



Southern California–Nevada Section
Mathematical Association of America

NEWSLETTER



Volume LI, Number 2

March 2010

**Southern California-Nevada Section to Meet
Saturday, April 10, 2010, at Harvey Mudd College**

The Spring Meeting of the Southern California-Nevada Section of the MAA will feature four exceptional speakers on four exciting areas and applications of mathematics:

- ❖ Puzzle-master **Scott Kim** on inventing puzzles;
- ❖ **Zvezda Stankova** on pattern-avoiding permutations;
- ❖ **Alissa Crans** on mathematics and music; and
- ❖ **Ken Ono** on Ramanujan's final mathematical mystery.

The meeting also will feature the popular Student Poster Session and MAA Book Sale. Section NExT will have parallel activities for its members.



*Speaker Ken Ono of UW
Madison enjoys a previous
trip to Southern California.*

Deadlines for 2010 Spring Section Meeting:

Title and abstract for Student Poster Session:
Monday, March 29 (see page 12)

Section NExT application: Thursday, April 1 (see page 3)

Mail-in registration for Spring Meeting: Monday, April 5 (see page 11)

Online registration for Spring Meeting: Tuesday, April 6, 5 p.m. (see page 10)

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**Pre-register online
for the MAA So Cal-
Nevada Section
Spring Meeting at
the section website:**

[http://sections.maa.org
/socalnv/](http://sections.maa.org/socalnv/)

Greetings from the 2009-2010 MAA Southern California-Nevada Section Chair

Art Benjamin, Harvey Mudd College

Since 1999, I have had the pleasure of serving on our section's governing board as Secretary, Treasurer, Governor, and Chair. During that time, we have seen our section expand to include Southern Nevada, our newsletter has switched from being hard copy to online, and we have had lots of meetings, all with great speakers and participants. We are one of the few sections to hold two meetings per year, and our student attendance at the Spring meeting is the largest among all MAA Sections, thanks to our student poster session. The members of our section tend to be very well represented at the national meetings as well.



Anandi Hira and Amy Walecka of Pepperdine University present their strategy for winning tickets to the musical "Wicked!" during the Student Poster Session at the JMM in San Francisco in January 2010. Their strategy worked! The pair won tickets to "Wicked!" and we hope they enjoyed the show. Both Hira and Walecka will enter PhD programs in the fall, Hira in computer science and Walecka in Operations Research.

2010 JMM in SF. At the San Francisco Joint Mathematics Meetings, our members presented talks, our students presented posters, and our members won prizes. It was great seeing **Curtis Bennett** receive the MAA's national teaching award, the Haimo Award for Distinguished College or University Teaching. His talk clearly demonstrated why he was deserving of that prize. Congratulations to **Janet Beery** for receiving the MAA's Certificate for Meritorious Service. Janet has served on our board for more than 10 years, doing a terrific job as Student Chapter Coordinator and then as Newsletter Editor.

Many students from our section presented posters, and some of them won \$100 prizes from the MAA (see page 13 for details). One of my favorite posters was presented by students **Anandi Hira** and **Amy Walecka** from Pepperdine University (advised by **David Strong** and **Kendra Killpatrick**), who came up with a mathematical model to optimize one's chances of winning a free pair of tickets to see the musical "Wicked!" They put their theory into practice and actually won a pair of tickets in San Francisco!

Greetings from the Section Chair, continued from page 2...

Spring 2010 Section Meeting. Meetings are a great place to hear new ideas, catch up with former colleagues and collaborators, and form new friendships. I'm delighted that the next meeting, my last as a section officer, will be held at Harvey Mudd College. Program Chair **Michael Orrison** has put together an exciting program of speakers that are sure to please, and we are expecting another large turnout of student poster presenters. I look forward to seeing you there!

Fall 2010 Section Meeting. Mark your calendars for the Fall Meeting, to be held at UC Irvine on October 16, 2010.

New Faculty: Join Southern California-Nevada Section NExT!

Magnhild Lien, CSU Northridge; Ioana Mihaila, Cal Poly Pomona

Project NExT (New Experiences in Teaching) is an MAA program for new and recent PhDs in the mathematical sciences that addresses the full range of faculty responsibilities, including teaching, scholarly activities, and service. Since its inception in 1994, the national Project NExT program has grown tremendously, and sections of the MAA have been encouraged to organize regional NExT programs.

The SoCalNev Section NExT program is in its 8th year and has sponsored dynamic cohorts of participants at the MAA Southern California-Nevada Section meetings. SoCalNev Section NExT Fellows attend both the Fall and Spring meetings of the MAA Section and participate in special activities. These activities involve practical information about implementing effective pedagogical and professional strategies, including topics such as teaching methods, directing undergraduate research, and writing grant proposals. In addition, SoCalNev NExT provides a venue in which its participants can meet informally and discuss issues relevant to new faculty. Unlike the national Project NExT program, Section NExT includes community college faculty.

SoCalNev NExT is now recruiting applicants to participate in activities at the Spring 2010 MAA Southern California-Nevada Section Meeting on April 10 at Harvey Mudd College. Section NExT will accept applications from faculty with Master's degrees or PhDs who are within the first three years of beginning full-time employment with significant teaching responsibilities at the community college or university level. Project NExT Fellows within their first three years of full-time employment are encouraged to register and become members of Section NExT.

For more information, including a link to the on-line application form, please visit <http://www.csun.edu/~vcmth00s/SectionNExT.htm>. To join Section NExT in time for the Spring Section Meeting at Harvey Mudd College, please complete an application form by **Thursday April 1, 2010**. For Spring Meeting registration information, see pages 10 and 11 or visit the Southern California-Nevada Section website at <http://sections.maa.org/socalnv/>

Spring Meeting Schedule

Saturday, April 10, 2010

Galileo Hall, Harvey Mudd College, Claremont

- 8:15 – 12:00 **Registration** – Hixon Court, at the entrance to Galileo Hall
- 8:15 – 10:30 **Refreshments** – Hixon Court, at the entrance to Galileo Hall
- 8:30 – 2:30 **MAA Book Sale** – Galileo Hall Lobby
Organized by Michael Hoffman, Richard Katz, Cal State Los Angeles
- 9:00 – 10:00 **Invited Address by Scott Kim**, www.scottkim.com
McAlister Lecture Hall, Galileo Hall

Teaching Students to Invent Puzzles

All math students learn to solve problems. But as every mathematician knows, being able to solve problems is only half the battle. To think like a mathematician, students also need to be able to invent their own problems – to identify interesting areas and ask new questions. Mathematical research thrives on just this ability.

But you don't have to be a research mathematician to invent original problems. In this presentation, I will talk about work I have done asking students of all ages to invent original mathematical problems. I will show how I have used the puzzle toy Rush Hour to teach techniques of puzzle design. I will show how I have built computer games that let players invent puzzles for others to solve. And I will show how puzzle invention can be taught in gradual steps that move a student from simply modifying an existing puzzle to creating something truly original. Finally, I will discuss how designing puzzles is similar to doing original mathematical research.

- 10:00 – 10:15 **Section Business Meeting** – McAlister Lecture Hall, Galileo Hall
Presentation of Section Distinguished Teaching Award
Recognition of 25- and 50-year MAA members
- 10:15 – 11:15 **Student Poster Session** – Courtyard above Galileo Hall
Organized by Cynthia Wyels, Cal State Channel Islands
- 11:15 – 12:15 **Invited Address by Zvezdelina Stankova**, Mills College
McAlister Lecture Hall, Galileo Hall

Exploring Pattern Avoidance: Unsolved Questions and Baffling Answers

Spring Meeting Schedule continued on page 5 ...

Spring Meeting Schedule, continued from page 4

11:15 – 12:15

Invited Address by Zvezdelina Stankova, Mills College
McAlister Lecture Hall, Galileo Hall

Exploring Pattern Avoidance: Unsolved Questions and Baffling Answers

According to a classic result of Erdős and Szekeres from 1935, any permutation of large enough length will contain an increasing or a decreasing subsequence of correspondingly large length. Formally said, the identity permutation $I_k = (1, 2, 3, \dots, k)$ and its reverse $J_k = (k, k-1, \dots, 2, 1)$ impose too many conditions on permutations of length $> (k-1)(l-1)$ and hence cannot be simultaneously avoided. What if we try to avoid only one permutation at a time? Seemingly simpler, this is the most fundamental and toughest question in the arena of restricted patterns. Classification of patterns according to their restrictiveness (or Wilf-equivalence) has been completed only up to length 8 over the course of several decades. Calculating the exact probability of avoiding a specific pattern still eludes researchers: back in the '80s, the answer for level 3 was provided by the n th Catalan number; yet, to this day the length-4 patterns have yielded answers only for 1342 and 1234. The 1234-calculation, for example, was done by Gessel in 1990, using D -finite power series and notions removed from the classic flavor of restricted patterns.

In this talk, we shall explore the ever-tempting question of Wilf-classification; specifically look for an alternative, combinatorial proof of enumerating the 1234-avoiding permutations; and discuss whether, among the array of generated ideas and methods, there is a "true" way of approaching pattern-avoidance.

12:15 – 1:30

Luncheon – Hoch Shanahan Dining Commons

1:30 – 2:30

Invited Address by Alissa Crans, Loyola Marymount University
McAlister Lecture Hall, Galileo Hall

Musical Actions of Dihedral Groups

Can we hear an action of a group? Or a centralizer? In the same way it is possible to see group structure in a crystal, it is also possible to hear group structure in music. We will investigate two ways that the dihedral group of order 24 acts on the set of major and minor chords and illustrate both geometrically and algebraically how these two actions are dual. Both actions and their duality have been used to analyze works of music as diverse as that of Beethoven and the Beatles. (This is joint work with Thomas M. Fiore and Ramon Satyendra.)

Spring Meeting Schedule continued on page 6 ...

Spring Meeting Schedule, continued from page 5

2:30 – 3:00 **Refreshments** – Hixon Court, at the entrance to Galileo Hall

3:00 – 4:00 **Invited Address by Ken Ono**, University of Wisconsin, Madison
McAlister Lecture Hall, Galileo Hall

Unearthing the Visions of a Master: The Story and Legacy of Ramanujan

The legend of Ramanujan is one of the most romantic stories in the modern history of mathematics. It is the story of an untrained mathematician, from south India, who brilliantly discovered tantalizing examples of phenomena well before their time. Indeed, the legacy of Ramanujan's work (as a whole) is well documented and includes direct connections to some of the deepest results in modern number theory, such as the proof of the Weil Conjectures and the proof of Fermat's Last Theorem. However, one final problem remained, the enigma of the functions that Ramanujan discovered on his death bed. Here we tell the story of Ramanujan and this final mystery.

Directions to Harvey Mudd College, Claremont

For directions, see the campus website at <http://www.hmc.edu/campusmap/regional.htm>
For a campus map, see <http://www.hmc.edu/campusmap/>

Parking: Meeting parking is free in the parking lots on the south side of Foothill Blvd. and the north side of Platt Blvd., just east of Dartmouth Avenue on the Harvey Mudd College campus. There also is street parking along Foothill Blvd.

Registration will be just outside Galileo Hall, the Book Sale and all invited addresses will be in Galileo Hall, and the Student Poster Session will be in the courtyard above Galileo Hall. The registration desk will be in Hixon Court just outside Galileo Hall.

Hotels: The Doubletree Claremont is near the Claremont Colleges, while the Doubletree Ontario is near the Ontario Airport. Reserve for either at <http://www.doubletree.com>

Great Books, Great Bargains at MAA Book Sale!

The 2010 Spring Meeting at Harvey Mudd College will include the ever-popular MAA Book Sale. Book prices at the meeting will be about 10% less than the already discounted MAA member prices in the MAA Catalog. Almost all of the books in the MAA Catalog will be on display, including a number of brand new titles. Book Sale organizers are Michael Hoffman and Richard Katz of California State University, Los Angeles.

Mathematical Puzzles, Patterns, Mystery, and Music to be Presented at MAA Spring Section Meeting April 10 at Harvey Mudd College

The Spring Meeting of the Southern California-Nevada Section of the MAA will feature four exceptional speakers on four exciting areas and applications of mathematics:

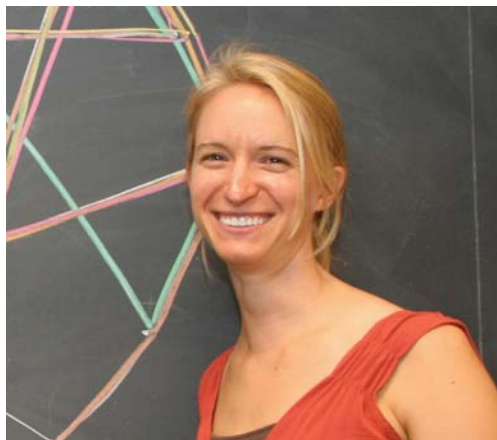
- ❖ Puzzle-master Scott Kim on mathematics and puzzle invention;
- ❖ Zvezda Stankova of Mills College on pattern-avoiding permutations;
- ❖ Ken Ono of UW Madison on Ramanujan's final mathematical mystery; and
- ❖ Alissa Crans of Loyola Marymount University on mathematics and music.

The meeting also will feature the popular Student Poster Session, organized by Cindy Wyels of California State University, Channel Islands. The MAA Book Sale, offered throughout the day by Michael Hoffman and Richard Katz of Cal State Los Angeles, will have a large selection of new MAA books, along with almost all of the other titles in the MAA booklist. Even the Business Meeting promises to be exciting, with the highly anticipated presentation of the 2010 Section Distinguished Teaching Award and recognition of our section's 25- and 50-year MAA members.

The Southern California-Nevada Section NExT (New Experiences in Teaching) will run a parallel program of activities for its members; new faculty members within three years of beginning their teaching careers who wish to participate should apply by Thurs., April 1 (no fooling!), at <http://www.csun.edu/~sf70713/application.html> (See page 3 for more information.) See you in Claremont!

Spring Meeting Speakers

Alissa Crans earned her B.S. in mathematics from the University of Redlands in 1999 and her Ph.D. in mathematics from the University of California at Riverside in 2004, under the guidance of John Baez. She is currently an Assistant Professor of mathematics at Loyola Marymount University and has held positions at Pomona College, The Ohio State University, and the University of Chicago.



Alissa's research is in the field of higher-dimensional algebra and her current work, funded by an NSA Young Investigator Grant, involves categorifying algebraic structures called quandles with the goal of defining new knot and knotted surface invariants. She is

Spring Meeting Speakers and Presenters, continued from page 7...

also interested in the connections between mathematics and music, and enjoys playing the clarinet with the Santa Monica College wind ensemble.

Alissa is extremely active in helping students increase their appreciation and enthusiasm for mathematics through co-organizing the Pacific Coast Undergraduate Mathematics Conference together with Naomi Cameron and Kendra Killpatrick, and her mentoring of young women in the Summer Mathematics Program (SMP) at Carleton College, the EDGE program, and the Career Mentoring Workshop.

Scott Kim is an independent game designer who designs original visual thinking puzzles for the web, computer games, magazines, and toys. Major projects include puzzles for websites Adobe.com and Juniornet.com, computer games Obsidian and Escher



Interactive, magazines *Discover* and *Games*, and physical toy Railroad Rush Hour. His interest in puzzles sprang from an early interest in mathematics, education and art. His first puzzles appeared in *Scientific American* in Martin Gardner's "Mathematical Games" column. Other pursuits include creating "inversions" (words that read in more than one way) and creating educational dance performances about mathematics. He was born in 1955, raised in Los Angeles, and attended Stanford University, where he received a BA in music and a self-designed PhD in Computers and Graphic Design. He currently lives in El Granada, California, near San Francisco, with his wife Amy (an online community strategist and author of *Community Building on the Web*) and his son Gabriel. You can read more about his work on his website www.scottkim.com.

Ken Ono received his PhD from UCLA in 1993, under the guidance of Basil Gordon. He then held positions at the University of Georgia, University of Illinois, Institute of Advanced Studies, and Penn State University, where he was named the Louis P. Martarano Professor in 1999. He is presently the Manasse Professor of Letters and Science and the Hilledale Professor of Mathematics at the University of Wisconsin at Madison.

He has authored over 100 research papers, as well as the CBMS monograph *The Web of Modularity*. His work includes ground-breaking results on partition congruences, modular forms, Borchers products,



Spring Meeting Speakers and Presenters, continued from page 8...

and mock theta functions. He has advised 17 PhD students to date, and he sits on the editorial boards of 11 journals. His awards have included a Sloan Fellowship, a Presidential Early Career Award, a Packard Fellowship, and a Guggenheim Fellowship.

In addition to his research accomplishments, Ono is a well-known lecturer and teacher, as evidenced by his receipt of the 2005 National Science Foundation Director's Distinguished Teaching Scholar Award, and the 2007 and 2009 Favorite Instructor Award from the University of Wisconsin Residence Halls.



Zvezdelina (Zvezda) Stankova is Frederick A. Rice Associate Professor of Mathematics at Mills College, where she has served as Department Head for two years. She is founder and Director of the Berkeley Math Circle at UC Berkeley and has founded dozens of math circles throughout the world. She co-founded the Bay Area Mathematical Olympiad and helped train the USA's International Mathematical Olympiad team for six years.

Zvezda was drawn into the world of mathematics when, as a 5th grader, she joined the math circle at her school in Bulgaria and won, three months later, the Regional Math Olympiad. She represented her home country at two International Mathematical Olympiads (IMOs), earning silver medals. As a freshman at Sofia University, Zvezda won a competition to study in the U.S. and, encouraged by her advisors Professors Rhonda Hughes and Paul Melvin, completed a dual BA/MA degree at Bryn Mawr College in 1992. She did her first math research in the area of enumerative combinatorics at two summer REUs in Duluth, Minnesota, under the mentorship of Professor Joseph Gallian. The resulting papers contributed to her Alice T. Schafer Prize for Excellence in Mathematics by an Undergraduate Woman, awarded by the Association for Women in Mathematics. In 1997, Zvezda received her Ph.D. from Harvard University in the field of algebraic geometry under the supervision of Professor Joseph Harris, with a thesis on moduli spaces of trigonal curves. She did post-docs at MSRI and UC Berkeley before joining the Mills College faculty in 1999.

Her current research interests include classification of restricted patterns, specifically, Wilf-equivalences and shape-Wilf-ordering, in the area of enumerative and algebraic combinatorics. She continues to start, guide, and promote math circles in Northern California, the United States, and the world and in 2009 co-edited the first volume, *A Decade of the Berkeley Math Circle—the American Experience*, of the AMS-MSRI book series, *Mathematical Circles Library*. Zvezda's inspiring style and passion to teach and communicate mathematics beyond the classroom have been recognized by the MAA: in 2004 she was selected as a co-recipient of the first Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member.

Registration for Spring Meeting

Participants can register online (using a credit card) for the Spring Meeting, to be held Sat., April 10, 2010, at Harvey Mudd College in Claremont, by going to the link on the section website <http://sections.maa.org/socalnv/>. Online registration will be available from Monday, March 8, at 8:00 am, to **Tuesday, April 6, at 5:00 p.m.**

Participants also may register by mail by **Monday, April 5, 2010**. Either send the registration form on page 11 of this newsletter, or send your

Name
Affiliation
Address
E-mail address
Lunch preference (vegetarian or non-vegetarian)

along with appropriate payment (see below) to:

Ernie Solheid
Department of Mathematics
California State University, Fullerton
800 N. State College Blvd.
Fullerton, CA 92834

Make checks payable to **Southern California-Nevada MAA**.

Registration and luncheon:

MAA member: \$45
Non-member: \$50
Student: \$20

Registration only (no luncheon):

MAA member: \$30
Non-member: \$35
Student: \$12

Pre-registration deadline is Monday, April 5, 2009 (mail-in using form on page 11) or Tuesday, April 6, 2010, 5 p.m. (online at <http://sections.maa.org/socalnv/>).

On-site meeting registration is available for \$5 more than pre-registration.

Questions or problems? Contact Ernie Solheid, Meetings Coordinator
Email: esolheid@fullerton.edu Phone: (657) 278-7023

For **Directions to Harvey Mudd College**, see page 6.

For **MAA So Cal-Nev Section Spring Meeting Program**, see pages 4–6.

Spring Meeting Pre-Registration / Luncheon Reservation Form

Harvey Mudd College, Saturday, April 10, 2010

Enter the number of registrations of each type in the appropriate blank in the table below.
Make checks payable to Southern California-Nevada MAA.

Name(s) _____

Affiliation _____

Address _____

E-mail address(es) _____

	MAA Member	Non-member	Student
Registration only	_____ @ \$30	_____ @ \$35	_____ @ \$12
Registration and Luncheon	_____ @ \$45	_____ @ \$50	_____ @ \$20
Registration and Vegetarian Luncheon	_____ @ \$45	_____ @ \$50	_____ @ \$20

Note: On-site meeting registration
is available for \$5 more.

Total Enclosed \$ _____

The MAA national office has requested the following information. Please check all boxes that apply to you—or enter appropriate numbers for multiple registrations.

Faculty member at college or university with highest degree offered:

_____ Associate _____ Bachelors _____ Masters _____ Doctorate

_____ High school teacher _____ Business/Industry/Government

_____ Undergraduate student _____ Graduate student

BALLOT FOR MAA SECTION OFFICERS: PLEASE VOTE!

Note: You may vote online when you register online for the Spring Section Meeting!
Please visit <http://sections.maa.org/socalnv/> to register for the meeting and to vote.

Position		Candidate	Write-in alternative
Section Vice-Chair	<input type="checkbox"/>	Silvia Heubach Cal State Los Angeles	
Section Secretary	<input type="checkbox"/>	Kathryn Leonard Cal State Channel Islands	
2 nd Vice Program Chair	<input type="checkbox"/>	Jen-Mei Chang Cal State Long Beach	

The Students' Column

*Cynthia Wyels, Student Chapters Coordinator
California State University, Channel Islands*

**Plan to attend the Spring 2010 Meeting April 10 at Harvey Mudd College!
Enter a poster in the Student Poster Competition!**

Students Make Their Presence Felt

Consider presenting a poster at our Spring 2010 Meeting on April 10, 2010, at Harvey Mudd College! Student poster presenters receive free registration and lunch at the meeting (up to two presenters per poster). More importantly, they share their work with the wider mathematical community, receiving accolades, feedback, and further ideas. And they develop their communication skills and gain a resume item. Undergraduate and Masters students are invited to submit a poster. Do so by providing the information requested at <http://sections.maa.org/socalnv/> (under Spring 2010 Meeting) by **March 29, 2010**. Topic ideas follow.

- Results of masters thesis, honors, senior, or independent study projects;
- Results of classroom projects or modeling contests;
- Results of REUs and academic-year research programs;
- Historical investigations in pure or applied mathematics;
- Solutions of problems from the Putnam Exam or from the *Monthly* or other journals.

Stretch Your Learning!

The MAA Undergraduate Page is a great resource:
<http://www.maa.org/students/undergrad/>.

Did you know you could spend several weeks this summer pursuing research under the guidance of a mentor near or far ... while having your travel costs and room and board covered ... and even receive a stipend to offset your usual summer job earnings? Check out the REU section of the MAA Undergraduate Page. (Don't wait: most application deadlines are in February and March.) And spend some time with the other information on this page – opportunities to consider abound. Our own section's webpage (<http://sections.maa.org/socalnv/>) and this newsletter list many of the regional conferences that are relatively easy to attend.

Pacific Coast Undergraduate Math Conference March 13, 2010 (π Day Eve!)

The fifth annual Pacific Coast Undergraduate Math Conference will be held Saturday, March 13, 2010 at Pepperdine University in Malibu. See and hear about the mathematics of movie animation from Tony DeRose of Pixar Studios, learn about graduate study and careers in mathematics, and meet math majors from all over the western United States. For more information, including FREE registration, visit www.pcumc-math.org.

Students' Column, continued from page 12...

Southern California – Nevada Students at the JMM in San Francisco

The Southern California–Nevada Section was well represented by students at the Joint Mathematics Meetings in San Francisco, Jan. 12–15, 2010. Many presented their work in the Student Poster Session there, others gave oral presentations in some of the dozens (hundreds?) of sessions, and yet others took advantage of the meeting's proximity to attend graduate school fairs, panels, networking sessions, and many talks. Four regional students were recognized as having particularly excellent posters (see the list below). All who presented are worthy of congratulations: the facts that your advisor(s) approved your entry and it was accepted to be presented are in themselves accomplishments.

2010 National Student Poster Session Award-Winners from the So Cal-NV Section

- **Evenly Spaced Binomial Coefficients: A Purely Combinatorial Proof**, Bob Chen, Harvey Mudd College
- **Completions of Local Rings and Minimal Prime Ideals**, Rachel Karpman, Scripps College
- **Minimal representations of even permutations as products of cycles of fixed length k** , Josh Maglione, California State University, Fullerton
- **Classical and Virtual Pseudodiagram Theory and New Bounds on Unknotting Numbers**, Jennifer Townsend (with three others), Scripps College

Congratulations to 25- and 50-Year MAA Members!

Congratulations to the following members of the Southern California-Nevada Section who have been MAA members for 50 years!

Daniel D. Carpenter
Murray Gechtman
Robert C. Prim

Margaret A. Raphael
Robert L. Traugher
A. Aristides Yayanos

Congratulations also to the following members of the Southern California-Nevada Section who have been MAA members for 25 years!

Jeffery C. Allen
Klaus L. Buxbaum
James H. Cliborn
Susie W. Hakansson

Charles H. Jones
Hung-Mou Lee
Lee A. Morris

These members will be recognized during the Business Meeting of our upcoming MAA Southern California-Nevada Section Spring Meeting April 10 at Harvey Mudd College.

News from the Campuses of the Southern California–Nevada Section

The University of California - Santa Barbara hosted



noted origamist, mathematician, and UCSB Regent's Lecturer Robert Lang (right) in February of 2010. Lang gave the public lecture, "From Flapping Birds to Space Telescopes: the Modern Science of Origami," and the Mathematics Department Colloquium, "Algorithms in Origami," and visited the UCSB Math Club, the UCSB Math Circle, and the Freshman Seminar, "The Mathematics of Origami" (left).



Cal Poly Pomona is pleased to announce the arrival of new faculty member **Carla Gerberry**, who received her Ph.D. in Mathematics Education from Purdue University in 2009. Carla has been teaching content courses for pre-service teachers for five years and has also taught Algebra and Calculus at the tertiary level. Congratulations to **Berit Givens** and **Amber Rosin** on receiving tenure and promotion to Associate Professor.

CSU Channel Islands will host an NSF-sponsored Research Experience for Undergraduates in 2010: 12–15 undergraduates will work with four faculty mentors (including **Kathryn Leonard** and **Cindy Wyels** of CSUCI), exploring the world of mathematical research in an eight-week residential summer program. An international component features a faculty mentor and students from Mexico. Students should apply by March 19; for information and application instructions, see: <http://faculty.csuci.edu/cynthia.wyels/REU/>

California State University, Los Angeles welcomes back new faculty member **Melisa Hendrata**. Hendrata earned her PhD at UC Santa Barbara in optimization and modeling of biological systems after completing bachelors and masters degrees in mathematics at Cal State LA. Also at Cal State LA, **Gary Brookfield** received tenure and promotion to Associate Professor and **Andrei Verona** changed his status from semi-retired to retired.

At **California State University Northridge**, **Kellie Evans** (PI) and **Silvia Fernandez** (co-PI) have received an award of \$1.5 million from the National Science Foundation to establish the **CSUN NSF Teaching Fellowship Program**. Encourage your seniors and graduates to visit < <http://www.csun.edu/~kme52026/csunsf.html> > for more information.

Bernardo Abrego of CSUN is the new editor of the problems section and an associate editor of the MAA's *Mathematics Magazine*. **Jerrold Gold** (PhD UCLA 1970) retired in

News of the Section, continued from page 14...

December of 2009 after 39 years of service to the mathematics department at CSUN, known as San Fernando Valley State College when he arrived in 1970.

The 2010 REU at **California State University, San Bernardino**, directed by **Rolland Trapp**, will feature projects in geometry and knot theory. Application deadline is March 8; for details, see <http://www.math.csusb.edu/reu/>

The **Claremont Colleges** 2010 REU will focus on Operations Research and Statistics with projects led by **Johanna Hardin** and **Gizem Karaali** of Pomona College, **Mark Huber** of Claremont-McKenna College, and **Susan Martonosi** of Harvey Mudd College. See <http://ccms.claremont.edu/REU> for details. Application deadline was March 1.

The **Claremont Center for the Mathematical Sciences** (CCMS), founded in 2007 by retired Harvey Mudd College mathematics professor **Bob Borelli**, received a grant from the Fletcher Jones Foundation to fund summer research for eight Claremont graduate and undergraduate students.

Harvey Mudd College regrets the passing of long-time mathematics faculty member **Melvin Henriksen** in Oct. 2009 and of former department chair **Michael Moody** in Jan. 2010. A conference honoring Henriksen will be held at the College on Sat., March 27,

and the inaugural lecture in a series honoring Moody will be given on Sun., May 2, by former HMC faculty member **Lesley Ward**. Visit < <http://www.math.hmc.edu> > for details.



HMC's **Art Benjamin** was a guest on Comedy Central's "The Colbert Report" on Jan. 27, 2010, where he did some high-speed mental squaring and shared the beauty

and utility of mathematics with host Stephen Colbert and his audience. Art and his "mathemagics" were featured in a *New York Times* article on Jan. 3, 2010.

Pepperdine University held its third annual Pepperdine Math Day in November of 2009, with 150 high school students from throughout Southern California visiting campus for a written mathematics competition.

News of the Section, continued from page 15...

Bruce Yoshiwara of **Pierce College** received the Teaching Excellence Award at the annual meeting of the American Mathematical Association of Two-Year Colleges (AMATYC) in November 2009. He and his Pierce College colleagues **Kathie Yoder** (1997) and **Kathy Yoshiwara** (2003) are three of only six California recipients of the TE award, which has been given in odd-numbered years since its inauguration in 1997. Bruce is AMATYC West Region Vice-President and (hence) a member of the AMATYC Executive Board.

Point Loma Nazarene University will welcome applied mathematician **Ryan Botts** (right, with his dog, Molly), a new PhD from Ohio University, in August.

The **University of Redlands** welcomes Assistant Professor of Mathematics **Joanna Bieri** and Mathematics Lecturer **Wendy Peske**. Sophomore mathematics and computer science double-major **Caitlin Bonnar** won the mathematics program's first-ever Pi Award, established by the family of recently retired mathematics professor **Allen Killpatrick**. The department mourns the loss of recently retired Senior Lecturer **Portia Cornell**, who died in October of 2009.



Please send news from your institution to janet_beery@redlands.edu

Governor's Report: JMM and Other National MAA News

*Ken Millett, 2007–2010 Section Governor
University of California, Santa Barbara*

Our MAA is a truly complex enterprise, acting within our section and nationally. For example, twenty-five new books were published in 2009. The Joint Mathematics Meetings in San Francisco was a splendid event, highlights of which can be found at http://www.ams.org/amsmtgs/2124_intro.html with photos at <http://www.flickr.com/photos/maaorg/sets/>. Ahead are Math Awareness Month in April, the MathFest in Pittsburgh in August, and the 2011 JMM in New Orleans. It is not too early to begin making plans to participate! California's Robert Lang, internationally renowned origami scientist and artist, will give the second MAA-AMS-SIAM Gerald and Judith Porter Public Lecture at the JMM.

Project NExT has more than 1,000 Fellows, many of whom are our colleagues, and continues to grow. Especially in these fiscally challenging times, I would urge our

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departments to continue to encourage new faculty members to apply. New NSF funding will continue the MAA's Professional Enhancement Program through 2013. It is not too late to apply to the Dolciani Mathematics Enrichment Grant program to support efforts for middle school and high school students. Proposals are due by April 15, 2010: see www.maa.org/dolciani

The MAA has become more active in national science policy arenas, expressing support for increased priority for preparing for STEM careers with an emphasis on underrepresented students and women. It hosted a briefing for Congressional staff and industry stakeholders in coordination with Rep. Ruben Hinojosa (D-TX) on "Undergraduate Mathematics: Promising Recruitment and Retention Strategies to Ensure Diversity in the STEM Pipeline." More information can be found at <http://www.maa.org/sciencepolicy/o20310NSFBudget.html>. Key Congressional members will be visited on March 10-11, 2010.

With a presence on Facebook, Twitter, and Flickr, there are more ways to keep abreast of mathematical news and events. Mathematical blogger and UCSB graduate student Brie Finegold attended the San Diego meeting of the AAAS and created a blog discussing some of the mathematical events: see <http://maa.org/news/021910Finegold.html>. Of special local interest was Andrea Bertozzi's discussion. She and her team at UCLA are developing models to study gang violence: see "Gangs and Statistical Mechanics?" In addition, *Math Horizons* is now available electronically and the *MAA FOCUS* has a new electronic edition. Going green, the MAA now offers memberships providing electronic access to journals in lieu of the traditional print versions. In Spring 2010, electronic memberships will be offered to students. Our section's Tom and Jane Apostol are new members of the Icosahedron Society.

The MAA co-sponsored a seven-member team competing in the 2009 China Girls Math Olympiad last August where they received two bronze, four silver, and a gold medal. The 2009 International Mathematical Olympiad team won four silver and two gold medals.

Next fall, the MAA will conduct an on-line national survey of beginning calculus teachers and students to develop a picture of their demographics and identify and measure the impact of factors that influence student success.

The Board of Governors is working on a revision of the bylaws with the goal of voting on them at MathFest 2010 or JMM 2011. Watch for news of this in the *MAA FOCUS*, Math Alerts, or on the MAA website. The Board was informed that the MAA continues to be fiscally healthy, weathering turbulent economic times because of the financial strength built over time, more proactive planning, and cost-cutting measures. 2010 is budgeted as a break-even year but the world's financial climate will certainly affect the final outcome.

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It has been a great honor and a wonderful experience serving as the section's Governor these last three years ... thank you for this opportunity. I am looking forward to working with our new Governor and our section's continuing efforts to make the MAA Southern California-Nevada Section an even more visible and effective mathematical presence serving teachers, students, and fans of mathematics in our region.

Southern California-Nevada Conference Calendar

Friday-Saturday, March 5-6, 2010: California Mathematics Council Community Colleges (CMC³)-South Spring Conference, Doubletree Hotel, Anaheim
<http://www.cmc3s.org/conferences.shtml>

Saturday, March 6, 2010: UCLA Curtis Center Mathematics and Teaching Conference
<http://www.curtiscenter.math.ucla.edu/continuing.html>

Saturday, March 13, 2010: Pacific Coast Undergraduate Mathematics Conference, Pepperdine University, Malibu
<http://www.pcumc-math.org/>

Friday-Saturday, March 19-20, 2010: Infinite Possibilities Conference, Institute for Pure and Applied Mathematics, UCLA. (Conference includes an optional short course on operations research Thursday, March 18.)
<http://www.ipcmath.org/>

Saturday, March 27, 2010: Mel Henriksen Memorial Conference, Harvey Mudd College, Claremont
<http://www.math.hmc.edu/conferences/henriksen/>

Saturday, April 10, 2010: Mathematical Association of America Southern California-Nevada Section Spring Meeting, Harvey Mudd College, Claremont. See this newsletter and/or <http://sections.maa.org/socalnv/> for more information.

April 21-24, 2010: National Council of Teachers of Mathematics (NCTM) Annual Meeting and Exposition, San Diego
<http://www.nctm.org/conferences/content.aspx?id=23209>

Sunday, May 2, 2010, 4:30 p.m. (tentative date and time): Inaugural Lecture in Michael Moody Mathematics Lecture Series by Lesley Ward, University of South Australia, Harvey Mudd College, Claremont
<http://www.math.hmc.edu>

Saturday, Oct. 16, 2010, Mathematical Association of America Southern California-Nevada Section Fall Meeting, UC Irvine

Save these dates for future MAA national meetings!

Summer 2010	Pittsburgh, PA	August 5-7
Winter 2011	New Orleans, LA	January 5-8
Summer 2011	Lexington, KY	August 4-6
Winter 2012	Boston, MA	January 4-7
Summer 2012	Madison, WI	August 2-4
Winter 2013	San Diego, CA	January 9-12
Winter 2014	Baltimore, MD	January 15-18
Winter 2015	San Antonio, TX	January 9-12
Summer 2015	Washington, DC	August 5-8
Winter 2016	Seattle, WA	January 6-9
Winter 2017	Atlanta, GA	January 4-7