

STATISTICAL M μ SINGS

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Do You Know . . . :

- Who is teaching in New York in the Fall?
- Which faculty member worked on a summer research program in Japan?
- Who will be the new Statistics Interim Chair?
- How is the Stat consulting program changing?
- Which faculty members went to Brazil this summer?
- Which faculty members are new parents?

GREETINGS FROM THE CHAIR



Jay and Carol Devore in the Big Apple.

Hi, everyone. It has been several weeks since the academic year ended and we graduated 6 students. I have now had enough time to recover from teaching, administration, and shoulder surgery so that I now feel energized to turn attention to many tasks neglected for the last several months. That includes helping to produce this newsletter.

The past year has been very rewarding in a number of ways, and occasionally disappointing and/or frustrating. Here are some highlights:

- Carol Erickson, our Administrative Support Coordinator for 5 years, decided to leave California to return to Minnesota (the gloom was thick in the department hallway when we learned of Carol's decision). But we were fortunate to hire another Carol (the job description included a requirement that the new person be named Carol so that the department chair could still yell "Hey, Carol!" from his office!), Carol Morris. This new Carol has worked at Cal Poly for over 20 years in a variety of capacities, including a stint in Academic Records, but this is her first time in an academic department. She has learned quickly and is already beloved by our majors, minors, and faculty. Please communicate with her if you have not done so already.
- Chris McCall and Jose Tagunicar, former graduates who have achieved great success in the financial services industry, gave talks here last fall. Their presentations were filled with valuable advice for current students as well as many anecdotes about their experiences subsequent to leaving Cal Poly. Also, Todd Alonzo, who after Cal Poly earned a PhD in Biostatistics from the University of Washington and now does research on childhood oncology at USC, gave a very informative seminar. We'd really like to get more former students to come and speak here. So please contact us if you are interested.
- Interest in a statistics major continues at a high level. In the fall of 2005, there were 23 students who finished Stat 150, our 4-unit orientation course. As I write this, we have 20 new statistics majors due on campus in September, 2006, and we will likely have several change-of-major students join the 150 crowd.
- The job market continues to be very good for our graduates, and those who want to go on to graduate schools have many attractive options.
- Recent graduates who have gone on to graduate study report great success. Samuel Frame just finished the PhD program at UCSB, and in fact will be a lecturer here in the fall. Laine Elliott, Dawn Eash, and Dave Schumann have all passed their PhD qualifying exams at North Carolina State. Clint Roberts is working on his PhD dissertation at Ohio State, and Aaron Quan and Beau Corkins are rumored to be making good progress there also. Cassie Murcay is doing very well in the biostatistics program at USC. James Adams is studying biostatistics at Loma Linda University. And Rudy Angeles is going strong at Stanford. There may be others in this category whose names I've omitted - my apologies to you.
- We have a great group of younger faculty who continue to be active statistically in a variety of ways. Last summer Beth Chance became a Fellow of the American Statistical Association, joining Roxy Peck, Allan Rossman, and me in this regard. Matt Carlton, Beth Chance,

Mary Mortlock, Allan Rossman, and Bob Smidt all served on the grading panels in Lincoln, Nebraska for the 2006 AP Statistics Exam, and Roxy Peck was an invited speaker. Matt Carlton, Allan Rossman, Andrew Schaffner, Jeff Sklar, Heather Smith, and John Walker all gave talks at the Joint Statistics Meeting this past August in Seattle. The latter two individuals described what they have been doing with our Stat 465 course (Statistical Consulting and Communication) since its inception several years ago. Beth Chance was a panelist at an invited session. Allan Rossman and Roxy Peck were participants at the International Conference on the Teaching of Statistics (ICOTS) last July in Salvador, Brazil; Allan and Beth edited the conference proceedings, Allan presented several papers, and Roxy organized a session.

- Jim Daly was coauthor with a Cal Poly Civil Engineering professor of a paper that received the best paper award at the annual meeting of the National Transportation Research Board Committee on Safety Data, Analysis, and Evaluation. Goes to show that the old-timers can still be productive!
- Several faculty remain active in the area of textbook publishing. My newest book, *Modern Mathematical Statistics: An Applied Approach*, coauthored with Ken Berk from Illinois State University, appeared in January 2006 (with a copyright date of 2007!). Beth Chance and Allan Rossman (them again!) published *Investigating Statistical Concepts, Applications, and Methods*. Kent Smith continues to work with several coauthors on business statistics texts. And Roxy Peck is in the process of revising several books that she has coauthored with me.
- We initiated a rather substantial change in our curriculum. Starting in the fall of 2007, statistics majors will no longer be required to take Stat 321 and 322, and in fact the latter course will disappear. They will be replaced by 3 new courses: Stat 301, 302, and 325. See the article elsewhere in this newsletter for more details.
- Jim Daly retired in June of 2006 after a very successful career at Cal Poly spanning more than three decades, including serving for six years as the first chair of the department after we separated from Computer Science. However, he is now participating in the Faculty Early Retirement Program (FERP), which allows him to get paid for teaching several courses during each of two quarters while receiving retirement income. It is a nice soft landing for him.
- Karen McGaughey, who had joined our department in September, 2003 after receiving her PhD from Kansas State, took a leave of absence to work as a statistical consultant for AMD in the Silicon Valley. We hope she will return to the department after a two-year hiatus, but that is uncertain at press time.

Nearly every year that I have been chair, we have recruited for tenure track faculty, and this past year was no exception. The combination of retirements, leaves, released time for various faculty, and increased demand for our courses led us to seek several new people. The applicant pool was not large but there were some very strong individuals. We invited six of the applicants for on-site interviews, ended up making offers sequentially to all six, and received six rejections. Major reasons for this included high housing costs relative to salaries, workload, and “two-body problems” (a significant other needing gainful employment). We’ll have to try again in 2006-2007.

You may have noticed that I wrote “retirements” in the last paragraph, even though I mentioned only one. We do have another one – me. I have decided to follow in Jim Daly’s footsteps. For the fall 2006 semester I will be teaching at NYU, where I was on sabbatical several years ago, and then I will become a FERPer and teach courses here in the winter quarter. Finally, in the spring, I will have no official responsibilities for the first time since 1971, when I began my teaching career at the University of Florida. I do plan to remain statistically active. The 7th edition of my book *Probability and Statistics for Engineering and the Sciences*, which has been in print since 1982, will appear sometime early in 2007. I will also continue my service as an Associate Editor for Reviews for both the *Journal of the American Statistical Association* and *The American Statistician*.

In honor of my retirement, my colleagues in the department and some close friends commissioned a plaque that reads “Jay Devore Statistics Book Collection” for the conference room next to the department office that contains the department’s book collection, and also contributed a very substantial amount of money for new book purchases. I’m extremely grateful for their thoughtfulness.

I won’t miss at all dealing with the day-to-day minutiae associated with being department chair – forms that need to be filled out, meetings to attend, withdrawal petitions to consider, and the like. But I will certainly miss the close associations I have had with statistics majors and minors over the years. I will be checking my email as regularly as ever, so I hope many of you will stay in touch. And for “official business,” please communicate with the new chair, Bob Smidt (rsmidt@calpoly.edu) as well as Carol Morris. Thank you for all the good times and great memories you have given me.

Best wishes,



REPORT ON COLLEGE BASED FEES

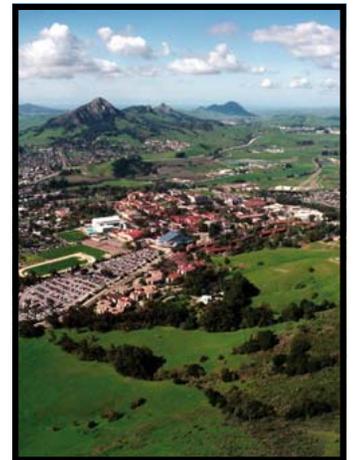
By Allan Rossman

The Statistics Department continues to use students' College-Based Fee (CBF) funds to enhance their educational experience as Statistics majors. In the spring of 2006 a committee of six students (Casey Word, Rebeca Sermer, Jenna Maskell, Richele Porter, Adam Buttenbach, Hunter Glanz) and three faculty (Jay Devore, Ulric Lund, and myself) formulated a proposal for how to spend the \$30,000 that we have been granted for the upcoming academic year. Some of our ideas are:

- Purchase seven new computers for the Newland Family Statistics Lab. This lab is heavily used by statistics majors, and the new computers will be greatly appreciated.
- Offer a two-unit course in SAS certification in Spring 2007, to be taught by Rebecca Ottesen. This course was extremely successful in preparing students for the SAS certification exam when it was first offered in Spring 2005, so current students are looking forward to this opportunity in the coming year.
- Offer multiple sections of STAT 324 (Regression) and STAT 330 (SAS). These multiple sections afford students greater flexibility in planning their schedules and also produce smaller classes and therefore more student-faculty interaction.
- Provide summer student-faculty research experiences. Matthew Bowyer is working with Dr. Andrew Schaffner on a continuing project to use Bayesian models for estimating archeological site age based on obsidian data. Casey Word and Maria Loper are working with Dr. Jeff Sklar to learn about structural equation models and apply them to educational datasets.
- Support student travel to professional conferences and career fairs. Last year several students attended the Western Users of SAS Software conference in San Jose and the career fair presented by the Southern California Chapter of the ASA.
- Support faculty travel for professional development. Several faculty members will attend and participate in the Joint Statistical Meetings in Seattle this August, funded in part by CBF monies.

*

*(CBF)
“College-Based Fee
Funds enhance the
students’
educational
experience”*



Recent Graduates:

- Andrea Hessell
- Rebeca Sermer
- Christian Milbank
- Blake Sweeney
- Kristen Sharp
- Scott Murphy

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FOCUS ON FACULTY



*Clockwise from Left:
A. Kawaguchi, J. Doi, K. Yonemoto, T. Yanagawa*

Jimmy Doi

Several years ago, I had the wonderful opportunity to participate in a summer research program in Japan, sponsored by the National Science Foundation. During that summer, I met Dr. Takashi Yanagawa, one of the more well-known biostatisticians in Japan, who served as my host advisor. He currently is Professor and Director of the Biostatistics Center at Kurume University and, under his supervision, the program has quickly established itself as one of the leading centers of biostatistics research in Japan.

I am happy to say that I have been able to continue ongoing interactions with Dr. Yanagawa since my first contact with him in 2000. My most recent trip to Japan was in March 2005, where I worked with Dr. Yanagawa at the Biostatistics Center. Research with him has led to a joint presentation which he gave at the 2005 International Statistical Institute conference in Sydney, Australia. We hope to wrap up our current research project soon and submit our paper for publication.

Sharon Lane-Getaz

I was a new faculty member working at Cal Poly during the winter and spring quarters of 2006 which provided fertile ground for the development and validation of the RPASS (Reasoning about *P*-values and Statistical Significance) assessment for my dissertation project. While at Poly I gathered validity evidence, improved and added items, assessed reliability, and captured baseline data across 4 courses and 5 instructors. It was fortuitous to have access to varied group of statisticians who teach undergraduate statistics. In addition to having access to statistics educators, I was also able to pool data from students of various disciplines in their first courses in statistics.



Sharon Lane-Getaz

During winter quarter I conducted field tests with and conducted interviews about the RPASS. Results were included in a paper presented at the American Educational Research Association annual conference (San Francisco, April 2006). The quarter break included summarizing and cataloguing the audio and digital video collected and making the recommended instrument modifications. The busier spring quarter included consulting with twelve expert raters to gather content-related validity evidence. Eight raters are Cal Poly professors. Changes made to each item and the rationales were documented by item and by rater(s). After three rounds of expert review and modifications, the instrument was rated sufficiently valid to assess reliability, in terms of score consistency. A field test with sixteen students produced RPASS scores that suggested the instrument was nearly ready to conduct research ($r_\alpha > .70$), with the deletion of one item). At quarter's end, baseline data was collected from 200 students across four different courses and five instructors (including my own students).

In addition to making progress on my dissertation project, I was challenged by teaching 3 sections of intro stats each quarter. I adapted course materials designed for semester-long 75 minute classes to fit in 50 minute windows over a quarter. Some in-class computer labs became demos. Some activities became homework, etc. In the spring when I was assigned to the studio lab, I re-adapted materials to use the in-class lab, activity-based approach but in shorter time periods. The curriculum development is (of course) a never ending saga.

Even those of us who enjoy our work need to take a break. I enjoyed reunifying vacation with my nuclear and extended families for the rest of June but will be back to work on this dissertation project during July and August! Thanks for having me fill in at Cal Poly and sharing Black Hill, Morro Bay, See Canyon views, hidden coves, Osos Flacos, and Montana de Oro. The countryside is lovely!



Ulric Lund

Ulric Lund

My teaching skills were pushed to their limits this past year, when Fall and Winter Quarter was spent teaching a new to me 5-unit introductory statistics course, STAT 221. This was followed in the Spring Quarter teaching our relatively new course for electrical and computer engineers, STAT 350, for the first time. I had to dust off several of my old mathematics texts on Fourier transforms and multivariable calculus, and also remind myself of what a Brownian motion is. This course covered typical introductory sections on counting rules, probability, probability distributions, and then a bit on stochastic processes. The icing on the cake was a final chapter applying stochastic processes to signal processing. This part was a bit of a stretch for me.

But all in all, I really ended up enjoying teaching the class, and learning a lot myself.

I attended the international SAS conference held in San Francisco this spring, and took a short course in mixed effects models using SAS, as well as power computations. The mixed modeling course served me well in assisting a student with a senior project this past year, as well as advising a Master's student in Dairy Science and another in Forestry, who much to their chagrin, will need to go beyond a simple ANOVA to analyze their data properly.

Finally, in an effort to perhaps double the number of statisticians aware of circular statistics, I would like to invite you to peruse the upcoming (September, I believe) issue of Environmental and Ecological Statistics, which is devoted solely to the analysis of directional data. My contribution to this issue was an article, co-authored with my former advisor at UCSB, applying circular statistics to the investigation of the transport of air pollutants near Houston, Texas.

Karen McGaughey

I have taken a leave of absence from Cal Poly for the 2005-06 and 2006-07 academic years to pursue an opportunity in industry with Advanced Micro Devices, Inc. in Sunnyvale, CA. AMD is a microprocessor company developing cutting edge technology for both the server and personal computer markets. As a statistician with AMD, I am responsible for day-to-day consulting in design of experiments and analysis with onsite engineers involved in the development of the newest chip technology. Recently I have begun project work with AMD's production fabrication plants in Dresden, Germany, helping them to develop statistical methodology to identify processing and design issues in their volume products. Not leaving the classroom too far behind, I am also teaching two courses, a basic statistics course using the SAS® product JMP, and a design of experiments course to engineers at both AMD and AMD's sister company Spansion. This has been a wonderful opportunity for me, and I am really enjoying working and living in the bay area, but I definitely miss Cal Poly, the Stat folks, and the SLO life.



New Parents in 2006

**Beth & Frank Chance
Benjamin Haines Chance
March 8, 2006**

**John Coleman & Ann Finland
Sophia Angeline Coleman
August 19, 2006**

**Becky Ottesen & Beto Lima
Eliane Alyse Lima
July 27, 2006**



Spring Graduation 2006

Jimmy Doi, Andrew Schaffner, Jeff Sklar, Ulric Lund, Jay Devore, Matt Carlton, and John Walker

"Focus on Faculty" Cont. from Page 5

Rebecca Ottesen

Rebecca Ottesen and husband, Beto Lima, are the proud parents of a baby girl, Eliane Alyse Lima. She was born July 27 at 1:20 am and weighed in at 7 pounds. The Ottesen/Lima family are well and happy.

Allan Rossman, Roxy Peck, Beth Chance

Along with Beth Chance and Roxy Peck, I helped to plan the Seventh International Conference on Teaching Statistics (ICOTS), which was held in Salvador, Brazil on July 2-7, 2006. Beth and I served on the International Program Committee and co-edited the Conference Proceedings. Roxy organized a session on "successfully implementing statistical education in secondary schools." Roxy and I attended the conference and enjoyed many thought-provoking presentations about how to improve the teaching and learning of statistics around the world.

Roxy also applied her organizational talents to arranging for a post-conference tour enjoyed by 19 statistics educators and guests. We took a five-day boat trip on the Rio Negro and Amazon Rivers. The tour involved canoe trips on which we spotted a myriad of birds, monkeys, sloths, and other wildlife, and we also took guided walks through the rain forest to view the vegetation up close. We concluded the trip with a stop at Iguassu Falls, where we enjoyed spectacular waterfalls and other scenery.

Andrew Schaffner

It's hard to believe that this fall I'll be starting my 10th year of service at Cal Poly. Since my hire this department has changed dramatically with several retirements and even more new faculty coming on board. All this new energy means a whole lot of action in the hallway of Faculty Offices East: discussions about how to best teach our classes, interesting consulting problems, and challenging research endeavors. While some faces in the department have changed, our family-like attitude towards each other and our students continues on.

Some of you might know that I've been a closet Bayesian for many years. Well I'm proud to come out: "Here I am world. I am Bayesian!" Over the past few years, I have been engaged in some statistical archeology research that has been quite exciting, especially since I've been able to work with several

great students (Laine Elliot '04, Rebecca Gan '06, and currently with Matt Boyer, a statistics major and summer research scholar. Together with the help of a local archeologist, student researchers and I have been developing hierarchical Bayesian models for dating obsidian artifacts (volcanic glass that was commonly used to make arrowheads, spear points, etc.). In the past, archeologists had little ability to date these artifacts because they contain no carbon and hence radio-carbon dating (the gold standard) is useless. Using diffusion models developed by physicists and incorporating sources of uncertainty a'la Bayes, we have developed a class of models that can predict the age of these artifacts based on how far atmospheric moisture has penetrated the artifact (something that is really slow and hard to measure as the vapor only penetrates a few microns every 1000 years!). I'll be presenting my findings this summer at the Joint Meetings this summer in Seattle. Maybe I'll see you there!



Jeff Sklar

Jeff Sklar: First Year Experiences

It's hard to believe that I've already been at Cal Poly for a year. Sometimes it's still difficult for me to fathom just how far I've come: from undergraduate, to graduate student, to post-doctoral researcher/lecturer, and now to assistant professor, what an incredible ride! But I am extremely fortunate to have landed a position at Cal Poly in such a prestigious department, and to be part of a very stimulating and supportive atmosphere.

Before arriving here, I spent 9 years at UCSB completing my graduate work and then working as a post-doctoral researcher and lecturer. Once you've been part of an institution for that long, you become comfortable in your environment and a little hesitant about moving forward. I'll admit that I was a bit worried



Allan Rossman

"The tour involved canoe trips on which we spotted a myriad of birds, monkeys, sloths, and other wildlife, and we also took guided walks through the rain forest ..."

-Allan Rossman



Andrew Schaffner

"Focus on Faculty" Cont. from Page 6

about the unknown. When I started at Cal Poly last fall, I had to adjust to my new surroundings while teaching a full course load.

My life was extremely hectic and disorganized. I didn't even have housing when I started, but I was able to stay with the Chances until my wife, Maria, and I could find an apartment (a million thanks to them). We finally settled into our cozy and comfortable place near downtown in mid-October. Maria was also able to take a job at Cal Poly as an advisor in the College of Engineering. Everything was finally coming together.

Making the transition from teaching in the UC system to teaching in the CSU system was not as difficult as I first imagined, due primarily to the quality and caliber of the students at Cal Poly. For the most part, students at Cal Poly are motivated and eager to learn. The relatively small class sizes facilitated interaction with students, and I was able to attend to their needs better than I could at UCSB. The transition was also made easier thanks to helpful and friendly faculty and staff. When I had questions pertaining to class material, I could always seek advice from faculty up and down the hall.

With teaching duties and responsibilities during the academic year, finding time to devote to professional development was quite a challenge. But as a new faculty member, I was given a reduced teaching load which allowed me to continue some ongoing projects. And my connections to UCSB still remained strong. I am currently collaborating with a professor from the Graduate School of Education at UCSB on a National Science Foundation sponsored project called "Instructional Tools in Educational Measurement and Statistics (ITEMS)." We are developing and evaluating Web-based presentations to assist teachers correctly interpret standardized test scores. This summer we made presentations at the National Educational Computing Conference in San Diego, and at the Joint Statistical Meetings in Seattle. I am currently working with my thesis advisors on a paper based on results in the area of adaptive non-parametric regression. I hope to get a draft of this paper out before you read this newsletter.

With the end of the academic year, and the start of the summer, I had even more time to work on projects. This past summer I

also had a great opportunity to work on a research project with statistics students Maria Loper and Casey Word. We learned about structural equation models (SEM's) and their applications in education and the social sciences. We are going to use the SEM methodology to investigate relationships between teachers' attitudes toward standardized testing and student achievement scores.

So now I'm feeling right at home at Cal Poly, and I am looking forward to a bright and exciting future. Next winter quarter, 2007, Dr. Schaffner and I will offer a special topics course in Bayesian statistics and survival analysis. I will cover survival analysis in the first half of the quarter, and Dr. Schaffner will continue with Bayesian statistics for the remaining half. The opportunities to work with students, develop new courses, improve existing courses, and conduct research are virtually endless. Needless to say, I'll be quite busy for years to come!

Kent D. Smith

During this last year, I have been working on a revision for one of the texts for which I am a co-author. The book is entitled *Business Statistics A Decision Making Approach*. To accompany this 7th edition, my co-authors and I are also working on both a *Student's Solution Manual* and an *Instructor's Solution Manual* for the text. Text writing is a never ending project. There are always deadlines to meet, solutions to check, and new material to research. It has kept me (or, perhaps, "rescued me") from a long list of home and garden projects.

I continue to enjoy traveling, gardening, playing pool, ballroom dancing, and my pets. Dottie and I have adopted a Kerry Blue Terrier. He was rescued from a "puppy farm" in Missouri. He still suffers from the treatment he received there. We are trying to socialize him to accept our cats. We are looking forward to when everyone can be in the house at the same time.

Retirement has poked its head around the corner to gaze upon me. But it's going to be a year or two before that I take that big step.

*



Kent Smith

Greetings from Bob Smidt (Interim Chair 2006-2007)



“Our doors are always open to the students and each other, a tradition that continues today.”

Hi all. It looks like the department has forgotten the “Fool me once shame on you, fool me twice shame on me” guideline, so I’ll be back as department chair for the 2006-2007 academic year. My first term seemingly many decades ago was a bit chaotic, particularly with a series of temporary office managers/administrative aides (I swear it wasn’t my fault), but I am looking forward to this year with Carol Morris guiding my way gently through the rigors of everyday duties, emergencies, and general gobbledygook (you probably remember that term from your multivariate stat class). But working with the best people on campus, the faculty of the Statistics Department, should be a breeze and I look forward to the challenges.

While I doubt that many of you ponder about the state of the department, we are at the end of a long transition. For many years, the faculty of the department was static. Between the time that Kent Smith was hired in 1980 and Andrew Schaffner was hired in 1997, we had only one other faculty hire, Rick Rossi, and he decided to leave us for the greener (actually wetter—Rick is an ardent fisherman) pastures of Montana. As a group, we worked hard to develop the department after the separation from Computer Science, suffered the transition from a 3-unit to a 4-unit course basis, and broadened and updated the course offerings. During this time, the department introduced Stat 130, 217, 218, 221, 251, 252, 312, 416, 418, and 419, also revamping Stat 330 and 423 to better suit the needs of the students. Perhaps more importantly, our doors were always open to the students and each other, a tradition that continues today. But gradually the face of the department changed. Leon Maksoudian retired, Roxy Peck ascended to the dean’s office, and in a few years Sing Chou Wu, John Groves, and John Rogers retired. Then in the spring of 2005, Jim Daly decided to enter the FERP (Faculty Early Retirement Program), teaching for us part-time, and Jay Devore decided to do the same this past spring. So except for Kent Smith and me, who expect to be trundled off to the land of the statistical dinosaurs (where all models are balanced and all Bayesian priors make sense) in the not too distant future (an annoying acronym for “soon”), the department has all fresh faces (and associated bodies). (Are we tired of parenthetical comments yet?)

The new wave of faculty members - Andrew Schaffner, Steve Rein, Beth Chance, Alan Rossman, Matt Carlton, John Walker, Ulric Lund, Jimmy Doi, Karen McGaughey, and Jeff Sklar - as well as established lecturers Heather Smith, Becky Ottesen, and Mary Mortlock, have brought fresh ideas and new perspectives to the department. Our curriculum has been invigorated, adding a successful freshman orientation class and an outstanding capstone class in statistical consulting. This year we will be working on developing courses to replace the Stat 321-322 sequence and experimentally introduce a “topics” course, taught by Andrew and Jeff, which will cover aspects of applied Bayesian models and survival analysis. But with all the progress we have made in curriculum, I think that the most important characteristic of the department is the continued real interest we all have in the education and growth of our students.

I am looking forward to working with what I think continues to be the best department on campus. I hope you will consider writing, stopping by for a visit, or even preparing a talk about your experiences—our current students would enjoy and benefit from hearing about life post-Poly.

Have a good year!

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GUEST SPEAKERS DURING 2005-2006

Larry Beeson & Mark Ghamsary—Loma Linda University
 Air Pollution and Mortality/Biostatistics and Epidemiology at Loma Linda University

Brooke Buckley—University of South Carolina in Columbia
 Benchmark Analysis under Abbott-Adjusted Quantal Response Models

Johanna Hardin—Pomona College
 Biweight Correlation as a Measure of Distance Between Genes on a Microarray

Joshua Kerr—University of California, Davis
 Signal Extraction of Seismic Array Data Via Partially Linear Least-Squares

Chris McCall—Capital One Financial
 Words of Wisdom from a Practicing Statistician

Elizabeth Malloy—Harvard School of Public Health, University of New Mexico
 Examining the Health Effects of Pollution Exposure using Wavelet Shrinkage in Functional Linear Models

Ronald Neath—University of Minnesota
 Fully Automating Monte Carlo Algorithms for Likelihood-Based Inference in Hierarchical Models

Samantha Bates Prins—Virginia Tech
 Statistical Applications in Ecological Assessment

Mark Rees—J.D. Power/Consultant
 Statistics in a Market Information Environment

Krzysztof (Chris) Rudnicki—Rice University, Houston, Texas
 A Dynamic Model for Survival Data with Longitudinal Covariates

Jose' Tagunicar—Washington Mutual Card Services
 Statistics in the Financial Services Industry

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MU SIGMA RHO AWARDS FOR 2005-2006

Matthew Robinson
 Victor Meyerson
 Hongyan Wang
 Kristen Sharp
 Casey Word
 Christian Milbank

“Becoming a successful statistician requires more than attending classes and performing well on tests. It requires a love of the discipline and an ability to apply what you have learned to real problems.”

-Chris McCall

CURRICULUM CHANGES TO BEGIN IN FALL OF 2007

BY ALLAN ROSSMAN

The Statistics Department is preparing to offer three new courses for Statistics and Mathematics majors, to begin in Fall 2007. These courses are:

STAT 301, 302: Statistics I, II. A two-course sequence that introduces students to the discipline of statistics. Topics include issues of data collection, data analysis, and statistical inference. Special attention is paid throughout to the process of statistical investigations. Probability ideas are introduced as needed to illuminate statistical ideas, and simulation is an emphasized tool. Specific topics in 301 include observational studies vs. controlled experiments, randomization, confounding, randomization tests, hypergeometric distribution, descriptive statistics, sampling, bias, binomial distribution, significance tests, confidence intervals, normal model, t-procedures, two-sample procedures. Specific topics in 302 include chi-square procedures, one-way ANOVA, two-way ANOVA, simple linear regression, logistic regression, multiple regression, time series, and quality control. Pre-requisite: Math 142.

STAT 325: Introduction to Probability. A self-contained introduction to probability and applied probability models. Topics include basic probability rules, counting rules, conditional probability, discrete and continuous random variables, and expectation. Applied models include Poisson processes, Markov chains, and reliability models. Pre-requisite: Math 142.



Beginning in Fall 2007, Statistics majors will be required to take all three of these courses, and Mathematics majors will be required to take STAT 301 and one of the other two. Our primary reasons for making these changes are:

We'd like Statistics and Mathematics majors to begin their study of statistics with a course that emphasizes the entire statistical process (from data collection through descriptive analyses to inferential methods and drawing conclusions) throughout the course. Such a course presents a more balanced introduction to the discipline of statistics than one that covers probability extensively before proceeding to statistics.

Statistics majors often struggle with STAT 425, so we hope to prepare them for that course with an introduction to probability at the 300 level. The STAT 325 course will also afford students the opportunity to learn about applied probability models that are not presented in our current curriculum.

*

*“The Department
is preparing to offer
three new courses
to begin in Fall
2007.”*

-Allan Rossman

STATISTICS DEPARTMENT CONSULTING PROGRAM EXPANDED

BY JOHN WALKER

This year, the College of Agriculture will provide additional funding to the Statistics Department to expand its consulting program to two faculty members. For many years, the Statistics Department has assigned one faculty member per quarter to provide free statistical consulting for students, faculty, and administrators throughout the university. The College of Science and Mathematics (COSAM) has provided funding for the consulting program, which releases the consultant from teaching one course. The consulting position rotates from quarter-to-quarter among interested faculty. Profs. Steve Rein, Andrew Schaffner, Bob Smidt, Heather Smith, and John Walker have all served as consultants during the past several years.

The number of clients using the consulting service has increased over the past few years. Many these new consulting projects have come from Cal Poly's Dairy Products Technology Center (DPTC), which is part of the College of Agriculture. Faculty and graduate student researchers at DPTC are doing many experiments to study how different ingredients and production processes affect the properties of dairy products. Statistical consulting is needed in the planning, data collection, and data analysis stages of these projects. One current project is studying how the level of certain ingredients in milk affects how well certain bacteria bind to particles in the milk. Researchers want to find ingredients that increase the binding of beneficial bacter-



ia for use in probiotic foods, such as yogurt, which help regulate the amount of good bacteria in the body. Another project is studying how different amounts of fat and different types of stabilizing ingredients affect the taste and texture of ice cream. The DPTC shares the results of these projects with the dairy industry to produce new and healthier dairy products for consumers.

To help satisfy this increased demand, the College of Agriculture will fund an additional faculty member to provide consulting beginning this fall. This consultant will work exclusively with College of Agriculture students and researchers, while the consultant funded by COSAM will continue to work with clients from the rest of the university. The consultant for the first year of this new program will be John Walker. The position will rotate yearly among the faculty in the Statistics Department.

As part of the agreement with the College of Agriculture, the Statistics Department will offer a graduate-level Design of Experiments class (STAT 523) for the Dairy Science Masters program. The new course will share lectures with the current undergraduate Design of Experiments class (STAT 323), but graduate students will be assigned additional reading and a more involved project. The course will be taught once per year, beginning in Winter 2007 with Prof. Walker as the instructor.

“One current project is studying how the level of certain ingredients in milk affects how well certain bacteria bind to particles in the milk.”

-John Walker

✱

KEEPING IN TOUCH

Rudy Angeles (Graduated in 2004)

I just completed my second year in the Statistics Ph.D. program at Stanford University. I am currently looking for a dissertation topic that applies Bayesian statistics (especially empirical Bayes) and machine learning to bioinformatics problems. Outside the Stanford bubble, I've been engaged in private consulting and teaching. In particular, I examined financial data for a Palo Alto-based engineering firm and proposed recommendations to increase revenue collections. Last spring, I taught a semester-long course in introductory business statistics at San Jose State University.

Rachel (Hodgson) Bell (Graduated in 1994)

I graduated from Cal Poly in December '94 and promptly began my career at Fair Isaac in San Rafael, CA. I continue to work at Fair Isaac as a director in the Global Scoring Solutions department. My role includes working with major financial institutions to develop strategies for using credit bureau risk scores to improve their portfolio performance, as well as developing and implementing credit bureau risk models for emerging credit markets around the globe. I also recently presented at Fair Isaac's international conference in Budapest, Hungary – a fabulous place to visit.

On the home front, we have two children: Zechariah (5) and Gracie (2). Zechariah will be starting kindergarten and has more energy in his 5 year old body than 5 adults combined! Gracie is little "princess independence" and loves to copy everything her big brother does – good or bad! I reside with my family in Penngrove, a small-town community north of the Fair Isaac offices. We spent our summer vacation in Disney World at Orlando, Florida – we had a great time, but were glad to get back to California's climate!

Joseph Blue (Graduated in 1994)

I am married with two children, living in Carlsbad, CA. I am a Director of Analytics for a company called ID Analytics. We build models to mitigate Identity Risk, like when someone steals your identity and tries to get a credit card or mobile phone using your information. We have been in the news a little lately because we are going to work with the VA to determine if any of the 23 million stolen identities have been used to commit fraud. I am considering returning to school for a PhD.

Dawn (Eash) Cooper (Graduated in 2004)

After graduating from Cal Poly in 2004, I moved to Raleigh, North Carolina to pursue a PhD at North Carolina State University. The graduate program at NCSU was phenomenal. Not only did I have the opportunity to be a statistical consultant, but I also taught my own undergraduate statistics course. I received my Master's degree in May 2006 and decided to move back to CA and get married instead of pursuing my PhD. Now I am living in Redondo Beach and even though I only just began the job search, I have found that my degree is in high demand. I have accepted a position as a healthcare researcher in Long Beach because it offered the most autonomy and challenging work. I am very excited about my future, but remember fondly my memories of Cal Poly.

Michael Cummings (Graduated 2005)

I just wanted to say thanks for all the statistics department did for me while I was at Cal Poly. I can't tell you how glad I was switching from a math to stats major. You really did an amazing job creat-

ing a learning environment where it felt like everyone was a family. I would definitely recommend Cal Poly to anyone who was interested in statistics. If there was a graduate program I probably would have stuck around!!!

Hank Elgin (Graduated in 2005)

After graduating in March of 2005 I spent some time traveling in the U.S. and worked the 2005 fire season on a hand-crew with the U.S. Forest Service. For the past three months I have been employed with Lindamood-Bell Learning Processes in San Luis Obispo as a Project Analyst in their Research and Development. I hope in the next few years to complete the first three actuarial exams and hopefully be admitted to one of the masters programs in Statistics in Germany.

Laine Elliott (Graduated in 2004)

I graduated from Cal Poly two years ago and went directly to graduate school in statistics at NCSU. My first year focused on coursework which made me appreciate Cal Poly. I have heard nightmares about graduate school, but with my undergraduate foundation in statistics it wasn't so bad. In my second year I was assigned to teach an introductory statistics course. The statistics department at NCSU provides great curriculum support for new teachers which made it easy. Teaching was the best part of my year. This summer I started a part-time job at the Duke Center for Human Genetics on a project related to sickle cell anemia. It is an academic environment where I am given a lot of freedom to explore ideas. This kind of opportunity was the reason I went to graduate school. In the coming year I will take courses and decide on a dissertation topic. I always miss Cal Poly and the great teachers in the statistics department. They provided inspiration and encouragement that still motivates me.

J. R. Growney (Graduated in 1989)

I have been in Kansas City for 8 years now. I've specialized in project and program management and received my Project Management Professional (PMP) certification in 2000. I recently started a new job as project manager with Nicholson Kovac, an Integrated Marketing Communications company. NK specializes in B2B advertising and is one of the top 3 agencies in the Kansas City area. Interesting note; during the interview my statistics background was brought up (some 17 years later??) due to the heavy analysis that agencies do in support of clients including surveys, ratings, ad reach, etc.

I haven't traveled to California recently, but plan on heading that way mid-August of this year. My wife, Elizabeth, has been training for the Vineman Triathlon to be held in Guerneville. This is a full Ironman distance and will be her first. I'm helping her train along the way. I've been running marathons and ultra marathons so I can keep up...but sink when I swim, so that's a problem! Our 3 daughters, Payton (11), Shannon (9), and Colleen (8), are just as active with dance, swimming, and gymnastics respectively. Shannon has also expressed interest in triathlons and will be in a couple of short races around the area. Our dog Highway (yip, that's where she was rescued from) runs with me but not during the heat of summer... I tend to drag her back after a couple of miles.

Keeping in Touch Cont.

Michael Han (Graduated 1988)

I continue work in the healthcare consulting industry as a senior associate for Mercer Health & Benefits. I recently received my professional designation as a Certified Employee Benefits Specialist. Outside of work, I am currently serving as the Treasurer and Handicap Chairman for the Lincoln Park Golf Club here in San Francisco. Other activities include online poker (I recently won my first online tournament: 194 entrants, \$1046 first prize, \$22 entry fee) and I also have taken up Bikram Yoga in the past year.

Chris McCall (Graduated 1997)

I am now married. The wedding went off perfectly in October 2004 in central Massachusetts. A few weeks later we flew out to Las Vegas for Laura Fay's wedding. On the personal front I am still at Capital One (seven years next month). Holly and I have bought a house in the DC area. It is a little humid but compared to Florida and Tennessee the weather is pretty mild.

Wendy McCormack. (Graduated in 1995)

Immediately after graduating in 1995, I joined Fair Isaac and built statistical models for 4 years. I enjoyed both the work and the people at Fair Isaac, but I wanted to learn more aspects of the business, so in 1999 I left to pursue an MBA at Cornell University. After graduating from Cornell, I returned to the Bay Area and worked in Finance at Intel. I left Intel in 2004 to join my classmate's (Jose' Tagunicar, Stat '04) Risk Management team at Washington Mutual, where I am working today. I went through one of the most trying times of my life in 2002 when I was diagnosed with breast cancer. Fortunately for me, my initial prognosis was much worse than what I actually had, and I have been cancer-free for 4 years now. The cancer experience changed my life in many ways - I got a motorcycle, did a 24-hr mountain bike race with my friends, and completed the California Death Ride (road cycling event). It also got me married! My husband and I met as volunteers at the 2003 Avon Walk for Breast Cancer. Lately, we have been staying busy remodeling our home and starting our own property management company.

Stacey (Thompson) Melo (Graduated in 1995)

I left Fair, Isaac about three years ago. I have been living in Rockville, Maryland. I am working at Fannie Mae in DC. I lead the credit bureau analytics group. I am responsible for developing the credit bureau models that Fannie Mae uses in its automated underwriting systems. My group also validates non-traditional credit and traditional credit products on the market.

I got married last year to a wonderful man, William. This year we had a son, Matthew. My daughter is absolutely thrilled to have a little brother. Now she wants a little sister, but I don't think I am ready for that. I really like living on the east coast. I like the family atmosphere and all the history that DC has to offer. I think in CA history is a very vague topic, but out here it is very real. You live it. There are museums, presidential estates, historic towns, and battle-grounds. I really like that my children will not just read about history in a book, but will be able to go out and experience it. On a different note, I like that the water at the beaches on the east coast. It is warmer and all ages can be found enjoying the sand.

The weather difference was a shock. The winters in Maryland are much colder than in CA, but this is balanced by the fact that we get to play in the snow occasionally. The summers are warm, but it is the humidity in July and August that can be awful. Like anywhere, you adjust. The Spring and Fall seasons are wonderful. I enjoy the

changing of the seasons which never really happens in CA. The fall colors are breathtaking.

Mark Newland: (Graduated 1982)

I am working with my wife running a small coffee house in Pratt, Kansas, about one hour west of Wichita, while I look for employment in the technology field (semiconductor and disk drive technology) in either the Northwest (Washington and Oregon), or in Colorado. The right opportunity has not presented itself at this point. In the mean time, I am working with several people helping design programs for JPEG and MPEG manipulation. This allows me work with some of the latest technologies in RAD, including Microsoft's Visual Studio .NET platform. I continue to teach Physics, Calculus, and Presentation Skills for local home school kids, as well as teach Computer Applications and College Algebra at one of the local colleges.



Editorial note: Current and former students as well as faculty are extremely grateful to Mark and his wife Linda for the years of support that helped us establish The Newland Family Statistics Laboratory.

Susyn (Heidenrich) Normington (Graduated 1999)

My husband and I are surprisingly still both in the same jobs that we started after graduating from Cal Poly in 1999. I am a Project Manager at Fair Isaac Corporation where I manage custom risk model developments for financial and insurance clients all around the world. At the end of last year, I had the privilege of living in Bangalore, India for 3 months to help train the local Fair Isaac team on our modeling processes. It was a truly wonderful and rewarding experience! We are also currently expecting the birth of our first child at the end of September so most of our extra time recently has been spent preparing for the baby!

Laura (Fay) Patnode (Graduated 1998)

Currently I manage a small group responsible for credit loss forecasting for the Business Banking group of Wells Fargo Co. I made the move to Wells Fargo from Providian about 4 years ago, where a number of Cal Poly graduates have had their start. And in fact, moving to the business banking line a couple of years ago, I met another Cal Poly grad, Marc Tran.

My most exciting news is getting married in November of 2004 to Mike Patnode (Computer Science '89). We had a fun and beautiful wedding in Las Vegas (and it wasn't the last-minute kind). Mike and I met on a San Francisco Bay Cruise for our respective Wells Fargo work groups, Mike has since moved back to the start-up world, and I moved to the Business Banking Group. We're looking forward to returning to San Luis Obispo together and compare stories.

Outside of work, I also started volunteering with Junior Achievement, helping to introduce basic economic concepts to a local Kindergarten class. It's been a world of fun, and I hope to continue in the next school year.

Wishing everyone well!

(Continued on page 16)

EVALUATION EFFORTS

BY BETH CHANCE

The Statistics Department has undertaken several department level evaluation activities in the last few years. These include the formal self-assessment we completed as part of the program review a few years ago, but we have also been compiling data to monitor our progress in fulfilling the mission of the department. We continue to gather data on our graduating seniors, from exit interviews/surveys to analyzing their performance on select questions from the final exam in Stat 465, the statistical consulting capstone course that was just team taught for the third time by Heather Smith and John Walker. For example, we have been assessing student ability to communicate their statistical knowledge as well as their understanding of particular concepts such as p-values. We also continue to monitor the attitudes and performance of the students completing our orientation course (Stat 150).



While many of our efforts have focused on our majors, this past year, we were also asked to evaluate some of our service courses as part of the overall General Education program review. The department gathered various data from students in Stat 130, Stat 217, and Stat 221:

- In Spring 2005, students were given questions from a recently developed national research instrument that aims to be a comprehensive assessment of student achievement after a first course in Statistics as a pre-test and post-test. These multiple choice questions have helped us identify some areas where students appeared to have a better understanding of course content prior to entering the course (e.g., scatterplots), some areas where students achieved larger gains in understanding (e.g., drawing appropriate statistical conclusions), and some areas where students achieved smaller than hoped gains in understanding (e.g., inference).
- In Spring 2005, students in several sections were given a common final exam question that focused on their ability to interpret the results of a statistical study reported in the media. Students were asked questions such as “Explain what ‘randomized’ means in this study and its purpose.” Several department faculty volunteered their time to “grade” the student responses.
- A sample of students that completed Stat 130 and Stat 217 in Spring 2005 were randomly selected and asked to complete an on-line survey about the course. Questions focused both on student attitudes about the course and repeated some of the content questions from the national research instrument to measure student retention of key concepts.

The department is currently reviewing the results of these tasks to help us identify areas of these General Education courses that could be improved. For example, some content such as scatterplots could be covered more briefly to make room for newer, more challenging content in the area of inference. We were encouraged that 78% of the respondents to the (voluntary) follow-up survey indicated that they found their course to be very or somewhat valuable. However, when asked how often they used the skills/knowledge they gained from the course, most replied “seldom”; and the department may want to pay more attention to coordinating what students learn in these introductory courses to subsequent courses in their majors.

We welcome any feedback you have on these evaluation efforts. In particular, we encourage alumni to tell us about experiences you have had in using statistics “in the real world” that would be appropriate and motivational to share with these undergraduate students from across the university.

*

STATISTICS 150

BY BETH CHANCE

In response to our departmental self-assessment a few years ago, the faculty felt we needed to enhance our “welcome to the major” course. This led to the development of Stat 150, a four-unit course intended for incoming freshmen. This course has been team taught by Allan Rossman and Beth Chance three times now, and we feel it has been very successful in helping students become members of the department community early in their academic careers. The course is still evolving in terms of its secondary goals of providing students with an introduction to the basic concepts of statistics, particularly as incoming majors are currently quite mixed in their background (e.g., whether they already completed an AP Statistics course in high school). One approach taken to help students see the applications of statistics is having them read selected chapters from *Statistics: A Guide to the Unknown*. These vignettes highlight real issues in the practice of statistics while also providing a segue for discussing basic statistical ideas such as randomization and significance. The course has also heavily emphasized asking students to design and carry out statistical analyses (e.g., comparing the use of “hella” [e.g., a slang term similar to the word “very” used to place emphasis on an action or condition] between northern



California and southern California students), as well as giving oral and written reports. A highlight each year has been a series of debates by the students (e.g., should clinical trials be used with placebo control group whenever an effective treatment already exists) “judged” by faculty members. Students have also been asked to complete a “time management study” of how they spend their time during this first college quarter and to give an oral presentation on student selected current applications of statistics in the news (e.g., critiquing the news article describing a research study on

whether swimming with dolphins helps to reduce depression).

The first students to take Stat 150 are just now becoming seniors and leaving the program, and we look forward to their feedback on this course. We feel it has helped them get to know other majors and faculty members much

sooner than they have in the past and enhanced their understanding of fundamental statistical concepts before moving into courses like Stat 321, while also giving them valuable practice in communication skills in a supportive, comfortable environment that will serve them well throughout all their subsequent courses.

*

“In response to our departmental self-assessment a few years ago, the faculty felt we needed to enhance our ‘welcome to the major’ course. This led to the development of Stat 150...”

-Beth Chance

**Interested in being a Statistics
Colloquium guest speaker?**

Contact Bob Smidt at

(805) 756-2026 or rsmidt@calpoly.edu

"Keeping in Touch" Cont. from Page 13

Elizabeth Pickard (Graduated 1999)

I completed my Masters degree in Statistics last June from Cal State East Bay and I continue to work as a Research Analyst with the California Institute on Human Services at Sonoma State University. I have also started consulting and teaching for the Assistance Dog Institute in Santa Rosa. This is a wonderful organization dedicated to advancing the relationships between people and dogs. In addition, I will begin teaching for the Mathematics Department at Sonoma State University in the coming year. I still enjoy singing and I live with my boyfriend, Chris, and five-pound dog Princess Leah in Rohnert Park, CA.

Clint Roberts (Graduated in 2003)

I just got back from 6 weeks in Thailand for another cultural exchange summer program. I spent most of the time in Bangkok at Kasetsart University, but we were able to spend a few days in Phuket for some vacation time.

In the spring, I passed Qualifier Examination level II. Now I am finishing up the final report for the research developing imputation methods for missing crime counts in the Uniform Crime Reports. The research was supported by ASA/BJIS funding. My own research will be a hierarchical bayesian approach to missing counts in the time series. I plan on taking my candidacy exam in December or January.

Liz Smith (Graduated over 25 years ago)

It boggles my mind that it's been over 25 years since I was a student at Cal Poly. I've been working for Telcordia (formerly Bellcore, formerly Bell Labs) pretty much continuously either as a consultant or as an employee since 1979. The company has changed radically since 1979, and not all for the better.

OK, on to more interesting topics. I've been married nearly 20 years to a wonderful guy from the Bronx, Charlie Cantalupe. I met him skydiving; he was co-owner of the drop zone where I began jumping. I retired from skydiving about 20 years ago, and about 10 years ago I took up motorcycling (as the rider instead of the passenger). I joined a women's motorcycle club, the Spokes-Women (www.spokes-women.com), and have served as the club's newsletter editor, president, and am currently vice president.

Alex Steiner (Graduated in 2005)

For the past 6 months I have been working at Mellon Capital Management in San Francisco, performing research for the Asset Allocation department. We are a purely quantitatively driven Institutional investment firm and have been doing very well lately. Over the past 6 months I have learned a lot about portfolio construction, financial modeling, and the institutional investment world. Since my work is purely quantitative, I have to use a lot of the material I learned in Stat 425, 426, 427, also I have had to learn new programming languages and new statistical techniques which have kept me very busy. I look forward to having a successful career in the investment management business and I owe a lot of my success so far to Cal Poly's Statistics department.

Huong Stemm (Graduated in 2001)

I have been working for Kinecta Federal Credit Union as a Database Marketing Analyst for 2 years. I like my job and Kinecta is a great credit union to work for. One of the biggest changes is that I have been married for almost 2 years. My husband, Jacob Halpin, is also a Cal Poly alumnus. He works for Boeing Satellite System as a mechanical engineer. We now have a 7 month-old daughter. Her name is Sofia HuongMai Halpin. We call Torrance our home since we moved in our first house early last year. I am still trying to balance between the new life with a baby and work. My schedule is much busier than it used to be. Things must be planned way ahead of time. Everything is going well.

Jose' Tagunicar (Graduated 1993)

After a successful 12-year career in credit card risk management, I am currently enjoying a sabbatical in the Bay Area. For the past 4 years, I've been employed at Washington Mutual, formerly Provident Financial, as the Senior Vice President in charge of the Portfolio Risk Management group. I managed a group that was responsible for designing strategies to minimize risk and maximize profit for a \$20B company.

Throughout my career, I have continued to use the "learn by doing" credo inculcated in me while at Cal Poly. In fact, I've kept 3 STAT books in my office for reference and have found them very useful in my career (STAT 321/322, Sampling, and Linear Models). If you've ever wondered if STAT can be used in the real world, my groups have included 4 former STAT majors (Wendy McCormack, Stefano Balistreri, Dan Loktief, and Michael Oing). In addition, I have worked very closely with companies such as FICO, InfoCentricity, and Visa, which employ many STAT majors.

I have also presented and been a keynote speaker at several business-related conferences, and in addition, I spoke to current STAT majors last Fall at Cal Poly -- my first visit since 1994. I strongly believe [ed: 100% confidence?] that statisticians will continue to be in high demand in the future for the Financial Services industry.

Right now, my plans include enjoying the summer and fall, traveling, and sports. I can be reached at jose.tagunicar@comcast.net

Marc Tran (Graduated in 1995)

I am living in San Francisco and work in the Business Direct Risk Management Department at Wells Fargo. I (along with my bank) recently bought a house in the Sunset District of the city. That is a foggy neighborhood, but it is still great to be a homeowner.

Marie Westcoat (Graduated 2003)

We have recently moved down to the City of Orange where Andy and I have purchased our first house. I continue to work for J.D. Power and Associates now more on marketing and analytics vs. where I started as a programmer. Working in the Automotive Industry has been exciting, especially with all of these dramatic changes in gas prices! I try to visit SLO a lot lately, especially since Andy and I are getting married there in September. It has been such a busy summer so far with many fun trips back home to the Bay Area, but we are having such a great time down here in Sunny Southern California!

Meet the New Administrative Coordinator

My First Year in Statistics

By Carol Morris

It has been a pleasure to work as the Administrative Coordinator in the Statistics Department since June of 2005. Because our department is relatively small, it has given me the opportunity to get to know the faculty and students on a much closer level. I feel that we are more like family than just a working department. I have also had an opportunity to form relationships with many of our major and minor students. What a great group! They are all so dedicated to their education and supportive of the learning experience of their fellow students.

The hardest part of the job was trying fill the shoes of Carol Erickson. She was very experienced and made everything appear effortless. Additionally, she was very close to the faculty, so it must have been hard for some of them to adjust while I went through my learning curve (which I continue to do). They have all been gracious and I am very appreciative of that.

Working in a one-person office is a new experience for me. I do it all. I enjoy the variety of tasks, the fast pace, the new challenges, and my physical office space. It may sound trivial, but I have worked in cubicles for many of my

22 years at Cal Poly, so to have four large windows that look out onto trees and greenery is great.

The Department Chair, Jay Devore, is quite the head of our social family. Each June Jay organizes a fantastic Statistics Social. All faculty, their families (including children), and Statistics majors (and their guests) are invited. The turn out is excellent because everyone has so much fun together. In the fall we have a faculty/staff potluck. The food is wonderful and the company is great. We are fortunate to have a Department Chair who takes such good care of our group.

As Jay mentioned earlier in the newsletter he will be retiring at the end of summer and then FERPing in winter. I know that we will all miss him and the contribution he has made to our Statistics family, our department, our students, our college, and for the intellectual stimulation that he continually provides.

Change can be good, and I am looking forward to working with Bob Smidt as the Interim Dept. Chair in the Fall.

Thanks for a great first year!

*

STATISTICS INSTRUCTION IN ACADEMIA AND INDUSTRY

By John Coleman

The evolution of statistics instruction for business professionals continues to advance in the private sector as well as academic settings. My work with business professionals in industry as a statistician followed by completion of my first year of teaching at Cal Poly have given me a unique perspective on the similarities and differences in statistics instruction offered to those groups of individuals.

For example, statistics instruction offered by General Electric, Solectron and other private-sector entities is frequently in the form of a Six Sigma or other business process improvement effort. The instruction is highly contextualized and business professionals apply what they have learned in actual improvement efforts where skills like process engineering, financial analysis and project management are utilized along with statistical methods. Specific statistical topics taught vary by company but generally cover topics like regression analysis, time series analysis, measurement systems analysis, and hypothesis testing among others.

The Stat 251-252 sequence at Cal Poly also covers much of the same statistical material, except for the measurement systems analysis, but suffers from the inability to actually use what has been learned to improve the business. Unfortunately, we don't have any business processes or products for students to improve. However, I think instruction can still be highly contextualized with the right examples, capstone exercises and projects as well as use of computer based, data analysis exercises. Private-sector statisticians the Cal Poly business student may encounter after graduation will certainly appreciate the ground breaking that has been done. My own teaching methods link statistical methods with business objectives wherever possible for the 251-252 audience.

Continuing to leverage other faculty members' examples and teaching techniques will hopefully offer more avenues to do just that in 2006-2007.

*

DONORS, WE THANK YOU!!



We wish to extend a sincere "Thank You" to the following contributors who gave to the Statistics Department and/or the Joyce Curry-Daly Endowment Scholarship fund from July 2005 through June 2006. Because of your generosity, we've been able to provide scholarship support for two Statistics majors, as well as keep the Newland Family Statistics Laboratory equipment and software updated and running properly. Your support is truly appreciated by faculty, staff and students.

July 2005 through June 2006

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Note: Every effort has been made to ensure the completeness & accuracy of the listing of contributors from July 2005 through June 2006. If you do find an error, please e-mail Carol Morris at cmorris@calpoly.edu.

STAT Club News

The Statistics Club kept busy during the past year with events such as SAS conferences, career fairs, and Open House. In September, a group of us attended the annual WUSS conference, this year held in San Jose, CA. This allowed us to network with SAS professionals and also helped establish the reputation of the Cal Poly Statistics Department in the professional world. Stat Club advisor Becky Ottesen attended the conference with us and everyone had a great time freshening up on basic SAS skills while also collecting some fun SAS gear.

Additional career building opportunities were always available. Our trip down to Duarte's City of Hope Medical Center, where ASA sponsored a statistics career fair allowed for us to meet recruiters from many companies and various grad schools. Overall, the event opened our eyes to the plethora of opportunities available for the post-undergraduate life. With the help of career services, we organized a resume workshop geared towards the statistics students. Our career counselor, Marquel Quarles, helped all of us update our resumes and provided some very useful hints.

But all work and no play makes for a long year. Some of fun activities filled our time and also helped to keep us out of the stat lab. We kicked off the buddy program this year which allowed for all incoming freshmen to have an upper-class mentor to ask questions about course or teacher selection, help adjusting to college, or even to get help finding housing. The new officers are excited about this program and hopefully it will continue to be a success. Also, we had an ice cream social, designed new stat club tees, had a bonfire at Avila beach, and helped organize the end-of-the-year social. Open house was also a huge success with our new game of Flip Coin. Thanks to our many generous sponsors, our fun prizes lured in a crowd of endless winners.

Needless to say, we had a busy year. It seems that as our major grows every year, so does the club. Getting involved in the club opens doors to new friendships, leadership opportunities, and many fun times. But, without the support of our awesome advisors, we wouldn't be able to do it all. Thanks to Jimmy Doi and Becky Ottesen for all the encouragement and endless support throughout the entire year!

Kristen Sharp
Stat Club Co-President 05-06, Alumni '06



Kristen Sharp

Thanks to funding by the department, I was one of four students able to attend the Western Users of SAS Software (WUSS) conference in September of 2005. The conference provided valuable workshops that allowed us to experience the many applications of SAS. The conference also provided many networking opportunities. We met people from all spectrums including Cal Poly Alumni, SAS authors, and SAS educators from many other universities. There were very few students at the conference, but that probably worked to our benefit since people were generally excited that students were taking an interest in SAS so early in their education. I consider myself lucky to have been able to attend WUSS '05 and I would strongly recommend students to attend WUSS in the future.

Also due to the generous funding by the department, the Statistics club was able to travel to a career fair in Southern California. The American Statistical Association (ASA) holds this event at the City of Hope in Duarte every winter, which I attended in both '04 and '05. I was a little overwhelmed during my first visit, but looking back it was a great opportunity for exposure since it focuses exclusively on the statistics profession. It was also there that Kristen Sharp and I met a contact for whom I later worked as a summer intern. This led to a "permanent" job with the same company. I strongly recommend that students attend this career fair in the future. Even if you are not yet looking for a job, it is a great way to break into the job fair experience as it allows you to see at an early stage exactly what employers are seeking.

Blake Sweeney
Stat Club Co-President 05-06, Alumni '06



Blake Sweeney

ALUMNI – WE’D LOVE TO HEAR FROM YOU!

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