

UCLA

Statistics Newsletters

Title

Statistical Moments - Spring/Summer 2004

Permalink

<https://escholarship.org/uc/item/24w3m1v8>

Author

UCLA Department of Statistics

Publication Date

2004-03-01



Statistical Moments

Greetings from the Chair

Jan de Leeuw

The state of the department is strong. All, or almost all, of our components are healthy and still growing.

This is especially true for the undergraduate program. The enrollments are way up (from Spring 2003 to Spring 2004 by 40%, for example). We now have 30 students in the statistics minor. The new major is approved by the faculty executive committee of the college and will be discussed by the undergraduate council in early May. There will, for the first time, be statistics courses in the new GE curriculum. The campus-wide undergraduate quantitative requirement will be redefined in such a way that more students will have to take statistics courses. Our excellent teaching faculty found local support to modernize and further develop Stat 10 from the Blended Instruction initiative, and national support from the Roadmap to Redesign project.

The graduate program has grown from 45 to 55 students, but it has financial problems. It is very expensive to admit foreign students, and with our limited resources we have to turn down quite a number of excellent applications. There are serious visa problems for Asian students, so the number of foreign applications is down as well. At this point in time we do not know who has ac-



cepted our offers, but we expect at least four new Ph.D. students and at least 10 M.S. students. Thus we will still have some growth next year.

The financial problems also have consequences for our teaching faculty and staff. This year we could not rehire Gretchen Davis. In the middle of the year Coen Bernaards left, and next year Frauke Kreuter will not return. These are serious losses. Both Coen and Frauke have tenure track positions elsewhere, so they are doing very well, but we have lost teaching faculty and we are scrambling. For the same reasons we had to let our programmer Babak Samii go, he nows works in Education here on campus. All these people were very important for the optimal functioning of our department, and they all made important contributions. We were sad to see them go.

There is currently a hiring freeze, so we cannot grow by hiring new faculty. This is a problem, because everything else grows. This year we will teach statistics to more than 4800 students, up from 4100 last year. We will have more than 60 graduate students. If there ever was slack in the system, that is surely gone now, and we had to increase both course size and teaching load. If we continue to grow and to cut the budgets, both quality of education and job satisfaction of the faculty will go down, with very serious consequences.

Finally, on a positive note, the department will move into its new offices on the eighth floor of Mathematical Sciences in August (and give up its space elsewhere). For the first time ever, we will occupy contiguous space, and this will surely have many desirable consequences.

In this issue:

Greetings from the Chair	1
Faculty News	2
Student News	3
Staff News	4

Department News	4
Alumni News	7
Research	8
Recent Publications	9
Bits && Bytes	11
Calendar	12

Faculty News

2003 David Marr Prize awarded to Z. W. Tu, X. R. Chen, A. L. Yuille and S. C. Zhu

A paper from the UCLA Center for Image and Vision Science Co-authored by Z. W. Tu, X. R. Chen, A. L. Yuille and S. C. Zhu was awarded the David Marr Prize at the 9th Int'l Conf. on Computer Vision, at Nice France October 2003.

The Marr prize, named after the founder of Computational Vision, is the highest honor in Computer Vision and is awarded every two years to recognize distinguished work.

Department's Expert on Southern California Wildfires goes on TV



On October 30th, while the raging fires were destroying property and life in California, our own Professor Rick Paik Schoenberg was asked to participate in a panel discussion on KTLA Channel 5 entitled "California Burning: Coping with Catastrophe," along with Jim Wright, from the

California Department of Forestry, and Gene Nardone, from Farmer's Insurance.

In the panel discussion, Hal Fishman, the host, asked very interesting questions about the role that research can play in predicting or preventing the fires. Rick's main point throughout the debate was that we cannot predict these fires with much accuracy but that the predictions can improve if we used a great deal of data that is currently being ignored by the U.S. Forest Service in the construction of its Fire Danger Rating indices. The data he referred to includes the historical and seasonal patterns of where fires have previously occurred. Data on Los Angeles County wildfires, and the specific areas that have burned in them, date back to the 1870s. It is known that if a certain area was devastated in a recent year, it is unlikely that it will burn again soon. This information could be used to improve the Ratings. We can not change the Santa Ana winds, and we can not change the vegetation, two very important risk factors, but we can do more research that will incorporate unused information to hope for at least a small improvement in prediction, and therefore prevention of some of the damages of these fires. Rick expressed hope that the

¹<http://www.isr.umich.edu/src/cannellfund.html>

²<http://news.stat.ucla.edu/item.php?news=17>

destruction and inferno produced by the October 2003 fires will prompt more research in the direction he proposes.

Rick's participation on this TV show is another example of how our research does not just stay within the walls of academics, but rather reaches millions to shape their opinions and, hopefully, improve life in California.

Nicolas Christou Nominated for 2004 Brian P. Copenhaver Award

Nicolas Christou was nominated for the 2004 Brian P. Copenhaver Award for Innovation in Teaching with Technology.



Frauke Kreuter Receives Survey Methodology Award

Frauke Kreuter received an award from the Charles Cannell Fund in Survey Methodology¹, as well as an invitation for a summer research fellowship at the Max Planck Institut for Human Development in Berlin. Unfortunately (for us), Prof. Kreuter announced that after this year she will be



moving to the Joint Program of Survey Methodology at the University of Maryland, College Park.

Boston Globe Review of Listening Post

Mark Hansen's collaborative work, Listening Post, appeared at MIT's List Visual Arts Center February 12th through April 4th. The excerpt from the LVAC's web announcement can be seen online².

We include here the review by the Boston Globe of the exhibition:

"Hansen and Rubin continuously tap into thousands of online chat rooms, pulling bits of text into a great wave that breaks over a curtain of 231 miniature screens.

Electronic music plays; a male voice with British inflections recites some of the text.

In one recent sequence, the screens pulled up sentences pairing "I love" with "the dog on 'Frasier,' " "snoop," "milosopical (sic) political women." For all its electronic wizardry, "Listening Post" proves a tender chorus of humanity, spiced by moments of anger, lewdness, and hate. It's bold, capacious, and entrancing."

Other Faculty News

Robert Jennrich will be an invited speaker at the Factor Analysis at 100 conference in Chapel Hill, May 13-15,

2004. For more information about the conference visit: <http://www.fa100.info/>.

Ivo Dinov co-Chaired an AMS-SIAM Special Session on Mathematical Modeling in Neuroscience, Biomedicine, Genetics, and Epidemiology, at the American Mathematical Society National Meeting in Phoenix, AZ, January 2004.

On a personal note, Juana Sanchez completed the Los Angeles marathon in 5 hours and 11 minutes on March 7 and finished the Catalina Island marathon on March 13 in 5 hours and 50 minutes.

Student News

Fun Activities in the Department



Even though graduate students work very hard throughout the year, they also take a break from studying and get together for fun activities. Since last

quarter, all the social gathering and much more was organized by the Statistics Graduate Students Association (SGSA)¹.

SGSA

Did you enjoy those pre-seminar cookies that suddenly began to appear in the lounge during winter quarter? Those are a little service provided by the newly formed Statistics Graduate Students Association (SGSA)¹. The SGSA organizes and sponsors social activities as well as provides important and helpful information regarding the technicalities of the graduate process and a voice of the graduate students to the department. The first two social events were a nature hike at Will Rogers Park in the fall quarter and a bowling competition during winter quarter. Smaller activities included a lunchtime pizza party and a happy hour trip to Acapulco. Also sponsored by SGSA was Dean's workshop of what it takes to graduate from the Statistics department. Ideas for future events and suggestions are always welcome as are people who want to help out! The SGSA can be reached by email at sgsboard@stat.ucla.edu and for updates and pictures from previous activities you can go to

¹<http://sgsa.stat.ucla.edu/>

<http://sgsa.stat.ucla.edu/>.

Katherine Tranbarger is Joe Bruin!

Seen Joe Bruin at a UCLA football game lately? That grizzly tike whose distracting antics bring ruin to foes and smiles to friends is none other than our own Katherine Tranbarger. Here she is exposed!



Awards, Presentations and Conferences

Almost all of the Ph.D. students and some of the Master students are going to the upcoming JSM meeting in Canada and some of them are presenting at the conference; Yan He, Romeo Maciuca, Katherine Tranbarger, Alejandro Veen, are among those people from the department who are presenting at the Joint statistical meetings in Toronto.

The participation in the last year's JSM meeting in San Francisco was very exceptional and it definitely increased visibility for the UCLA Statistics Department since many students and faculties attended the JSM conference and presented material during conference.

Katherine Tranbarger and Alejandro Veen will be attending the annual meeting of the IMS and the Bernoulli Society in Barcelona this summer and Alejandro will be also presenting at the meeting.

Neda Farzinnia has been awarded the graduate Research Mentorship Award for the year 2004-2005.

Celebrations

Stephen Erickson (current Ph.D. candidate) and Heather Ladd (MA, 2002) celebrated their one-year wedding anniversary on February 16.

Graduations Since Last Summer

Since last summer, many students graduated from the department and they either started their career or they continuing their educations for their next degree at other institutions.

Here are some of the graduate students who graduated recently:

William Anderson – He got his Master’s degree and he is pursuing his Ph.D. at Cornell University.

Thomas Daula – He got his Master’s degree and he is working in a financial company in New York

Scott Gilpin – He got his Master’s degree and he got a job in Denver where he is doing statistical modeling for targeted marketing.

Heidi Graziano – She advanced to candidacy for her Ph.D. and is working at the Aerospace Corporation.

Janine Miller – She obtained her Master’s Degree and she is teaching Mathematics and Statistics at high school level and she is also tutoring a wide range of courses to students at different levels.

Roger Peng – Roger got his Ph.D. and he is currently at John Hopkins University working on his Post Doctorate.

Stefanie Vassar – She obtained her Master’s degree.

Staff News

Babak Samii Moves to Education

We are happy and sad for one former staff member, Babak Samii. We congratulate him on his move to higher paying, more secure position at the Department of Education, but his talents and presence will definitely be missed in our Department. Babak continues to work as a programmer for the Graduate School of Education and Information Sciences. They depend on his help with maintaining and troubleshooting of their Macintosh and (occasionally) PC computers. In addition to this, he looks after the Moore Hall lab computers and provides the “know-how” and support with the audio and visual

equipment (which he states is still an area in which he has a lot to learn). The Department of Statistics wishes him all the best in his new position.

New Hires

We have hired four student workers for the 2003-2004 academic year. William Lin and Susan Ly will be working in the main office; Nancy Wong will work in the student affairs office; and Robert Jurado will work in the computing support office. We welcome all four and look forward to working with all of them.

Department News

Match the Baby and Parent

We’ve been neglectful not mentioning all of our department’s babies born these last couple of years. We’ve assembled here some of those missing baby pictures and made a game of it—guess which baby goes with which parent. See *answers at back*.¹



Department Consolidates and Grows into New Space

The consolidation of the Statistics department to the 8th floor of the Mathematical Sciences Building begins this

August. This long anticipated move will bring most of the department, which currently occupies five buildings and nine floors, together into one contiguous area. The total space being acquired is 8100 sq. ft., just enough for the projected needs of the department for the next five years.

Undergraduate Program Academic Improvements

The Department of Statistics continues to grow, and with the growth comes change. Our Department has actively been working on numerous improvements to both our graduate programs and undergraduate programs. Below is a summary of the modifications we have made.

New Undergraduate Major in Statistics

A new Bachelors of Science in Statistics has been proposed to UCLA and is now in its final approval stages. When it gets approved, students can enroll in the major beginning in Fall 2004. The B.S. program is designed to provide a general introduction to the practice of Statistics for students who intend to pursue study at the graduate level or seek employment in industry or government. An overall GPA of 2.0 is required for admission to the major.

Proposed Major Requirements:

A Entrance to the Major - To enter the major, students should have successfully completed one lower or upper division Statistics Department course with a letter grade, have an overall grade-point average of 2.0 or better, and declare the major in Statistics with the Statistics Department.

B Preparation for the Major (35 units) - Required (35 units): Mathematics 31A, 31B, 32A, 32B, 33A, PIC 10A, Statistics 35, Statistics 88 and one course in Statistics 10, 10H, 11, 12, 13 or 14. All courses must be completed with a grade of C or better.

C The Major (48 units) - Courses in the major are chosen to provide sufficient theoretical background for future graduate level research work, exposure to modern techniques and practices, and experience in fields of application.

Required (48 units): Statistics 100A, 100B, 100C, CM120A, CM120B, 130B, two Statistics 195 courses and four additional upper-division elective courses chosen from Statistics 130A, 130C, 150 through 199; Mathematics 131AB, 151, 170B, 171. At least two of these four elective courses must be from Statistics 130A, 130C, 150 through 199 and at least one elective must be chosen from Mathematics 131AB, 151, 170, or

171. Elective courses from outside the department are chosen in consultation with the undergraduate faculty adviser. Only 4 units of 199 may be applied to the major. Statistics 195 can be repeated with different topics. Statistics 89, 89HC, 110A, 110B, 189 and 189HC will not count towards any of the major requirements.

A maximum of 20 upper division units applied towards the major requirements can be applied toward major or minor requirements in any other department or program. Students cannot declare both a Statistics major and a Statistics minor.

It is strongly recommended that students pursue a minor in a substantive discipline that applies statistics in conjunction with the B.S. degree in Statistics. This minor must be chosen in consultation with the undergraduate faculty adviser.

Students planning to continue their study of Statistics in a graduate program are strongly advised to include in their schedule as many of the following Mathematics courses as possible: Math 131AB, 151, 170B, and 171.

All major courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better.

D Summary - The curriculum is designed to give students knowledge and skills in several areas that will prepare them well for future study or employment. In addition to learning essential statistical concepts (experimental design, causation, graphical analysis, inference, linear models), students who receive a B.S. in Statistics will have knowledge of Mathematics (calculus, analysis, probability) and computer skills (data management, basic programming). Additionally, the curriculum has a strong emphasis on developing oral and written communication skills, particularly in the "capstone" course (Statistics 195).

We do anticipate that this major proposal will be approved soon. Keep an eye on our website for updates. Questions on the new major can be directed to our Student Affairs Officer, Dean M. Dacumos at dacumos@stat.ucla.edu

Changes to the Undergraduate Minors in Statistics

The Undergraduate Minor in Statistics has been modified to be more available for students who are not in one of the Physical Sciences or Engineering Majors.

In the old requirements, students were required to take a five-course calculus series in order to take one of the required classes (Stat 100A: Statistics). Now, a student can take just two of the calculus courses and the newly created Stat 34: Applied Sampling course in order to get into Stat 110A (Applied Statistics), which can now be used as an alternative to Stat 100A. Physical Sciences students can still take Stat 100A under the new minor rules.

The changes to the undergraduate minor have already been approved and take effect beginning in Spring Quarter 2004. More information on the old and new minor requirements can be found at our webpage: www.stat.ucla.edu under the Academics link.

Of the 29 current Statistics minors, only five are from majors outside of the Physical Sciences. We anticipate that these changes will increase the number of non-Physical sciences students into our Undergraduate Minor.

New Undergraduate Courses

As listed in the two sections above, new undergraduate courses were designed for the development of our new major and to assist in the modification to the minor. Other undergraduate courses have also been developed to give our undergraduates a broader knowledge base of Statistics courses. Below is a list of the new Undergraduate courses for the 2003-2004 academic year.

- Stat 34: Applied Sampling
- Stat 35: Interactive and Computational Probability
- Stat 88: Sophomore Seminars
- Stat 89: Honors Seminars
- Stat 99: Student Research Program
- Stat 130D: Statistical Programming, Computation, and Visualization in C/C++/VTK
- Stat 175: Matrix Algebra for Statistics
- Stat 189: Advanced Honors Seminars

Graduate Program Academic Improvements

As our Department develops, we continually are establishing new methods to improve the education of our graduate students. Over the past two years, we submitted a proposal that details these changes and both years we have received funding from the UCLA Graduate Division to implement these improvements.

Appropriately, the received funds came from the Quality of Graduate Education (QGE) Award. The Department of Statistics was formed in 1998, and since that point, we have been growing rapidly in almost every dimension. As our faculty has grown, we have broadened our research focus, forming a series of subject-specific

centers and establishing new contacts with other departments on campus. In 2002-2003 we also reconfigured the graduate program to make better use of the center structure and to more rapidly involve students in original research. With funds from the 2004-2005 QGE Supplemental Allocation Program, we will reinforce these trends by providing our graduate students with several programs that address the unique challenges facing "new" statisticians.

Last year, QGE funds were used to assist students to attend and present at conferences and focus on their dissertation. We are also developing courses and program changes to expose our graduate students to faculty research earlier in their curriculum. With this increased emphasis on the importance of research, our students' educational quality will improve.

The new graduate courses developed in 2003-2004 are:

- Stat 233: Statistical Methods in Biomedical Imaging
- Stat 234: Statistics and Information Theory
- Stat 235: Data Management
- Stat 293: Graduate Student Research Seminar

Former President John F. Kennedy noted that "Change is the law of life. And those who look only to the past or present are certain to miss the future." Our Department will continually make improvements to our programs so we do not "miss the future".

Statistics End-Of-The-Year Celebration / Commencement

The Department of Statistics will hold its annual End-Of-The-Year Celebration and Commencement at 1:00 PM on June 19, 2004 at the Institute of Pure and Applied Mathematics/Portola Plaza Building. This special event commemorates both the achievements of our students and our Department. We will also acknowledge our Teaching Assistant of the Year at this event. Scheduled speakers include the department chair, Jan de Leeuw, graduate vice chair, Mark Hansen and Student Affairs Officer, Dean M. Dacumos.

We had one student, Kin Phoa, complete the Graduate minor in Statistics this year, and we anticipate 12 of our 39 undergraduate minors to complete their degree this year. Below is a list of our undergraduate minors who we expect to graduate by Summer 2004.

- John Bucci
- Jinbo Cao
- Kelly Chen
- Xiao Chen

- Clairia Chiu
- Robert Chow
- Jesus Gutierrez
- Kathy Kam
- Judith Mendoza
- Lindsay Sakaguchi
- Kekona Sorenson
- Shannon Stock

We also anticipate at least six of our graduate students to receive their Master's degree by the end of Summer 2004. These students include:

- Jocelyn Arnott
- Jason Cheng
- Khai Doan

Alumni News

Staying in Touch

A new addition to the newsletter will feature the activities of UCLA Department of Statistics alumni. In this edition we feature Roger Peng, Heather Ladd and Eunice Kim all recent graduates of the Department. We are interested in hearing from you, too. If you would like to drop us a letter, email us at newsletter@stat.ucla.edu. We await your news!

Roger Peng, Ph.D., Class of 2003

Dear all,

I'm currently a Postdoctoral Fellow in the Department of Biostatistics at the Johns Hopkins Bloomberg School of Health. I think I've just about started getting used to the idea of working in a department of biostatistics. I've enjoyed learning about the diverse problems they are working on here which are considerably different from the ones I worked on in grad school. Currently I'm working on air pollution epidemiology and am developing statistical methods for assessing the short and long term health effects of air pollution. In doing this research I've been lucky to work with a number of good statisticians and epidemiologists. One thing that I've learned is that epidemiologists have a different word for everything. For example, "parameter" equals "effect" and "interaction" equals "effect modification". A major part of adjusting here has been simply learning the lingo. So far I haven't had to do any major teaching, which has been nice. In

- Amy Kwong
- Sovia Lau
- Naoko Maekawa
- Brian Ng

We congratulate all of our Department's graduates on their tremendous achievement. We hope to see you all at the celebration.

Applications

The Department of Statistics received 110 applications for Fall 2004, 60 for the Doctorate program and 50 for the Master's program. Of these, 37 applicants were offered admission to our graduate programs with eleven currently accepting our offer (nine Master's and two Doctorate).

Congratulations to all our incoming students. We look forward to seeing you this Fall.

the fall I helped teach an intro course in statistical computing. One thing that's a bit different here is that there are no undergraduates to teach, so all of the students are graduate students or doctors. I haven't yet decided if this is good bad or neither.

Besides work (what, there's something besides work?) I've been enjoying exploring the city Baltimore. I live in the Mt. Vernon district which is the cultural/historical district of Baltimore. After living here for 8 months I think I've managed to sample all of the bars in my neighborhood (there are a lot!).

I hope that everyone in the department is doing well. I'm still waiting for the next issue of F-This!

-roger

Heather Ladd, M.S., Class of 2002

Dear Department of Statistics students, staff and faculty,

For the past 2 years since graduating, I've been working for the UCLA Neuropsychiatric Institute's Health Services Research Center. The center conducts research to better understand and improve health services being delivered to people with psychiatric and neurological problems. The majority of my time has been spent on two major projects within the center, Project IMPACT and the Caring for California Initiative. Project IMPACT is a randomized, controlled trial of 1,801 depressed, elderly adults, to test the effectiveness of a treatment

model for late-life depression in a Primary Care setting. As part of the Caring for California Initiative, a state-wide survey of medical records was completed to examine the clinical care processes for children served in California's outpatient mental health programs. When I'm not drowning in data, I spend my time studying the Spanish language, volunteering as a tutor in elementary and middle schools in Los Angeles and Santa Monica, reading books unrelated to Statistics as well as bicycling, running, swimming, and surfing now and then. Last summer I competed in my first triathlon, the Long Beach Triathlon. Because that didn't kill me, I plan to do the Los Angeles Triathlon this summer.

Sincerely,
Heather Ladd

Eunice Kim, M.S., Class of 2000

It's been almost four years since I graduated from UCLA with my Master's degree in Statistics.

The first three and a half years since leaving UCLA, I worked as a Statistician at J.D. Power and Associates. My responsibilities included generating index models to measure and identify drivers of overall customer satisfaction for syndicated and proprietary studies in various industries including: Automotive, Finance, and Real Estate. I also performed analyses on ad-hoc projects and research and development. It was a worthwhile experience dealing with Fortune 100 clients and learning many different aspects of marketing research.

In November, I was recruited and hired as a Statistician by Edmunds.com in Santa Monica. Edmunds.com is considered the leading research tool among the automotive websites. I was very interested in learning Internet Market Research, and Edmunds.com offered me the op-

portunity to do so in a fast-paced yet enjoyable working environment. I am part of the data analysis department that focuses on data mining, forecasting, and web traffic analysis. I also produce information that gets published on the Edmunds.com website, such as "true cost of ownership" and "true cost of incentives".

My apprehension about the culture of an internet company as being a "high stress environment" disappeared after the first month at Edmunds.com. Being surrounded by internet experts makes it a great environment to learn and grow.

I went back to get my Master's Degree in Statistics at UCLA 10 years after receiving my bachelor's degree. Quitting my job to go back to school full-time was not as difficult as one might think, but being a non-traditional student in my thirties was difficult. It was an invaluable experience that I would not change for the world. I remember having the mixed feelings of freedom and anxiety just walking around the campus during the first week of school. I knew many people who talked about going back to school as a full-time student. I was one of the lucky few who actually did it. Whenever I pulled all-nighters during finals week, I kept reminding myself of how fortunate I was to have such a supportive network of family and friends who cheered me on. I still consider the best part of those days was meeting friends and faculty with whom I continue to keep in contact. The experience I got from working at the UCLA Statistical Consulting Center prepared me well for my career.

My free time now is spent on ski trips to Park City, Utah, and kick boxing, and spinning classes at a local gym. I Hope to study Japanese now that I cut my commute time from two hours a day to twenty minutes.

-Eunice

Research

New Centers

The 2003-2004 academic year has seen the growth of several new research centers and projects in the Statistics Department.

The three new centers are the Laboratory of Statistical Genomics, directed by Chiara Sabatti, the Studio of Bio-data Refining and Dimension Reduction, directed by Ker-Chau Li, and the Center for Environmental Statistics, directed by Richard Berk.

A complete listing of our centers can be found at http://directory.stat.ucla.edu/index_body.php#centers.

Projects

Professor Berk, along with Professor Robert Mare, a demographer in the UCLA Department of Sociology, re-

ceived a 2-year grant from the National Science Foundation (NSF) for a project to study "Neighborhood Choice and Neighborhood Change: Evaluating Dynamic Models of Residential Segregation."

In addition, Richard Berk and Weihua Huang were awarded a grant by the Inter-American Tropical Tuna Commission to develop methods for flagging suspiciously low reports of dolphin killed when schools of tuna are netted.

The faculty studying computer vision have received five new research grants this year: Alan Yuille received two research grants, one from NIH and one from NSF, to support his research on statistical techniques for computer vision; Song Chun Zhu received a grant from NSF, one grant from ONR, and another grant from NSF with Yingnian Wu as co-investigator, to study image under-

standing and stochastic modeling of visual patterns.

Rob Gould and Juana Sanchez both received instructional improvement grants from the Office of Instructional Development (OID) to develop labs and activities for introductory and upper division undergraduate statistics courses.

Professor Sanchez has also submitted three grant proposals, to the American Association of University Women, the Spencer Foundation, and the National Science Foundation Information Technology Research Program. The proposals request funding to extend the activities of the OID grant to females in high-schools and community colleges in Los Angeles.

Rick Paik Schoenberg, along with professors Yan Kagan and David Jackson in Earth and Space Sciences, received a 3-year grant from the NSF to study point processes and applications in seismology.

Grants

The Statistics faculty are actively involved in a wide range of research and continuously attract outside funding as shown below:

Dick Berk, Research into the Investigation & Prosecution of Homicide: Examining T/Federal Death Penalty System, Fund Src: RAND, Fund dates: 3/12/2003-3/31/2005

Ivo Dinov, Data-driven, Interactive and Internet-friendly Approach to Teaching Undergraduate Applied Probability and Statistics, Fund Src: OID, Fund dates: 7/1/2003-6/30/2004

Rob Gould, A Distance Learning Model for High School Teachers, Fund Src: CAL POLY, Fund dates: 9/18/2002-6/30/2004

Rob Gould, Development of Instructional Data Sets for Introductory Statistics Courses, Fund Src: OID, Fund dates: 7/1/2003-6/30/2004

Rick Paik Schoenberg, Spatial-temporal Analysis of Earthquake Catalogs using Point Processes, Fund Src: NSF, Fund dates: 9/11/2003-7/31/2006

Juana Sanchez, Development of Data Analysis Projects & Problem Sets for Computer Science Majors in Undergraduate Upper Division Applied Statistics Courses, Fund Src: OID, Fund dates: 7/1/2003-6/30/2004

Hongquan Xu, Nonregular Designs: Classification, Optimality and Construction, Fund Src: NSF, Fund dates: 8/29/2002-6/30/2005

Alan Yuille & Song-Chun Zhu, Locating and Reading Information Signs, Fund Src: NIH/NEI, Fund dates: 11/3/2003-8/31/2005

Alan Yuille, SGER: Stochastic Algorithms for Visual Search and Recognition, Fund Src: NSF, Fund dates: 1/30/2004-7/31/2004

Song-Chun Zhu, A Comprehensive Statistical Framework for Image Understanding and ATR, Fund Src: ONR, Fund dates: 10/7/2003-9/30/2004

Song-Chun Zhu & Yingnian Wu, Learning Fundamentals Atomic Image Structures from Natural Images, Videos and Shapes, Fund Src: NSF, Fund dates: 7/8/2003-9/30/2005

Song-Chun Zhu, Stochastic Modeling and Computing of Visual Patterns: From Descriptive to Generative Methods, Fund Src: NSF, Fund dates: 7/11/2003-5/31/2006

Recent Publications

Preprints, Papers & Reviews

Statistics Online Computational Resource featured in Science Magazine¹

Teachers seeking demonstrations or online experiments for a college probability or statistics class should check out the collection of Java applets designed by statistician Ivo Dinov of the University of California, Los Angeles. One set of simulations lets students explore important distributions such as the chi-square, Poisson, and binomial, which describes coin flipping and other events that have two possible outcomes. Students can see how modifying parameters affects the mean, median, variance,

and other measures.

Another section runs more than 50 probability-related experiments. For instance, students can take a crack at the best guessing strategy for the Monty Hall problem, named for the host of the game show Let's Make a Deal. Contestants on the show had to guess which of three doors concealed a fabulous prize and avoid the doors that hid a goat. You'll also find online calculators, graphing and data analysis tools, a curve-fitting feature, and other applets.

The SOCR web site is at <http://socr.stat.ucla.edu>.

¹from <http://www.sciencemag.org/content/vol302/issue5651/netwatch.shtml>

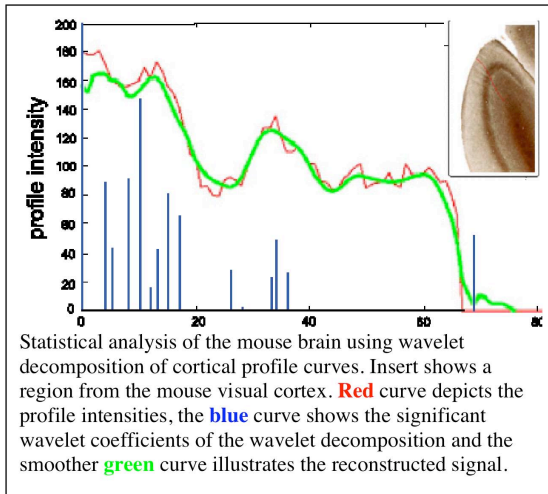
Recent Preprints

Jan de Leeuw published articles on Multidimensional Unfolding, Shepard Diagram, Monotone Regression, and Unidimensional Scaling all of which will appear in the Encyclopedia of Statistics in Behavioral Science, to be published by Wiley in 2005.

Rick Paik Schoenberg co-authored a paper on Rescaling Marked Point Processes. In this article the authors explore generalization of Meyer's theorem to the case of marked point processes to more general marks. Assuming simplicity and the existence of a conditional intensity, the authors show that a marked point process can be transformed into a compound Poisson process with unit total rate and a fixed mark distribution.

Mahtash Esfandiari and Vivian Lew wrote a paper on Bridging the Gap Between Consulting and Teaching: The UCLA Experience in which they discuss pedagogical, learning, research and consulting aspects of statistics.

Ivo Dinov coauthored an article on the construction of Multimodal, multidimensional atlas of the C57BL/6J mouse brain. In this paper the authors present a framework for representing and statistically analyzing a multitude of imaging, neurophysiologic, cognitive and genetic meta-data.



[download]

Hongquan Xu wrote a paper on Cataloging Three-Level Fractional Factorial Designs, in which he extends some known experimental designs with 16, 27, 32 and 64 runs.

	1	2	3	4	5	6	7	8	9	10	11	12	13
a	1	0	1	1	0	1	0	1	1	1	0	1	1
b	0	1	1	2	0	0	1	1	2	0	1	1	2
c	0	0	0	0	1	1	1	1	1	2	2	2	2

[download]

Ying Nian Wu and Song Chun Zhu wrote a Perceptual Scaling paper where vision is posed as a statistical learning and inference problem.

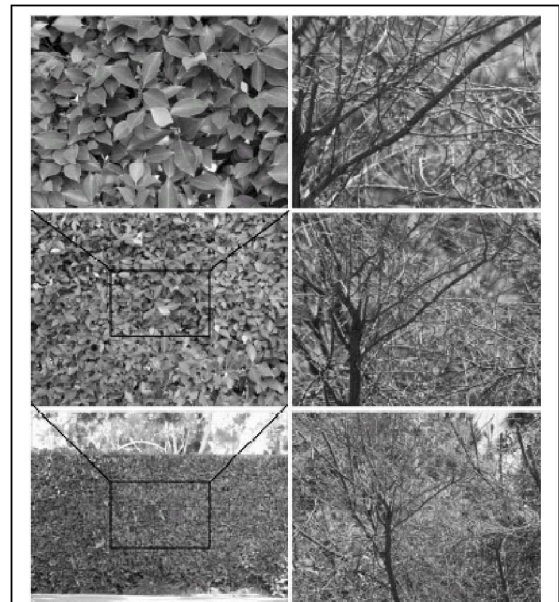
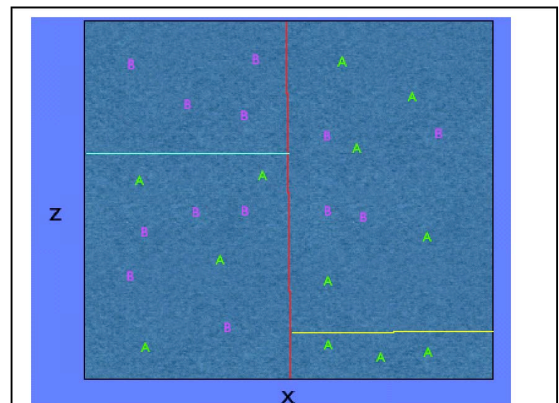


Figure: Perceptual scaling: transition from sparse structures to collective textures.

[download]

Richard Berk wrote a chapter on Data Mining Within a Regression which considers a wide range of commonly used procedures under the broad rubric of data mining.



Recursive Partitioning by classification and regression trees (CART) of Binary Outcomes ($Y=A$ or B and Predictors are Z and X).

[download]

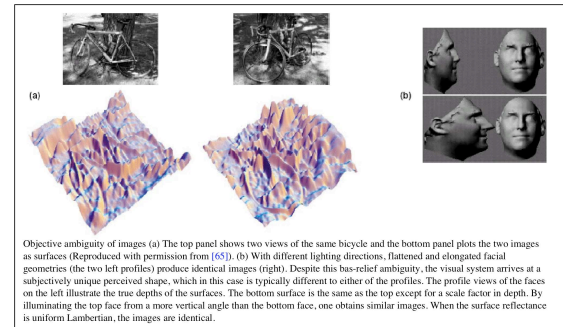
Juana Sanchez coauthored an article on Internet Data Analysis for the Undergraduate Statistics Curriculum, which summarizes the results of research in

three areas of Internet data analysis: users' web browsing behavior, user demographics, and network performance.

Chiara Sabatti coauthored a paper on E.Coli Regulatory Sites with Feedback to Expression Array Analysis. The authors propose an approach to the problem of reconstruction of the profile of a binding site and the localization of all its occurrences in a sequence based on a probabilistic model of the sequence, represented as concatenation of background and motif stochastic words.

Alan Yuille published a paper on Bayesian Models of Object Perception, where the authors propose a general framework for parsing images into regions and objects useful in

image segmentation and object recognition.



[download]

For a complete list of statistics faculty publications see <http://preprints.stat.ucla.edu/>.

Bits & Bytes

Computing News, Information and Tips

New Calendar System

We've been busy updating some of our services.

Check out our new calendar system at <http://calendars.stat.ucla.edu/>. Instructions on how to use the calendars (for department use only) can be found at our support pages¹.

We employed an existing open source calendar system, PHPiCalendar², and modified it for our needs. The changes we made to PHPiCalendar might be of interest to others, so we put them on our CVS site at PHPiCal³.

Using CVS

CVS, Concurrent Versions System, has been around a number of years. Although it typically is used for software projects CVS is a great collaboration and archiving tool useful for any project in which files need to be worked on simultaneously by project members or in which versions of files need to be tracked. Project members can be anywhere, they only need internet access and the CVS commands to work on remote project repositories.

CVS keeps the files that are under its control in a directory known as a *repository*. Once created, a repository rarely needs direct intervention, instead CVS manages it for you through directives that you give it. A repository can be used for a single project or for many projects (known as *modules*). You can create a practice repository doing the following commands:

¹<http://support.stat.ucla.edu/view.php?supportid=73>

²<http://phpicalendar.sourceforge.net/nuke/>

³<http://cvs.stat.ucla.edu/viewcvs/?cvsroot=PHPiCal>

```
mkdir ~/cvsrep
cvs -d ~/cvsrep init
```

This creates your practice cvsrep repository in your home directory and prepares it for CVS by installing a set of control files in the directory CVSROOT (inside of the cvsrep directory). The control files are used to customize the behavior of your repository. A repository rarely needs direct intervention so even the control files are managed using the CVS directives when you need to edit them.

For this example we will manage a web page. To start we need to create a work space known as a *sandbox*. Do the following:

```
mkdir ~/tmpwork
cd ~/tmpwork
cvs -d ~/cvsrep checkout .
```

This checks out the cvsrep repository putting its files in the tmpwork sandbox. Next, create a index.html file using any editor of your choosing. Save this file in tmpwork and then in the Terminal do:

```
cvs -d ~/cvsrep add index.html
cvs -d ~/cvsrep commit \
-m 'First version of my index.html'
```

You will see messages appearing:

```
cvs commit: Examining .
cvs commit: Examining CVSROOT
RCS file: ~/cvsrep/index.html,v
done
```

```
Checking in index.html;
~/cvsrep/index.html,v <-- index.html
initial revision: 1.1
done
```

While you have the repository checked out CVS will monitor changes that you make to the files in the sandbox. Each commit following any edits will commit your changes to the repository.

To release the sandbox use the directive:

```
cvs -d ~/cvsrep release
```

Assuming everything has gone well and you were able to commit your files to the repository you can now remove the files from the sandbox:

```
rm -fr ~/tmpwork/*
```

You haven't lost anything, the index.html file can be retrieved from the repository with:

```
cvs -d ~/cvsrep checkout index.html
```

This time you just checked out the file rather than the whole repository (.).

That's it for now. For more information about CVS check out the official CVS web site at <http://www.cvshome.org/> or the CVS man pages.

A Great Collaboration Tool

SubEthaEdit is the award winning tool for capturing brainstorming events. It shares files over the network and lets teams simultaneously edit them in real-time. It's free and can be downloaded at <http://www.codingmonkeys.de/subethaedit/>

Calendar

Events in the Department

- April 5 Spring Courses begin
- May 31 Memorial Day holiday
- June 11 Spring Courses end
- June 12-18 Finals Week for Spring Quarter
- June 19 Statistics End-Of-The-Year Celebration / Commencement
- June 28 Summer Session A begins
- July 5 Independence Day Holiday
- August 9 Summer Session C begins
- September 6 Labor Day holiday
- September 23* Qualifying Exams
- September 28-29* New Statistics Graduate Student Orientation
- September 30 Fall Courses begin

Seminars

- March 2 - Sensitivity Analysis in Bayesian Networks - Adnan Darwiche
- March 9 - Genomewide Co-expression Dynamics in Yeast and in Human Cell-lines - Ker-chau Li and Robert Yuan
- March 16 - First Hitting Time Analysis of the Independence Metropolis Sampler - Romeo Maciua
- April 13 - A General Change-point Detection Theory - Alexander Tartakovsky
- April 16 - Teaching Statistics to Secondary Mathematics Teachers - Robert Gould
- April 20 - Statistical Models for Processes Varying in Space and Time - Michael Stein
- April 27 - Chirplets: Multiscale Detection and Recovery of Chirps - Emmanuel Candes
- May 21 - Blending Statistics and Graphics in Visual Data Mining - Antony Unwin

¹Answers: Martin (5/31/02) belongs to (5) Dean. David (4/19/03) belongs to (6) Chiara. Veda (4/12/02) belongs to (3) Arno. Beverley (9/19/02) belongs to (4) Song-Chun. Kayleb (4/8/03) belongs to (7) Jennifer. Mara (10/4/02) belongs to (1) Jose. Joshua (12/1/03) belongs to (2) Hongquan.

Statistical Moments

8130 Math Sciences Bldg., L.A. CA 90095-1554 Phone:

E-mail: newsletter@stat.ucla.edu URL: <http://newsletter.stat.ucla.edu>

Statistical Moments is published bi-annually by the Department of Statistics at UCLA. Send comments, questions and submissions to newsletter@stat.ucla.edu. Back issues are available at <http://newsletter.stat.ucla.edu>.

Editorial Board *Ivo Dinov, Rick Paik Schoenberg,
Vanessa Beddo, Jamie Pompa, Neda Farzinnia, Dean
Dacumos, Jose L. Hales-Garcia*

Contributors *"Wildfire", Juana Sanchez*