

Chapter News

The Newsletter for Advisors of Student Chapters of the MAA

San Jose Downtown



Students and faculty alike gathered in San Jose, CA for Math Fest in early August 2007. The student activities began with an undergraduate student reception on Thursday afternoon. Student events continued with the MAA and PME student presentations on Friday and Saturday. Other highlights included the MAA Activity for Undergraduate Students, by Eve Torrence of Randolph Macon College, and the MAA Lecture for Undergraduate Students by Francis Su of Harvey Mudd College. Friday evening four teams competed in Math Jeopardy, and Saturday evening the student events were capped off by

the Ice Cream Social and MAA Awards for undergraduate student presenters. See inside for more information on all of these events.

The 2008 Joint Mathematics Meetings will be held in San Diego, CA January 6 - 9, 2008. There are many exciting student activities and sessions being planned for the JMM. For more details, see the list to the right and articles inside the newsletter.



January 6

11:10 am - noon
TERRENCE TAO,
UCLA

“Structure and Randomness in the prime numbers”

January 6 2:15 - 3:05 pm

JOHN CONWAY, PRINCETON UNIV.

“Three Dimensional Crystallographic Groups: The Thirty-five Prime Space Groups”

January 6 3:20 - 4:10 pm

PAUL H. EDELMAN, VANDERBILT UNIV.

“Mathematics and the Law: The Apportionment of the House of Representatives”

January 7 9 - 9:50 am

KAREN PARSHALL, UVA

“4000 Years of Algebra: An Historical Tour from BM 13901 to Moderne Algebra”

January 8 9 - 9:50 am

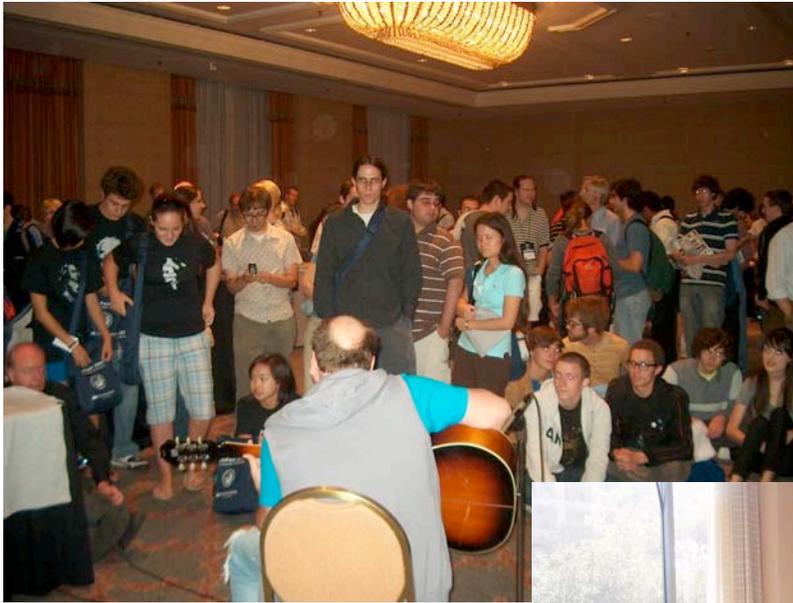
CARL POMERANCE,
DARTMOUTH COLLEGE

“The Covering Congruences of Paul Erdos”

January 8 1 - 1:50 pm

BRIAN J. CONREY, AIM
MAA LECTURE FOR STUDENTS

“The Riemann Hypothesis”



Left: *Ice Cream Social*
Photo by Betty Mayfield,
Hood College

Below: *Youngstown State Students*
Photo by Doug Faires,
Youngstown State University

Below: *Sam Houston State Students*
Photo by Doug Faires,
Youngstown State University



UNDERGRADUATE STUDENT RECEPTION IN SAN JOSE

As usual, the very first event of Math Fest, even before the Opening Reception and Banquet, was the reception for undergraduate students sponsored by CUSAC and Pi Mu Epsilon. A record number of students attended Math Fest this year (almost 250 were pre-registered, easily beating the old record of 162), and most of them attended the reception on Thursday evening in a lovely ballroom of the Fairmont Hotel. Everyone was welcomed to the conference by representatives of the two organizations and received program booklets containing abstracts and a schedule of the many student talks at Math Fest. There were plenty of refreshing drinks and snacks, and the noise level had a positive derivative, as students quickly made new friends. This event continues to be a fun, instructive way to begin Math Fest, and to welcome undergraduate students, their friends, and advisors.



Photo by Doug Faires, Youngstown State University

SPLITTING THE RENT

FAIRNESS PROBLEMS, FIXED POINTS, AND FRAGMENTED POLYTOPES

By Betty Mayfield, Hood College

“How do you divide the rent among roommates fairly?” That was the question posed by Prof. Francis Su of Harvey Mudd College at Math Fest 2007 in San Jose, in the MAA Lecture for Students. Prof. Su kept a packed auditorium engaged and entertained for an hour, as he explained how Sperner’s Lemma, Brouwer’s Fixed Point Theorem, cake-cutting, and walking through doors can all help to answer that question. His talk was interspersed with video clips from *NUMB3RS* and *The Simpsons*, and he did some walking himself, as he wandered the aisles of the room, eliciting audience responses. Students reported that they found the talk very interesting and accessible.

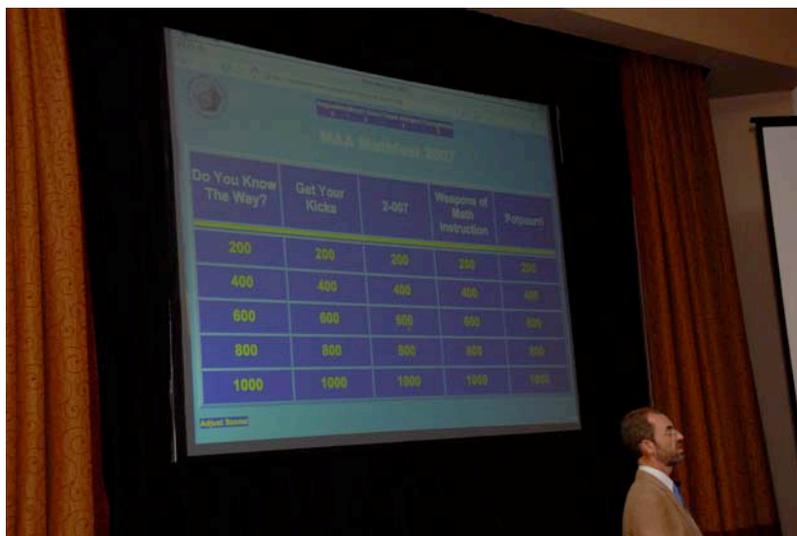
Francis Edward Su is a graduate of the University of Texas and Harvard University and has taught at Harvey Mudd for ten years. He was a 2004 Alder Award winner, as an outstanding young mathematics faculty member, and he delivered the James R.C. Leitzel Lecture at last year’s Math Fest. His article on rent-splitting, “Rental Harmony: Sperner’s Lemma in Fair

Division,” appeared in the American Mathematical Monthly in 1999 and was awarded a Merten M. Hasse prize for exposition.



The MAA Lecture for Students, organized by the Committee on Undergraduate Student Activities and Chapters, is an expository

lecture aimed at undergraduate students. There has been a Lecture for Students at both the winter and summer MAA meetings since 1991, featuring some of the best-known mathematicians in the country. It has become one of the most popular events of the national meetings, drawing faculty members and others as well as students.



MATH JEOPARDY

Photos by Robert Smith, Miami University



AN INTERVIEW WITH ROBERT SCHNEIDER

By Linda Braddy, East Central University



Robert Schneider, founding member of the band *Apples in Stereo*, attended Math Fest this year

and was interviewed by MAA President Joe Gallian. The band was founded in 1992 and has cut a total of six albums. Schneider describes himself as a professional musician with a passion for math. He first became interested in music after his mom bought him a synthesizer and boom box when he was in the sixth grade. The following year, she bought him an electric guitar and the rest is history! He first became interested in mathematics when the repair of a piece of musical equipment required him to decipher schematic drawings and the equation $V=IR$ (voltage = current flow times resistance). He said, "It blew my mind that this is real; I know real appli-

cations!" He admitted to having failed his first year of algebra in high school but following his encounter with the voltage equation, he taught himself algebra and has continued to learn more and more mathematics since that time.

When asked to describe the similarities in creating music and



in creating mathematics, Schneider explained that in both cases, "You perceive it as something fuzzy out there in space, you

feel it's there, and you just have to find your way, clarify it; you don't know what it's going to be." His

response to the question, "If you could spend an evening with any musician, who would it be?" was, "George Martin,

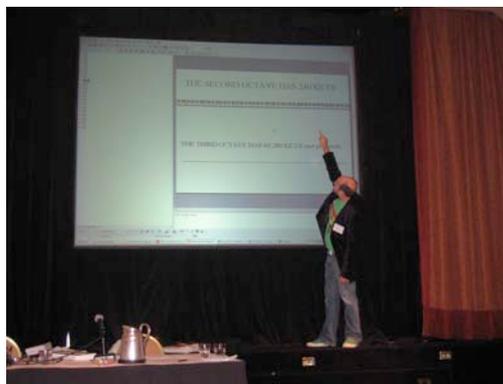
producer of the Beatles." Even though Brian Wilson, lead singer for the Beach Boys, is his hero, Schneider has actually met Wilson before and said he would like to

get some tips from Martin and hear his thoughts on music theory.

When asked a similar question about spending an evening with any mathematician, Schneider said, "Euler." Descartes would be his second choice, but he said he would be afraid Descartes "might pull a sword" on him.

During the presentation, Schneider showed a video he made with Elijah Wood (of *Lord of the Rings*). The video was Wood's directing debut; Schneider claimed that Wood is "obsessed with music like I'm obsessed with math."

Schneider also discussed a music scale, based on log base 2, with which he has been experimenting. He explained that the typical music scale, called a chromatic scale, is a 12-tone scale in which the oc-

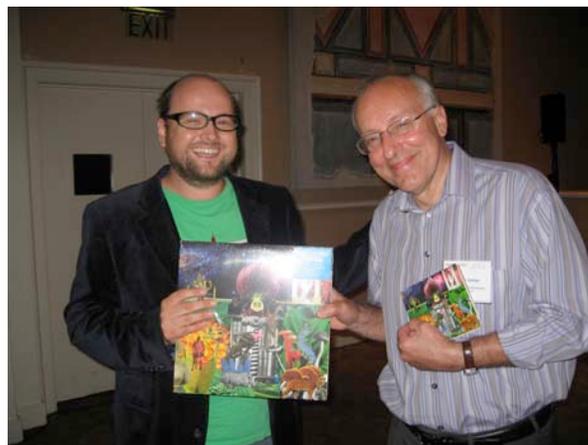


tave (all pitches that lie between a pitch and the pitch that is twice its frequency) is divided into 12 approximately equal intervals between suc-

cessive tones. So the notes of the scale are the same distance apart. His "logarithmic scale" is a musical scale in which the intervals between successive tones decrease as

the differences between the logarithms of successive integers. In other words, the notes of the scale get closer together as you move up the scale. He said that what is really cool about the scale is that the first octave of a keyboard would have 12 keys ($\ln 4$ to $\ln 16$), the second octave would have 240 keys, the third octave would have 65,280 keys, and so on. Interestingly, the chromatic scale (the 12-tone scale) was first defined by Pythagoras as a series of whole number ratios while Schneider's logarithmic scale is a series of logarithms of whole number ratios. According to Schneider, mu-

sic played in his logarithmic scale "sounds like alien music, odd, a little out of tune, because you aren't used to it. Listening to the log scale is like hearing your mother talk but she is speaking with a man's voice - it's weird!"



At the conclusion of the interview, Gallian quoted *Wikipedia's* description of Schneider's music as "bright and catchy."

STUDENT PROBLEM SOLVING COMPETITION

By Richard Neal, American Society for the Communication of Mathematics



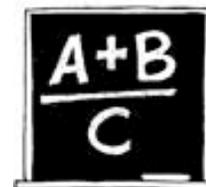
Twenty-six students competed in the U.S. National Collegiate Mathematics Championship during Math Fest in San Jose. Students at colleges and universities across the country qualify by competing in the local Problem Solving Competition overseen by Dr. Richard Neal and Editor Raymond Greenwell. This year the first six place winners were as follows:
National Champion: Ted Spaide, a sophomore at Harvey Mudd College.

- National runner-up: Carlos Gamez, a junior at University of Utah.
 - Third: Bryan Wilson, a junior at the University of Idaho.
 - Fourth: Aaron Goldsmith, a senior at the University of Missouri - Rolla.
 - Fifth: Ben Preskill, a junior at Harvey Mudd College.
- There was a three way tie for sixth place: Cuong Dong, San Jose State University; Son Ho, Williams College; and Ryan Causey, Mississippi State University.

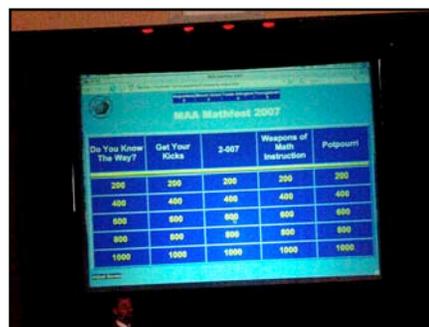
Winners received beautiful plaques. All competitors received medallions and t-shirts. The mathematics departments at the winners' campuses will also receive beautiful plaques. The students solved problems from a variety of areas of undergraduate mathemat-

ics including geometry, combinatorics, linear algebra, calculus and more during the competition. This is the tenth year for the national title competition that is held each year at Math Fest.

To participate in the Problem Solving Competition and to qualify a student for the National Championship, contact Dr. Richard Neal, 1-800-229-1725, or write to Box 60434, Oklahoma City, OK 73146, or email rneal@ou.edu.



ANSWER: A FUN UNDERGRAD. MATHEMATICS CONTEST HELD AT MATH FEST 2007



QUESTION: WHAT WAS MATHEMATICS JEOPARDY?

By John Harris, Furman University



Top: The Jeopardy categories

Bottom: Augustana College team.

Four teams of students participated in a Mathematics Jeop-

ardy demonstration at a Friday evening session of Math Fest 2007. The MAA and Pi Mu Epsilon fielded teams from the University of Texas at Arlington, Youngstown State University, Mount Union College and Augustana College. Participants treated a room full of spectators to an entertaining and challenging round of answers and questions. Topics covered included calculus, discrete mathematics, differential equations, linear algebra and mathematical miscellanea.

The contest, emceed by Mike Berry of the University of Tennessee and organized by Mike Mossinghoff of Davidson College and John Harris of Furman University, was a demonstration of an event that has become a regular part of annual meetings of the MAA's Southeastern Section. It

has been a great way to involve undergraduates in the sectional meetings.

Over the past several years more than 30 schools in the Southeastern Section have participated, and for each of the past four years 64 students have attended the meeting as Jeopardy participants.

As the spectators saw at Math Fest, the contest is challenging and the students are up to the task! If you would like more information on how you might create a similar contest for your student chapter or for your sectional meeting, feel free to contact Mike Mossinghoff (mimossinghoff@davidson.edu) or John Harris (john.harris@furman.edu).

ORIGAMI, POLYHEDRA, AND MATHEMATICS



By Betty Mayfield, Hood College

The Club Regent of San Jose's Fairmont Hotel bustled with lively chatter and lots of paper-folding on Saturday afternoon, as Prof. Eve Torrence of Randolph-Macon College led the MAA Undergraduate Student Activity. More than one hundred students crammed the room, sitting at tables and in chairs in the upper levels of the room, folding colorful origami paper into dodecahedrons, in this decidedly hands-on workshop. Prof. Torrence showed the participants how to make Thomas Hull's basic pentagon-hexagon PHiZZ units, and then how to use a Hamiltonian path on an appropriate graph to figure out how to put the units together to form a polyhedron. Students proudly carried their dodecahedrons around Math Fest with them, and many were spotted making more of them during their plane rides home.

Prof. Torrence holds degrees from Tufts University and the University of Virginia; she has taught at Randolph-Macon College since 1994. She has just completed a term as Chair of the Maryland-DC-Virginia Section of the MAA, and she serves on the Pi Mu Epsilon national council. Earlier in the day, she was presented with a Trevor Evans Award for her article with colleague Adrian Rice, "Lewis Carroll's Condensation Method for Evaluating Determinants," which appeared in *Math Horizons* in November 2006.

The Undergraduate Student Activity (formerly known as the Undergraduate Student Workshop) has been an interactive, hands-on feature of Math Fest since 1991.



SIGHTS FROM MATH FEST

Photos by Robert Smith,
Miami University



MATH FEST STUDENT PAPER PRESENTATIONS

By Ed Keppelmann, University of Nevada - Reno

Try asking your favorite math professor what he or she did when they were undergraduates. How did they pursue their interest in mathematics - how did they distinguish themselves from their class mates? If they were like me then maybe a few of the starred problems at the end of the chapter or maybe a little time trying to think about one of the great unsolved problems of the day. Even the chance to just understand such problems was an honor that made us all feel a special closeness to our pursuit of mathematics. Of course graduate school would be different but as undergraduates, for most of us any association with research was the farthest thing from our minds.

NOW! - flash forward to Math Fest 2007. With 162 student presenters in both the MAA and PME talks, it was an unprecedented display of undergraduate research



accomplishments. I wish I had time and space to tell you about all these great talks, everything from calculating football win probabilities, parameterizing caterpillars, and feminist mathematicians in the time of Euler to the analysis of great games like rithmomachia, whym, and tic tac toe in higher dimensions, there was certainly math of every size taste and shape. We can at least share with you the winners - Kudos to all the advisors and their students!

MAA Winners

Rachel Bayless and Katelyn Chabot of Wheaton College

Statistical Analyses of Long Range Weather Trends

As part of a project based course at Wheaton College (Norton, MA), a team of four students worked on a forecasting project from the National Weather Service. The goal was to better understand and to develop a model for long range weather trends in New England based on four oceanic and atmospheric indices. In this talk, we introduce the problem, discuss the accompanying data and present graphical and regression analyses used to address questions of interest.

Christina Gillen of Augustana College

Equally Related Genealogy Graphs

We consider the situation where a number of couples each have two children, a boy and a girl, and where after several generations each of the descendants is equally related to each of the original ancestors. We show that there are constraints on the pattern of marriages within each generation.

Joy Holowicki of Benedictine University

Impulsive Two-Prey, One-Predator Model Dynamics

We discuss variations of two-prey, one-predator models with impulsive behavior. We discuss the dynamics of these models and describe when these models are permanent.

Katrina Honigs of Grinnell College and
Vincent Martinez of The College of New Jersey

The Geometry of the Hausdorff Metric

The Hausdorff metric provides a measure of distance between compact sets in any compact metric space. The metric is important for its applications in image matching, visual recognition by robots and computer aided surgery and is also important in Fractal geometry. In this presentation, Vincent Martinez and Katrina Honigs will provide essential background information on this metric and share results from their investigation at the Grand Valley State University REU into the geometry the metric imposes on certain spaces.

Hanna Komlos of Rutgers
University

**Dynamics of the Dual
Billiard Map**

This work was done at the Grand Valley State University 2007 REU by Daniel Gorski and Hanna Komlos under the supervision of Professor Filiz Dogru. We studied the dual billiard map in the Euclidean and hyperbolic planes. In particular, we concentrated on regular polygonal tables which tile these planes. In the hyperbolic plane, we used the Klein bottle to explore the extension of the dual billiard map at infinity as a circle map.

Sean MacRae of Sonoma State University

An Introduction Into Partition Theory

Given an integer, how many representations of it as a sum of other integers exist? What at first appears a relatively easy combinatorics problem soon becomes quite difficult. In this exposition I will briefly discuss the very fascinating history surrounding the problem and also some problem solving techniques in determining the number of partitions of an integer.

Megan Sawyer of the University of Colorado Denver

Constructible Numbers

Throughout history, different types of tools have been utilized to define classes of constructible numbers. From the classical restrictions of straight edge and compass to modern integraph machinery, this paper investigates the correlation between the sets of numbers that can be constructed with each set of tools. Special attention is paid to the strengths and limitations of the marked straight edge.

Mary Wootters of Swarthmore College

Alpha Regular Stick Knots



Stick Knots, knotted embeddings of polygons in \mathbf{R}^3 , have recently been useful in chemistry as models for certain macro-molecules. We examine the stick number, and in particular the alpha-regular stick number, and we answer some questions about these knot invariants.

Morgan Prize

Max Engelstein of Yale University

Isoperimetric Inequalities

What is the least perimeter way to partition the sphere into a small number n of equal areas? For $n=2$, the answer is an equator. The solution is also known for $n=3$ and $n=12$. We discuss progress on the case $n=4$. Work of Conor Quinn and the 2007 SMALL Geometry Group.

SIAM Winner

Jessica Lin of New York University

Managing Infinite-Dimensions by Induced Dynamics

In 2003, Ott and Yorke explored the idea of using induced dynamics to deduce properties of complex dynamical systems on finite-dimensional Euclidean spaces. We extend the work of Ott and Yorke by studying complex dynamical systems in the infinite-dimensional setting, with an emphasis on Hilbert and Banach spaces. In the spirit of Ott and Yorke, we formulate platonic theorems that allow us to

compute invariants of the full system from the induced dynamics. We aim to apply our results to flows on function spaces that are generated by the partial differential equations of fluid mechanics.



Joshua Kelly and Jason Miller of Truman State University

Vocal Identification of Free-flying Bats

Measurements from echolocation recordings of seven species of bats were used to construct algorithms for identifying bats to species. Resulting classification rates compared well to those in the scientific literature. Not found in the literature are reports on the reliability of similar models and their susceptibility to biotic and abiotic variations in data. We show that classification trees are somewhat sensitive to such variation and that discriminant analysis models are more robust. We discuss the appropriateness of these models for determining species richness as well as the implications of using such models for conservation efforts of endangered species.

CUR Award

Anarghya Vardhana of Stanford University

Jacobi Symbols for Mersenne Numbers

If p is an odd integer greater than 1, and the sequence $s(1), s(2), \dots$ is defined by $s(1)=4, s(i+1)=s(i)^2-2$, then the number 2^p-1 is a prime number if and only if $s(p)-1$ is congruent to 0 modulo 2^p-1 . This is known as the Lucas-Lehmer primality test for Mersenne primes. Studying the problem of constructing universal starting values led to a property of Jacobi symbols that could be used to compute the Jacobi symbol of a pair of Mersenne numbers. In this paper, we prove this new theorem of Jacobi symbols for Mersenne numbers and extend the investigation by generating new starting values for the Lucas-Lehmer primality test.

Environmental SIG Awards

Gregory Shinault of California State University Bakersfield

Modeling of Fuel Consumption

Conventional approaches to the problem of finding an energy flight (a flight path minimizing the fuel consumption of an aircraft) raise huge mathematical and numerical challenges which involve a complex system of differential equations. A new approach to the problem is attempted. The theory of calculus of variations was tested in solving the problem of modeling the flight path of an aircraft that minimizes fuel consumption. The approach yields a boundary value problem (BVP) for a system of ordinary differential equations (ODE) called the Euler-Lagrange equations. The numerical result matches physical intuition and general characteristics of commercial air flight.

Chelsea Sprankle, Hood College
Photo by Betty Mayfield, Hood College



THE FIRST ANNUAL MAA ICE CREAM SOCIAL AND STUDENT AWARDS CEREMONY

By Lyn Miller, Slippery Rock University

The *MAA Celebration: 20 Years of Student Papers*, a.k.a., “The Ice Cream Social,” was a resounding success. What a fitting way to cap off two days of exciting and impressive undergraduate activity!

Held at 9 pm on the second night of the meeting, right after the J. Sutherland Frame Lecture, this event may likely become a new tradition in how we recognize MAA student achievement and participation at Math Fest. The room was packed with student presenters, attendees, advisors, and friends, all enjoying some great *Dove* ice cream bars and a chance to congratulate each other on various aspects of the program.

In all, there were 73 MAA student talks and 84 presenters (that’s a record number of presenters, I believe!). The winners of the various prizes are as follows:

Anarghya Vardhana of Stanford University received the coveted CUR (Committee on Undergraduate Research) Award for her presentation of original research in “Jacobi Symbols for Mersenne Numbers.”

Jessica Lin of New York University received the SIAM (Society for Industrial and Applied Mathematics) Award for her presentation of applied work in “Managing Infinite-Dimensions by Induced Dynamics.”

Joshua Kelly of Truman State University earned an EM-SIGMAA (Environmental Mathematics Special interest Group of the MAA) for his project “Vocal Identification of Free-flying Bats,” as did **Gregory Shinault** of California State University Bakersfield for “Modeling of Fuel Consumption.”

The Morgan Prize went to **Max Engelstein** of Yale University for “Isoperimetric Inequalities.”

Eight MAA “best-in-session” prizes went to:

Rachel Bayless and **Katelyn Chabot** of Wheaton College for “Statistical Analyses of Long Range Weather Trends”

Christina Gillen of Augustana College for “Equally Related Genealogy Graphs”

Joy Holowicki of Benedictine University for “Impulsive Two-Prey, One-Predator Model Dynamics”

Katrina Honigs of Grinnell College and Vincent Martinez of The College of New Jersey for “The Geometry of the Hausdorff Metric”

Hanna Komlos of Rutgers University for “Dynamics of the Dual Billiard Map”

Sean MacRae of Sonoma State University for “An Introduction Into Partition Theory”

Megan Sawyer of the University of Colorado Denver for “Constructible Numbers”

And **Mary Wootters** of Swarthmore College for “Alpha Regular Stick Knots”

Congratulations to all!

Of course, the awards aren’t possible without the selfless help of volunteer judges. This year’s folks who gave up some of their own Math Fest time to help with selections were: Randall Helmstutler, Kumer P. Das, Russell Goodman, Christopher Swanson, Daniel Birmajer, Steven Schlicker, Linda Braddy, Jeff Johannes, Ryan Gantner, John Hamman, Weiqing Xie, Ron Barnes, Peter Stanek, Douglas Faires, Sarah Ann Stewart and Mary Hawkins. Thanks so much to you all!

We concluded with some great entertainment provided by the ever-enthusiastic Robert Schneider, who also received an honorary “student speaker” t-shirt to cap off his meeting experience.

Events at the 2008 JMM held January 6 - 9

COME TO THE JOINT MEETINGS!

SPECIAL EVENTS PLANNED FOR STUDENTS AND ADVISORS ON OPENING DAY

Be sure to arrive in San Diego in time for these special events on **Sunday, January 6th**:

3:00 – 4:00: A special program for all faculty advisors -- of MAA Student Chapters and of all other student mathematics clubs and organizations. Hear the recommendations of the Strategic Planning Group on Students. Meet the new Associate Director for Student Activities. Get an overview of new programs and services in the works for students and their advisors.

4:00 – 5:00: Reception for Undergraduate Students and Math Club Advisors. All are welcome at our traditional reception, where you can mingle and swap ideas and news while you munch on delicious refreshments. Please bring your students and then stay for the...

5:00 – 6:00: *Panel discussion: Help for Undergraduates: Negotiating the Joint Meetings.* How do you make sense of a 200-page program book? What are MAA, AMS, AWM, SIAM, ASL, and NAM? What is the difference between a contributed talk and an invited talk? How can you tell which of those might be accessible to undergraduates? If you go to a talk and don't understand it, can you leave? Which social events are you allowed to attend? What's up with the exhibits? This informal panel will help undergraduate students find their way through the Joint Mathematics Meetings and make this a successful experience for them.

UNDERGRADUATE POSTER SESSION

By Diana Thomas, Montclair State University

The CUPM Undergraduate Student Poster Session will be held on **Tuesday, January 8, 2008 3:00-5:20 pm** at the Joint Meetings in San Diego. Poster set-up begins at 1:30 and judging will be held from 2:00-3:00. Students should submit their abstracts online at <http://www.maa.org/students/undergrad/postero8.html>. The deadline for submissions is November 3, 2007. If you have any questions please feel free to contact Diana Thomas at thomasdia@mail.montclair.edu.

MAA LECTURE FOR STUDENTS: J. BRIAN CONREY

“THE RIEMANN HYPOTHESIS”

We are delighted that this year's Lecture for Students will be given by Brian Conrey, Executive Director of the American Institute of Mathematics in Palo Alto, California, on the subject of the Riemann Hypothesis. Dr. Conrey says, “The Riemann Hypothesis is regarded as the most important problem in all of mathematics. It is the only problem to be on David Hilbert's list of 23 problems for twentieth century mathematicians to work on and also on the list of millennium problems for twenty-first century mathematicians to work on. Unfortunately, we still haven't got a clue how to do it!”

Holding a PhD from the University of Michigan, Conrey has served on the faculties of the University of Illinois and Oklahoma State University, and has been a member of the Institute for Advanced Study. He serves as an editor of the *Journal of Number Theory* and is also active in several outreach programs for high school students interested in mathematics.

Dr. Conrey is well-known as an engaging expositor, one who can make this esoteric subject accessible, interesting, and alive. Join us on Tuesday afternoon at 1:00 for this exciting lecture!

2008 JMM SESSIONS OF INTEREST TO STUDENTS

By Jim Tattersall, Providence College

Mathematics and Hollywood: A Conversation with Mathematical Hollywood Writers and Mathematics Faculty, Sunday, 2:15 p.m. - 3:35 p.m., Christopher Goff, University of the Pacific, and Sarah J Greenwald, Appalachian State University.

Recently, Hollywood has expanded its use of mathematical themes. A parallel trend involves linking these “mathematical moments” to educational initiatives. Our panel will furnish insiders’ perspectives on the effect of mathematical training on the creative process and the challenges of representing mathematics and mathematicians in Hollywood. We will also begin a critical discussion about how Hollywood affects mathematics education and public perceptions. As schedules allow, planned panel members include mathematical writers as well as mathematical consultants: David Bressoud, at Macalester College, is a *NUMB3RS* worksheet author; Ken Keeler has a doctorate in applied mathematics and has won Writer’s Guild and Emmy Awards for his work on *The Simpsons* and *Futurama*; Alice Silverberg, at the University of California at Irvine, has consulted for film and television; Eric Weisstein, at Wolfram Research, consults for *NUMB3RS*; and Jeff Westbrook has a doctorate in computer science and is currently a writer for *The Simpsons*. The panel is sponsored by SIGMAA on Mathematics and the Arts.

The Proof is in the Pudding: Humorous Theater of the Mathematical Variety, Monday, 6:00 p.m. - 7:30 p.m., Colin Adams et al, Williams College, with several short theatrical pieces, *A Difficult Delivery*, *Trial and Error*, and *A Killer Theorem*, we will attempt a proof of the following proposition: Theorem. Math can be funny.

Hard Problems, Tuesday, 6:00 p.m. - 7:30 p.m., George Csicsery, Zala Films

The world premiere of a 90 minute documentary about the USA team’s participation in the 2006 International Mathematical Olympiad in Slovenia. A question and answer session with Csicsery and a food and beverage reception will follow the film. Other films by Csicsery are *N is a Number: A Portrait of Paul Erdos*, *porridge pulleys and Pi*, and *Invitation to Discover*.

Dancing Mathematics and the Mathematics of Dance, Sarah-Marie Belcastro, Smith College

Karl Schaffer, DeAnza College, Tuesday 6:45 p.m. - 7:45 p.m.

This session will be a lecture/demonstration/performance that will consist of brief introductions of our mathematical and dance backgrounds, descriptions of the connections we see between mathematics and dance, and video clips of our separate choreography and giving explanations of how these exhibit mathematics in dance, and performance of three very short mathematical dances we have created together (including at least one proof!)

So You Want to Teach Environmental Math, Do You? A skit portraying the efforts to implement an environmental mathematics course at a mathematics department meeting. Tuesday, January 8, 7:00 p.m. - 8:00 p.m.

Texts are appearing which attempt to teach mathematics in an environmental context, using mathematics to understand some of the most important problems facing us today--and hopefully contributing to solutions. In this one-act skit, pros and cons of introducing an “Environmental Math” class are presented in a humorous fashion at a meeting of the mathematics faculty at Bogus U, revealing personalities that most of us will recognize. The skit is authored by Marty Walter, University of Colorado at Boulder, directed by Pat Ken-schaft, Bloomfield College, and sponsored by the Environmental Mathematics SIGMAA.

MAA Video Contest

THE RULES

A team should consist of at most 3 undergraduate students.

Videos must be a minimum of 45 seconds long and must not exceed 5 minutes.

The entrants and all persons appearing in the video must be 18 years of age or older and have given consent to appear. Consent forms can be found online.

Videos must not contain any copyrighted material (including background music).

Videos must be the entrant's original creation.

Videos cannot contain any profanity, offensive language, or otherwise objectionable content, as deemed by the MAA.

Videos must not be for commercial purposes.

Videos must be in the English language.

No more than three (3) entries per school.

Deadline for submission: 12:00 midnight, December 10th, 2007

Have you seen the Klein Four Group singing *Finite Simple Group (of Order Two)* and thought, "That looks like fun"? Have you searched "mathematics" on YouTube and seen all the cool stuff out there? Well, now it's your turn. The MAA wants you to put your mathematical ideas into a short video. In short, we want content for MathTube.

This is the fun side of math. Put together a team and show your creative side in a short video. You can sing calculus carols, QuickTime you and your friends creating a mathematical snow sculpture, or introduce an upper-level topic in a new and unique way.



"Whirled White Web" (see <http://stanwagon.com>) Photo by Stan Wagon

A panel of judges from the MAA will decide the best videos. The winning video will be posted on the MAA website (www.maa.org) for viewing. In addition, the best videos will be shown at the MAA booths for both the Joint Math Meetings and MathFest.

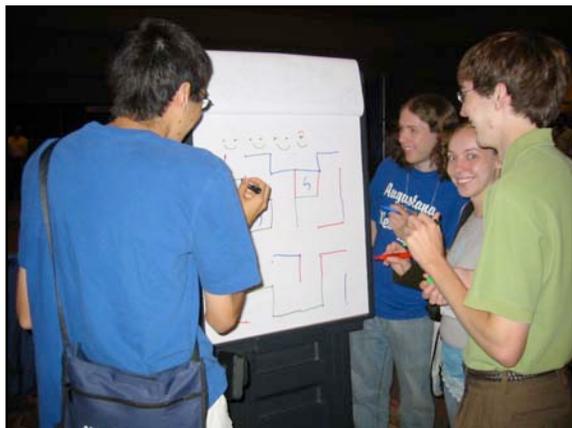
Each member of the creative team of the winning video will receive \$100, complimentary registration for the Joint Meetings in San Diego, and a collection of MAA products (flying disc, deck of cards, travel mug, and stress-relieving icosahedron). The next 3 runners up will receive the pack of MAA products for each member of the creative team and a \$25 gift certificate for MAA products.

Go to www.maa.org, the MAA website, to learn more about how to enter this contest, including how to submit your video.



STUDENT HOSPITALITY CENTER

By Richard Neal, American Society for the Communication of Mathematics



The Student Hospitality Center is sponsored by the MAA. It is a place where a variety of activities occur - students can relax, meet other students, pick up packets for

Hospitality Center held informal meetings, worked on mathematical puzzles, examined copies of Math Horizons, examined an Leonard Euler exhibit and more.

talks, and enjoy light refreshments during the meeting. The Student Hospitality Center is organized for both the Joint Mathematics Meetings and for Math Fest. This is the 17th year of its existence.

This year hundreds of visitors to the Student

Pictured is a group of students playing the game *Dots and Lines* on one of the flip charts made available to students.

This year two afternoon poster sessions were also held in the Student Hospitality Center. One was for undergraduate students and one for undergraduate students. Both poster sessions successfully attracted large crowds. The Student Hospitality Center is created and sponsored with undergraduate students in mind but everyone is welcome there. Dr. Richard Neal and his wife Araceli organize the center at both meetings.

HOW TO REACH THE MAA

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