

# SSU M★A★T★H Major

## From the Chair

Ben Ford

Greetings from the Mathematics and Statistics Department! It's been an exciting year here, so we're happy to send you this newsletter to keep you up-to-date on what's happening here. We'd love to have you come by for a visit!



- Our new statistics degrees were officially approved by the CSU Chancellor's Office in September.
- We graduated an outstanding class of 2009, including our first three graduates of the new B.S. in Statistics.
- Our newest faculty member, statistician Scott Nickleach, joined the Department in the fall and hit the ground running with our statistics group. One of Scott's foci is the development of an actuarial science program for our students; he's been busily working with the School of Business and Economics to jointly develop that track.
- We had a great Math Festival on April 29, with a fascinating talk on *Mathematics, Energy, and Climate Change* by Dr. Juan Meza of Lawrence Berkeley National Laboratory, and a great awards dinner afterwards. This is our annual chance to welcome back alumni to help honor our current students; watch your

mail this Winter for an invitation to next April's MathFest!

- The Department nominated, and SSU's president appointed, Dr. Sam Brannen to be the Department's next Chairperson, beginning in August. Congratulations, Sam!

As you undoubtedly know, the California state budget is a disaster. The potential impacts to the CSU are huge – the equivalent of closing two large campuses (like Northridge and San Jose). We don't know exactly what the local consequences will be, but they will almost certainly be severe. Please speak out on the importance of the CSU – and SSU – whenever you get a chance.

We always love to hear from you. Stop by the Department's web page sometime to leave alumni notes, or drop us an email to let us know what you're up to.



## New Statistics Degrees

Dr. Susan Herring

In addition to our wonderful math degrees, students can now choose either a B.A. or B.S. in Statistics. The new B.S in Statistics is intended to prepare students for graduate school and careers in statistics, while the new B.A. in Applied Statistics is intended as a second major for students preparing for careers and graduate programs which use statistics, such as psychology, economics and biology. We have also developed a new statistics minor, which has wide appeal to students across many disciplines. Our new degrees were approved by all the appropriate entities on campus and finally approved by the Chancellor's office in September 2008. In May 2009, the first three students graduated with the new B.S in Statistics. We wish them all good luck in their careers and graduate school.

The new Stats Club has joined the Math Club in sponsoring events, selling t-shirts and mugs as fundraisers, and making plans for next year.

## News Tidbits

**Prof. Jean Bee Chan** attended the 2009 AMS/MAA Joint meetings with a group of research students, and attended the 2009 MAA Section meeting at MSRI as part of the volunteer MAA book sale staff. She continues to serve on the SSU Academic Foundation Board and the national MAA Committee on Student Activities and Chapters, and to administer the MAA Diversity Initiative for students. At present, she is writing a paper on convex arcs with 2008 grad **Chad Griffith** and conducting research on art gallery theory with Professor Emeritus **Norm Feldman**.

**Rick Luttmann** and **Jean Bee Chan** both received their 35-year service awards – very nice chairs – from SSU this Spring.

**Ben Ford**, **Sam Brannen**, and **Edie Mendez** were all promoted from Associate Professor to Professor in August, 2008.

**Jerry Morris** and **Izabela Kanaana** have been awarded tenure effective summer 2009.

**Sam Brannen** continues to serve as the coordinator for SSU's Louis Stokes Alliance for Minority Participation program. He has worked with several other SSU faculty members to launch



SSU's first Statistics graduates with some of the Statistics faculty at the graduation party. Left to right: Prof. David Neal, Prof. Elaine Newman, Stephen Kadow, Prof. Susan Herring, Kristen Rolan, Amanda Frazier, Prof Cora Neal

SSU's MESA (Mathematics Engineering Science Achievement) program this year.

**Anna Brown**, a graduate of our cooperative MA program with San Francisco State and an SSU lecturer for several years, has recently been appointed to a permanent faculty position at Santa Rosa Junior College. We'll miss her in the Department, but congratulations to Anna! At SRJC, she'll join several other SSU alumni on the faculty.

**Dean Gooch**, who was SSU's last MA recipient in Mathematics, is the new Chair of the Mathematics Department at SRJC. When Sam Brannen becomes Chair of our Department, both postsecondary Mathematics Departments in Sonoma County will be chaired by SSU mathematics majors for the first time!

**Ben Ford's** paper *Self-conjugate simultaneous  $p$ - and  $q$ -core partitions and blocks of  $A_n$*  (with Hoàng Mai and Lawrence Sze of Cal Poly San Luis Obispo) appeared in the Journal of Number Theory in the Winter of 2009.

**Chad Griffith** (Dec. 2008 graduate) became a McNair scholar and presented his research at the McNair Scholars Research Symposium at SSU in April of 2009.

**Pi Day** got great press coverage from the Santa Rosa Press Democrat this year. Search for "Pi Day" at [pressdemocrat.com](http://pressdemocrat.com) to find the story, pictures, and a video about the chocolate pudding mess!

**Drs. Bill Barnier and Edie Mendez** have announced their intention to enter the Faculty Early Retirement Program in Fall 2009, which means they will be teaching half-time for the next several years.

**Dr. Cora Neal** traveled to the AMS/MAA Joint Meetings in Washington, D.C. in January to receive the Dex Whittinghill Outstanding Contributed Paper Award for Statistics Education,

honoring a paper she presented the previous year in San Diego.

Math major **Brian Lund** is a member of the SSU varsity Rowing Club squad that won second place in the lightweight 4 category at the American Collegiate Rowing Association's national regatta in May. Math major Mike D'Angelo is a member of the SSU Lacrosse team that made it to the National Championships, losing in the quarterfinals to eventual champion University of Michigan.

## SSU Service

Department Faculty members continue to be very active in SSU's governance. In 2008-9, **Drs. Sam Brannen, Rick Luttmann, Edie Mendez, Cora Neal, Sunil Tiwari, and Steve Wilson** served on the Faculty Senate, with Dr. Luttmann receiving kudos and a standing ovation at his last Senate meeting in May, concluding many years of Senate service. Sam Brannen and Sunil Tiwari also served on the Senate's Executive Committee.

**Dr. Izabela Kanaana** chaired and **Dr. Jerry Morris** served on the Scholarship Committee, and **Dr. Sunil Tiwari** chaired the Faculty Standards and Affairs Committee. **Dr. Sharon Cabaniss** is the School of Science and Technology representative on the Academic Senate's new ad hoc Diversity Committee and on the University's Educational Policies Committee. **Dr. Ben Ford** served as the School of Science and Technology representative on the Academic Planning Committee and the Campus Reengineering Committee, and chaired the School's Curriculum Committee.

**Dr. Elaine Newman** serves as treasurer of the Sonoma chapter of the California Faculty Association, and **Dr. Steve Wilson** serves on the CFA's statewide Contract Development and Bargaining Strategy committee.

## Undergrad Research – Alive and Well at SSU

Dr. Jean Bee Chan

During AY 2008-9, math majors Cori Brucato, Dylan Field, Chad Griffith, Alma Gonzalez, Francesca Schott, and James Shikashio participated in Math 495 (Research in Geometry) under the guidance of Prof. Jean Bee Chan. These students participated in a regular weekly seminar on unsolved problems in art gallery theory, hyperbolic geometry, and convex arc theory.

Dylan Field, Chad Griffith, and Alma Gonzalez presented research results in a poster session during the January 2009 Joint Math Meetings in Washington, D. C. Francesca Schott, Alma Gonzalez, and James Shikashio plan to speak at the upcoming August 2009 MathFest in Portland, Oregon. In addition, Chad Griffith, a McNair scholar, will seek a master's degree at San Francisco State while Dylan Field, a Tech High student, will be an undergraduate at Brown University this fall. The other students will continue study at SSU or head for the work force.

## Math Education M.A.

Dr. Edith Mendez

A cohort group of math teachers has been working on their Masters of Arts in Mathematics Education degrees, taking courses in the School of Education and the Department of Mathematics and Statistics.

This one-time [for now, at least!] cohort was the dream of Rick Marks and it has come true through the hard work of the teachers and students. Graduates of the program include Carol Keig, Heidi Kreklau, John Quintrell, Aaron Shreve, Joan Stevens, Yolanda Woods, Barb Corna, Kate Davies, Josh Deis, Kathy Bone, Kim Wall, Dean Ballard, and Glenn Hinoki with two more in the process of

completing their work. Several have already taken on new responsibilities, such as teaching in the School of Education and serving as a Mathematics Specialist at the Sonoma County Office of Education. Congratulations to all of the graduates!

## Mathematics Engineering Science Achievement

Sonoma State started a MESA (Mathematics, Engineering



and Science Achievement) chapter this year. MESA is an academic program that supports educationally disadvantaged students to attain four-year degrees in science fields. MESA Centers are located at UC, CSU, and independent university campuses.

MESA provides rigorous support through a variety of components and reinforces these components through establishment of a peer community based on academic achievement. This community provides students, most of whom are first in their family to go to college, with mutual support and motivation. This academic community is what sets MESA apart from other programs. The coordinator of SSU MESA is Computer Science Professor and Chair Lynn Stauffer.

The following Mathematics and Statistics majors are members of SSU MESA: Gloria Hurtado, Alma Gonzalez, Pema Lama, Brandi Loper, Y Vu, and Josephine Warren.



Pi Day aftermath

## Louis Stokes Alliance for Minority Participation

Dr. Sam Brannen

The Louis Stokes Alliance for

# LSAMP

Minority Participation (LSAMP) is an NSF-sponsored program designed to broaden participation in science, mathematics, engineering and technology (STEM) disciplines and contribute to the national agenda to increase the number of URM (underrepresented minorities) receiving baccalaureate degrees, and ultimately Ph.D.s, in STEM disciplines.

SSU students who are Mathematics, Physics, Biology, Geology, Computer Science, Engineering Science or Chemistry majors, are U.S. citizens or permanent residents, and identify as belonging to a group that has traditionally been underrepresented in higher education or that faces social, cultural, educational, or economic barriers to careers in STEM are eligible to join LSAMP.

In 2008-2009, six Mathematics and Statistics majors participated in LSAMP: Jose Lopez, Nicole Day, Chad Griffith, Brandi Loper, Juan Murillo, and Alma Gonzalez.

Seven LSAMP students, including Juan Murillo, attended the California Forum for Diversity in Higher Education at UC Berkeley in November of 2008.



## Alumni News

Let us know what you're up to by entering your own note at [www.sonoma.edu/math/](http://www.sonoma.edu/math/) - just click on "Alumni"

**Kurt Luoto** (1979) is in the final year of the Ph.D. program in the Mathematics Department at the University of Washington, working in algebraic and geometric combinatorics. He left a 20-year career in the software industry in 2001 to return to school.

**Leslie Deming** (1984) graduated with a Statistics Emphasis and a Minor in Economics with an emphasis in Econometrics. Subsequently, she returned to Sonoma State University to get a Master's Degree in Psychology. (She earned an MA, a.b.t. in 1991.) Shortly after completing her graduate work, she was hired to work in Institutional Research at SSU. She worked for over 13 years as the University's Senior Research Analyst. Leslie retired on February 1, 2009. At present, she is starting up a consulting business with a colleague. Providing survey design, scannable form production and processing, and writing up research findings are among their services.

**Mary Rack** (1998) is in her ninth year of teaching math at Mendocino High School, teaching AP Calculus, Geometry (using Geometer's Sketchpad), Algebra, and Discrete Math this year, in a classroom overlooking the ocean.

**Nick Hoffman** (2001): "I got married soon after graduating from SSU and have two children. Nathan was born in April, 2005 and Ashlyn was born in May, 2007. I am entering my 7th year of teaching at Pioneer High School in San Jose, and my 3rd year as a co-chair of the math department. Currently teaching Pre-Calculus, AP Statistics, and a specialized course for seniors to prepare them to take college placement exams. I developed the review/project-based course myself, and it is based on the topic outline for the CSU's ELM

Placement Test. I am also a mentor teacher through our district BTSA program, and served this year as the curriculum team leader for our WASC review. And I am the head coach of Pioneer's varsity boys soccer team."

**Aba Mbirika** (2004) is in graduate school at the University of Iowa, on track to complete his Ph.D. in 2009-10. He works with the undergraduate Math Club, serves on the graduate council, and puts out a newsletter (the "Sum Times"), which includes his own advice column. Send him some tough questions.

**Aaron Melgoza** (2005): "Graduated with BA in Math from SSU, Teaching Credential from CSUEB, and Masters Degree in Education from CSUEB. Currently working on Administrative Credential from CSUEB and teaching high school math at Lapaloma HS in Oakley."

**Virginia Knott** (2006) just finished her first year as a teacher at Fort Bragg High School. In the Fall, she wrote: "I am currently teaching Algebra I, Algebra II and a class called College Readiness which prepares students for the SAT and ELM exams. I am enjoying sharing my love of math with students."

**Megan Wong** (2006): "I got my teaching credential in 2007 from Sonoma State and I am starting my second year of teaching at Elsie Allen High School in Santa Rosa. I am excited to be teaching an honors class this year and hope to excite students about mathematics."

**Aaron Donahue** (2007) is finishing up his Master's Thesis at San Diego State University with an emphasis on Dynamical Systems but has decided to postpone his defense until December in order to complete more research and have a stronger Curriculum Vitae for applications to PhD departments. He intends to apply for PhD programs next fall with a strong interest in mathematical modeling for atmospheric science research. He is currently putting the finishing

touches on two papers he plans on submitting for publication this month (may '09). His research focuses on solutions to the forced Korteweg-de Vries equation, and soon he will switch gears and begin research on the use of Empirical Orthogonal Functions (EOF's) in atmospheric science research.

**Steven Moore** (2007): "I got my Math and Computer Science degrees in Spring of 2007, and just bought a (small) condo in my hometown of Sunnyvale, CA. I'm currently working as an automation engineer in Apple's wireless communications department. Life is good."

**Leanna Lofte** (2008) is in graduate school at the University of Denver. She writes "I am also a GTA for two business calculus courses. Dave is doing the same thing... he probably won't fill this thing out :)"

**Kristen Roland** (2009) was one of the first graduates of Sonoma State's Statistics program (with distinction too!). She is headed back home to Rhode Island for grad school at the University of Rhode Island, where she will be a TA while earning her Masters.



2009 Graduates with Distinction. L to R: Dept. Chair Ben Ford, Holly Wright, Kristen Roland, Colin O'Haire, Greg Morre, Chad Griffith, Dean Saeid Rahimi. Not pictured: Steven Kadow

## M\*A\*T\*H Colloquium

The M\*A\*T\*H colloquium had a successful 69th and 70th series this past fall and spring. Speakers included the following Math and Stats students and alumni:

- Michael King, Joseph Muller and Dylan Field (current students) spoke on *Secure E-mail: PGP, Hashes and Digital Signatures*.
- Nick Franceschine (B.A. 1977, M.A. 1978) spoke on *What an Actuary Actually Does*.
- Kristen Roland, Amanda Frazier, Patrick Midgley and Anna Espitallier (current students) presented their findings from statistical consulting projects.
- Chad Griffith (B.A. 2008) spoke on *The Use of the Gradient Vector in Constructing a Solar Electric System*.

We look forward to an exciting year ahead with more wonderful M\*A\*T\*H Colloquium speakers! If you'd like to share the ways in which Mathematics gets used in your career, email Ben Ford ([ben.ford@sonoma.edu](mailto:ben.ford@sonoma.edu)). It's always great for our students to hear from Department alums.

Talks are Wednesdays at 4:00 in Darwin 103, if you're in the area, and schedules are posted on the Department web page.

## Math Festival

Every April is Math Awareness Month, and the theme for 2009 was "Mathematics and Climate." The outstanding Colloquium talk for our Math Festival on April 29 was *Mathematics, Energy, and Climate Change* by Dr. Juan Meza, Department Head and Senior Scientist at Lawrence Berkeley National Laboratory. Dr. Meza regaled an audience of over 100 with examples of applications of mathematics to some of the most pressing issues of our day – greenhouse gas emissions, climate change, and energy production.

Earlier in the day, we had poster presentations and puzzle and geometry model displays in the Darwin lobby. Following the Colloquium talk, we adjourned to Sally Tomatoes at nearby Sonoma Mountain Village (formerly HP, then Agilent) for an evening of good food and celebration, honoring a great group of math majors with many awards. Putnam and Mathematical Modeling Competition participants, professional organization membership winners, and graduates with distinction all received applause and kudos.

Math/Stats faculty members were assisted by Provost Eduardo Ochoa, Vice President and CFO Larry Furukawa-Schlereth, Vice Provost Melinda Barnard, and Dean of Science and Technology Saeid Rahimi in honoring our students.

## Emeritus Faculty

**Don Duncan** and his wife **Penny** recently moved to Michigan to be nearer their daughter and grandchildren. We miss seeing them at SSU!

**Clem Falbo** continues to maintain a web site ([www.mathfile.net](http://www.mathfile.net)) with lots of math jokes and other good math-related content from his home in Joseph, Oregon. He and his wife Jean continue to travel – recent trips include Patagonia and an Atlantic crossing by ship.

**Chuck Phillips** and his wife **Jeanette** live near SSU and will soon celebrate their 60<sup>th</sup> wedding anniversary!

**Tom Nelson** is enjoying his grandchildren and looking forward to teaching a class in the Department this Fall. He and Norm Feldman served as judges of the poster competition at the Math Festival.

**Norm Feldman** is also scheduled to teach a course for the Department in the Fall. He continues to attend M\*A\*T\*H Colloquia and work on research mathematics.



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