edu



In the last installment, I wrote that, according to Burton [1, p. 258], with Chinese rod numerals, black rods are used to represent positive numbers and red rods to represent negative numbers, and a vacant space on the counting board to represent zero in that place value. It turns out that other

authors tell us just the opposite: that red rods are used to represent positive numbers, and black rods to represent negative numbers; and if rods of only one color are available, then a negative number is indicated by placing a rod across the last nonzero digit, for example,  $\top \equiv \text{ㄩ}$  for  $-642$  [4, p. 152]. However, do not take my word for it. Instead, read about Chinese rod numerals, and many other topics from the rich history of mathematics, for yourself. Summer will be the perfect time for you to do that, and I have a few suggestions.

If you find Chinese rod numerals intriguing (they could make for good classroom activities, especially in your college arithmetic or prealgebra class), then turn to the book, *Fleeting Footsteps*, by Lam Lay Yong and Ang Tian Se [4]. This is a fascinating book that shows you how many different calculations are performed using Chinese rod numerals. The book also contains an English translation of the Chinese mathematics text, *Sun Zi Suan-jing (The Mathematical Classic of Sun Zi)*, that was written around AD 400. What is fascinating about this book is that Lam and Ang put forth the thesis that the Indo-Arabic number system we use today has its origins in the Chinese rod numeral system. Read all about it!

If you were at the CMC3 Recreational Math Conference last April 25 and 26, you may have heard Bill Dunham's Saturday keynote talk on Newton. Dunham is a brilliant speaker who knows a great deal of the history of mathematics. Whether you

got to enjoy Dunham's talk or not, you can certainly enjoy his timeless classic, *Journey through Genius* [3]. In his book, Dunham gives accounts of what he considers to be the great theorems of mathematics and the stories that surround them. In twelve chapters, Dunham's accounts span the gamut from Hippocrates's quadrature of the lune to Euclid's proof of the infinitude of the primes to Newton's binomial theorem to Cantor's infinities. All great stuff.

If you have ever wondered from where many of our mathematical notations come, check out Florian Cajori's, *A History of Mathematical Notations* [2]. You will learn that the earliest printed appearance of the symbols  $+$  and  $-$  for plus and minus, respectively, is found in Johann Widman's 1489 work, *Behennde vnnd hübsche Rechnūg auff allen kauffmanschaftten*. That the earliest record of the equals sign  $=$  is in Robert Recorde's 1557, *Whetstone of Witte*. That  $\parallel$  for parallel occurs in William Oughtred's, *Opuscula mathematica hactenus inedita*, of 1677. That our  $\$$  sign was introduced into Hawaii by American missionaries in a translation of Warren Colburns, *Mental Arithmetic*, in 1835, and that the  $\$$  sign is apparently "a change introduced unconsciously, in the effort to simplify the complicated motion of the pen called for in the florescent  $p^s$  [for *peso* or *pesos*]." You will find all that and much, much more in this authoritative reference.

If you are interested in a survey of the history of mathematics, a book I have had on my shelf for some time, but just have not found the time to read, is Dirk J. Struik's, *A Concise History of Mathematics* [6]. Maybe I will get around to reading it this summer, finally, or maybe I will not. If you read the book, please let me know what you think of it. The table of contents indicates that it covers the history of mathematics from "The Beginnings" (chapter I) to "The First Half of the Twentieth Century (chapter IX) in a little over two hundred pages. That should make it easy to take this book wherever you go.

A book that I did read a very, very (very) long time ago is Lynn M. Osen's, *Women in Mathematics* [5]. I read this book when I was an undergraduate student. The women that it features are

Hypatia, Maria Agnesi, Emilie de Breteuil, Caroline Herschel, Mary Fairfax Somerville, Sonya Kovalevsky, and Emmy Noether; the book concludes with chapters on “The Golden Age of Mathematics” and on “The Feminine Mathtique.” I will not say more, for I would hate to spoil it for you. The book is generally biographical, with very little of the women’s specific mathematical achievements described. Nevertheless, it is a classic, and well worth a read.

So, I invite you to fix yourself a nice, cold drink; to recline in your favorite chair; and to while away your summer reading a good book. A good history of mathematics book, that is, or several of them. And if you find one that I did not mention, drop me a line to tell me about it. Have yourself a wonderful summer.

Previous columns are on the Web at <http://ms.yccd.edu/history-glass.aspx>.

## References

- [1] David M. Burton, *The History of Mathematics: An Introduction*, 7th ed., McGraw-Hill, New York (2011).
- [2] Florian Cajori, *A History of Mathematical Notations: Two Volumes Bound as One*, Dover Publications, Inc., New York (1993).
- [3] William Dunham, *Journey through Genius: The Great Theorems of Mathematics*, Penguin Books, John Wiley & Sons, Inc., New York (1990).
- [4] Lam Lay Yong and Ang Tian Se, *Fleeting Footsteps: Tracing the Conception of Arithmetic and Algebra in Ancient China*, revised ed., World Scientific Publishing Co. Pte. Ltd., New Jersey (2004).
- [5] Lynn M. Osen, *Women in Mathematics*, The MIT Press, Cambridge (1988).
- [6] Dirk J. Struik, *A Concise History of Mathematics*, fourth revised ed., Dover Publications, Inc., New York (1987).

## CMC<sup>3</sup> Foundation

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### Student Speaker Competition

The Foundation was once again delighted to facilitate the annual Student Speaker Competition, made possible by a generous gift from past CMC<sup>3</sup> president Debra Landry. This year’s winner, Kris Anaya, who recently transferred from Sacramento City College to UC Davis, gave a talk entitled “The Integration of Math and Music: a Transition from Sac City to UCD,” inspired by the work of composer and mathematician Iannis Xenakis. Kris was mentored by Hsiao Wang from Sacramento City College. Thank you to Larry Green for running the competition.

### Adjunct Update

*Tracey Jackson, Santa Rosa Junior College*

The 2014 CMC<sup>3</sup> Fall Conference in Monterey is December 5th and 6th, and there is a reduced adjunct rate for the conference registration. At the conference this year there is a panel discussion on the tenure-track hiring process, which may be of interest to those seeking full-time positions. For more information about the conference, please visit the website <http://www.cmc3.org/>.

The website also has a page of links to various job searches, many with both tenure-track and adjunct listings. This year appears to be more promising for full-time job openings, so keep checking the searches frequently, especially in late fall when most positions are posted. At the panel discussion, a list of current open positions will also be provided.

In addition, a speaker proposal form is available on the website. If you have a talk that would be of interest to the CMC<sup>3</sup> community, please consider presenting at the conference.

## Math Nerd Musings

Jay Lehmann, *College of San Mateo*



Do you ever play it safe with the courses you request to teach? Stick with the courses you've had lots of experience teaching? Maybe you feel better qualified to teach those courses. Or, you don't give it that much thought, winding up asking for the usual.

This semester I did something different, teaching statistics for the first time in about fifteen years. I'd taught it almost every semester my first ten years of teaching, but stopped requesting the course, thinking others in my department were more qualified, which is true—I took only two stats courses in college.

But it took teaching the course this semester to remember that I *like* teaching the course. Statistics is different than our other course offerings. There is such a strong verbal component and the concepts are more embedded in "reality," often requiring metaphors about everyday life. For example, one way to discuss the main point of hypothesis testing is to relate it to the classic metaphor of when our court system convicts suspects. And the thing is, I really enjoy relating concepts to metaphors. It's creative and fun. And students like it when we share such metaphors with them.

The course pulled me in other mind-expanding directions. I learned how to use statistical software that wasn't available when I last taught stats. The technology was not only fun to learn to use, it also enabled me to teach the course in ways that required students to think more in depth about the concepts.

I also read every page of the textbook, which granted me the unexpected sense that I was more in sync with my students, because some of them read the book, too.

Yet another unexpected bonus—and perhaps the most significant one—is that I found myself enjoying my other classes more. Just like a multi-course meal can be so much more satisfying and enjoyable than a single course.

There are still a couple of subjects that I've never taught: discrete math and differential equations. I don't have much interest in teaching discrete math, but differential equations keeps tugging at me. I only took one course in the subject, but I enjoyed it, and with the proper preparation, I bet I could do a decent job. And after my positive experience teaching statistics, I'm that much more likely to give it a shot—right after I have a few more semesters of teaching stats under my belt. There are certain lectures and projects to fine tune....

**Yet another unexpected bonus—and perhaps the most significant one—is that I found myself enjoying my other classes more. Just like a multi-course meal can be so much more satisfying and enjoyable than a single course.**

And what about you? Is there a course lurking in your department's offerings that you've been curious about or even longing to teach? So, what's stopping you? Do you like things to be predictable? Well, maybe the invigorating feeling of doing something new might outweigh a little chaos. Feel a bit rusty on the subject? Well, it's not like you have to start the semester cold. Most of us instructors enjoy learning. And we have the infiniteness of summer to take a bit of time here and there to study—poolside with a favorite beverage nearby.

## Calendar

July 1-5, 2014 International Conference on Technology in Mathematics Education (TIME-2014), Krems, Austria. Contact: Peter Baumgartner, +43 (0)2732 893-2350, email: [peter.baugartner@domau-uni.ac.at](mailto:peter.baugartner@domau-uni.ac.at)

July 13-18, 2014 International Conference on Teaching Statistics (ICOTS-9), Northern Arizona University, Flagstaff, AZ. Contact: Roxy Peck, [rpeck@calpoly.edu](mailto:rpeck@calpoly.edu)

September 27, 2014: WisMATYC Fall Conference, Univ of Wisconsin-Fond du Lac, Fond du Lac, WI. Website: [www.wis.matyc.org](http://www.wis.matyc.org)

October 3-4, 2014: MichMATYC Fall Conference, Lake Michigan College, Benton Harbor, MI. Website: [www.michmatyc.org](http://www.michmatyc.org)

November 13-16, 2014,; 40th Annual AMATYC Conference, Nashville, TN. Contact: AMATYC Office, [amatyc@amatyc.org](mailto:amatyc@amatyc.org).

December 5 and 6, 2014; 42nd Annual CMC<sup>3</sup> Conference, Hyatt Regency Monterey Hotel and Spa, Monterey, CA. Contact: [Joe Conrad](mailto:Joe.Conrad@solano.edu). (707) 864-7000 x4372, [Joseph.Conrad@solano.edu](mailto:Joseph.Conrad@solano.edu)

April 10, 2015: NEBMATYC Conference, Elkhorn, NE. Contact: [Steven Reller](mailto:Steven.Reller@northeast.edu). Website: [www.northeast.edu/Organizations/NEBMATYC](http://www.northeast.edu/Organizations/NEBMATYC)

April 17-19, 2015: 48th NYSMATYC Annual Conference, Rochester, NY. Contact: [Larry Danforth](mailto:Larry.Danforth@nysmatyc.org). Website: [www.nysmatyc.org](http://www.nysmatyc.org)

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