# **UCLA**

### **Statistics Newsletters**

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# Statistical Moments



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#### **Give to Statistics**

Donations can be made through the Giving to UCLA program. For more information see page 13. Past, Present and Future Statistics at UCLA

# **Greetings from the Chair**

Welcome to this new issue of Statistical Moments. Since the Summer of 2004, when the last newsletter was published, many exciting things have happened in the Department. The most exciting event, perhaps, was the move into our new space. The Department is now mostly contiguous, and the move made it possible to accommodate most of our growth. In fact, we are at the stage again in which lack of space is starting to become a problem, with little or no space for visitors, postdocs, temporary faculty, and emeriti.

We now have an undergraduate major in Statistics, with currently 20 students enrolled. In the course of this year, we will try to increase the enrollment to about 30. Statistics 10 now uses blended instruction technology throughout, and counts as a five credit general education course. This year we will start to teach new service courses at the upper division level for Sociology and for Electrical Engineering. Total enrollments have more or less stabilized at around 4500, mostly because we stopped teaching Statistics 11 for Economics and Business.

The graduate program again went through a major growth spurt, with currently about 80 students enrolled in the Ph.D. and M.S. programs. We had some extra financial support from the graduate division this year, so we could admit a number of excellent new students. Next year we will see little or no increase, because we think that the current size is about all we can handle with our current staffing.

There are now three vice-chairs: one for undergraduate studies (Rob Gould),



Ian de Leeuw

one for graduate studies (Mark Hansen), and one for external affairs (Rick Paik Schoenberg). Faculty in the department have obtained many awards and distinctions, which you can read about on their personal web pages, on the pages of the research centers, and elsewhere in this newsletter.

We have handled a lot of promotions and merit reviews over the last years, and if everything goes as planned we will start the new academic year with eight full professors, two associate professors, and two assistant professors. One of the assistant professors will be a new hire, coming from the search that is currently in progress. In addition, we will have one academic administrator, two lecturers, two continuing lecturers, and one continuing senior lecturer. It looks as if we will have to continue the hiring process for some years to come, because there will be some unavoidable losses due to retirement. Statistics is very active in campus wide initiatives such as bioinformatics and scientific computing, and our faculty are without exception involved in many interdisciplinary projects. Generally, I think we are in good shape, but we should be careful not to be complacent and we should try to get the additional resources we are entitled to.

### **Statistics News**

Men With Heart Disease May Be at Risk for Death With Blood Sugar in 'Normal' Range, UCLA Study Suggests; Women at Lower Risk<sup>1</sup>

Men with cardiovascular disease may be at considerably increased risk for death even when their blood sugar level remains in the 'normal' range, suggests a new study by a team of scientists at UCLA and Cedars-Sinai Medical Center in Los Angeles. The study, a statistical analysis examining the connection be-



Sidney Port

tween glucose (blood sugar) levels and death in patients with cardiovascular disease, was published Feb. 15 in the American Journal of Epidemiology, the leading scientific journal in its field. Cardiovascular disease includes coronary heart disease, stroke, angina and peripheral vascular disease. Currently, doctors consider a glucose level of 100 or less to be normal, 101-126 to be impaired and above 126 to be diabetic.

"Our findings suggest that for men with cardiovascular disease, there is apparently no 'normal' blood sugar level," said Sidney Port, UCLA professor emeritus of mathematics and statistics, and lead author of the study. "For these men, across the normal range, the lower their blood sugar, the better. Their death rate over a two-year period soars from slightly more than 4 percent at a glucose level of 70 (mg/dl) to more than 12 percent at 100 (mg/dl) — an enormous increase."

Surprisingly, however, and contrary to conventional belief, above 100 (mg/dl), their risk does not seem to change – it stays at the same high level – no matter

how high above the normal range, Port said. Their death rate at 100 and 150 is the same. Although these data suggest that blood sugar for men with cardiovascular disease should be as low as possible, co-author Mark Goodarzi, assistant professor-in-residence at Cedars-Sinai Medical Center's Division of Endocrinology, cautions that their study by no means proves that deliberately lowering glucose would reduce mortality.

"Such a fact can be established only by a suitable clinical trial" Goodarzi said.

Currently, no such trials are scheduled. In another surprising result that Port and his co-authors cannot explain, women with cardiovascular disease show a dramatically different response from men. "For women, we found no evidence of any change in risk across the normal range, from 70 to 100, but then their risk seems to rise quickly through the impaired range and continues to increase with higher glucose in the diabetic range; therefore a blood sugar level of 100 seems to be a sensible cut point for women with cardiovascular disease."

"Why there should be such a profound difference between men and women with respect to how glucose affects mortality in the presence of atherosclerosis is a mystery that needs to be further pursued," Goodarzi said. "To date, we and colleagues we have consulted can offer no explanation."

"These large gender differences may have previously remained undetected because earlier studies looked either at men and women together or a younger, healthier group of men," said Port, whose study analyzed men and women with cardiovascular disease separately. "If you look at men and women combined, you get a highly distorted picture because they respond so differently."

Using extensive heart study data from the town of Framingham, Mass., collected every second year since 1948, Port and his co-authors performed a sophisticated statistical analysis, which made adjustments for factors such as the patients' cholesterol levels, blood pressure, cigarette smoking, body mass index and antihypertensive drug use. The researchers analyzed more than 1,200 people (686 men and 517 women), ages 45 to 74, diagnosed with cardiovascular disease. Because the researchers' statistical technique allowed them to take advantage of the fact that many patients were examined over multiple two-year periods, they report on more than 3,800 observations.

In a follow-up study, they are analyzing whether blood sugar levels are linked with death or development of cardiovascular disease in people who have not been diagnosed with cardiovascular disease.

Co-authors on the study are Noel Boyle, associate clinical professor of cardiology; Willa Hsueh, professor and chief of endocrinology; and Manuel Quiñones, assistant clinical professor of endocrinology, all in UCLA's David Geffen School



Robert Jennrich

of Medicine; and Robert Jennrich, UCLA professor emeritus of mathematics, biomathematics and biostatistics.

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<sup>&</sup>lt;sup>1</sup> From UCLA Office of Media Relations, http://publications.stat.ucla.edu/uclastat/men\_with\_heart\_disease-2005.pdf

# **Faculty News**

#### SCASA Fall Kick Off

The SCASA Fall Kick Off was held at Claremont McKenna College on November 5, 2005. The key note speaker was Jan de Leeuw. Mark Hanson, Robert Gould, and Mahtash Esfandiari also participated. Jan's lecture consisted of two parts:



Mahtash Esfandiari

- Building a Statistics Department—The UCLA Statistics Department started in 1998 by combining programs from Mathematics and the Social Sciences. Despite budgetary problems it has experienced fast growth. The models used to organize research and teaching, and the ways in which this new department has been imbedded in the existing campus structure were discussed.
- Gifi goes Logistic-Albert Gifi, in Nonlinear Multivariate Analysis (1990), outlines a system of descriptive multivariate analysis techniques based on least squares loss functions and alternating least squares algorithms. An alternative system of the same level of generality based on logistic likelihoods and majorization algorithms was discussed.

#### Vanessa Beddo Moves to North Carolina

Vanessa Beddo has left us as lecturer and taken a job as a senior statistician with Quintiles, Inc. in North Carolina.

Quintiles "helps improve healthcare worldwide by providing a broad range of professional services, information and partnering solutions to the pharmaceutical, biotechnology and healthcare industries."<sup>2</sup>.

It is a *big* move in every conceivable way for Vanessa and her family and we wish them all best regards in their careers and resettlement.

#### **NSF Awards Grant to Ivo Dinov**

We would like to congratulate <u>Ivo</u>
<u>Dinov</u> for his National Science Foundation award. The foundation awarded a major grant to UCLA for support of Ivo's project "<u>Statistics Online Computational Resource for Education</u>"<sup>3</sup>.

The project's abstract best describes its goals: This project is developing a suite of dynamically linked instructional materials, tutorials, demonstrations, experiments, graphical interfaces, and computational and visualization tools for improving statistics and probability education. Intellectual merit: The proposed interactive tools target both lower and upper division undergraduate students including those enrolled in a wide range of cross-listed service courses in disciplines such as economics, biochemistry, education, engineering, biomedicine, neuroscience and psychology. The project team combines faculty expertise in computational and statistical modeling research and open-source software development, with staff in a Center for Teaching Statistics and an office for Educational Technology Service. Broader impacts: Undergraduate and graduate students figure prominently in the design, implementation, and validation of the resources, via an iterative cycle of designand analysis with instruction, training and learning taking place simultaneously. The Web-based nature of the resources also facilitates the involvement of a diverse population of users. Collaborative efforts with other institutions further bolster the functionality and effectiveness of the resource as a contemporary pedagogical instrument. Finally, the materials

serve to advance understanding in the general population of basic probability and statistical modeling techniques, and data and result interpretation for informed and scientific decision-making on social, biomedical and environmental issues.

# Juana Sanchez Awarded Professional Development Award

<u>Juana Sanchez</u> received a 2004-2005 Professional Development Award from the UCLA Chancellor's Office.

The funds were used to partially support the participation in the <u>United States Conference for the Teaching of Statistics</u> (USCOTS) and participation in the CauseWeb Workshop in Columbus, Ohio, May 19-21, 2005. Juana presented a Spotlight poster session entitled "Introducing Undergraduate Students to Spam Filtering, Internet Traffic Data and WWW Clickstream Data Analysis".



Juana Sanchez

#### Juana Sanchez and Robert Gould Elected to Seats in Sections of the American Statistical Association

Two of our faculty have been elected to Section seats in the <u>American Statistical Association</u> for the years 2006-2009.

Juana Sanchez has been elected to be Council of Sections Representative for the Section on Statistical Computing. She is also editor for its newsletter. Submissions for the newsletter are welcome and can be sent to <a href="mailto:jsanchez@stat.ucla.edu">jsanchez@stat.ucla.edu</a>.

<sup>&</sup>lt;sup>2</sup> Excerpted from <a href="http://www.quintiles.com/Corporate">http://www.quintiles.com/Corporate</a> Info/

<sup>&</sup>lt;sup>3</sup> http://socr.ucla.edu

Robert Gould has been elected to the Executive Committee at Large for the Section on Statistical Education.

For ASA 2005 election results please visit:

http://www.amstat.org/news/index.cfm? fuseaction=2005electionresults.

### **Student News**

#### 2005-The Largest Yet Commencement & Celebration

The largest Department of Statistics commencement to date occurred on June 18, 2005 at the Institute of Pure and Applied Mathematics (IPAM). Our chair, Jan de Leeuw and vice chairs of undergraduate affairs, Robert Gould, and



Robert Gould

graduate affairs, Mark Hansen, provided the speeches and congratulations at this event. For those of you who would like to see a copy of the program, it can be found online<sup>4</sup>.

Ching-Ti Liu was named the 2004-2005 Teaching Assistant of the Year at this event. A well deserved honor for his hard work and care.

Forty graduate and undergraduate statistics students were recognized for completing the coursework for the statistics major and minor, including our first two students to ever receive a Bachelor of Science in Statistics at UCLA. Congratulations to all the students:

Doctorate of Philosophy

- ❖ Dr. He (Helen) Hu
- ❖ Dr. Katherine Tranbarger
- ❖ Dr. Tianwei Yu



Drs. Tranbarger, Yu and Hu

Master of Sciences

- Ivan Asensio
- ❖ Michael Choe
- Eric Daly
- ❖ Kimberly Duke
- ❖ Demetria Gianopoulos
- ❖ Ji Young Kim
- ❖ Min Seong Kim
- ❖ Brian Kriegler\*
- ❖ Dushyanth Krishnamurthy
- ❖ Frank Lee
- & Chia-Ho Lin
- ❖ Ziqiang Liu\*
- ❖ Jamie Pompa
- ❖ Xuelian Wei\*
- ❖ Yang (Gloria) Wen
- ❖ Alan Wong
- ❖ Tun-Hsiang Yang\*
- \* Going on to the Ph.D. degree

#### Bachelors of Sciences

- ❖ Joran Hettinga
- ❖ Jean Wang

Undergraduate Degree with a Minor in Statistics

- ❖ Yunong Bao
- Sze-Jou Chen
- Charleston Chiang
- A Raian Hara
- Mei Hoong
- Ngai Lee
- Sharon Lee
- ❖ Aromalyn Magtira
- ❖ Joseph Marcucilli
- ❖ Ronald Martinez
- Ariana Radianto
- ❖ Mahdi Raghfar

- ❖ Howie Ta
- ❖ Edmund Tran
- Hoosie Ung

# 2006 Commencement & Celebration

The Department of Statistics will hold its annual End-of-the-Year Commencement and Celebration at 1:00 PM on June 17, 2006 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.

The eleven undergraduate minors who we expect to graduate by Summer 2006 are:

- ❖ Monica Aviles
- Chun Chan
- ❖ Li-Chia Chi
- ❖ Amanda House
- & Bei Hu
- ❖ Wing Kwong
- ❖ Kaanan Shah
- ❖ David Tsai
- ❖ Eric Tsai
- ❖ Ka Lok Wong
- ❖ Angela Yan

Those majoring in statistics that we expect to graduate by Summer 2006 are:

- ❖ Selina Hung
- ❖ Raymond Lin
- ❖ Hansel Pattynama
- ❖ Ryan Rosario
- ❖ Wendy Shih
- ❖ Ruxi Zhang

We also anticipate our graduate students to receive their Masters degree by the end of Summer 2006. These students include:

<sup>\*</sup> Ryan Rowe

<sup>&</sup>lt;sup>4</sup> http://sutdent-services.stat.ucla.edu/publications/commencement\_program-2005.doc

- ❖ Elizabeth Bruch
- ❖ John Bucci
- ❖ Tak Fujita
- Yuwei Jin
- Kirsten Johnson
- \* Kathy Kam
- ♦ Ohjin Kwon
- ❖ Meena Mani
- ❖ Weizhi Mo
- ❖ Jung Ju Seo
- ❖ Song Yao

Our list of Ph.D. recipients include:

- ❖ Weihua Huang (Summer 2005)
- ❖ Ming Zheng (Fall 2005)
- ❖ Yan (Sabrina) He (Winter 2006)

Those who may graduate with a Ph.D. by the Summer of 2006 are:

- ❖ Jong-Ho (Andrew) Baek
- ❖ Stephen Erickson
- ❖ Neda Farzinnia
- ♦ Matilda Hsieh
- ❖ Ching-Ti Liu
- **♦** Angela Presson
- ❖ Alejandro Veen

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

#### Alan Wong Awarded SRC Student Scholarship

We are glad to announce that Alan Wong has won the 2005 Spring Research Conference (SRC) student scholarship.

Alan was one of the seven students who won this year's scholarships, which cover registration and travel expenses.

Alan made an excellent presentation on "Two-Level Nonregular Designs from Quaternary Codes" on June 3rd 2005.

The 12th Annual Spring Research Conference (SRC) on Statistics in Industry and Technology were jointly sponsored by ASA-SPES and IMS and held on June 1-3, 2005 at Park City, Utah. For more information, see <a href="http://src2005.byu.edu/">http://src2005.byu.edu/</a>.

#### **Recent Graduates Today**

Since last summer many of our graduate students have either started careers or are continuing their education:

- Mike Choe graduated with his Master's degree and is now a Technical Data Analyst with Ticketmaster
- Kimberly Duke graduated with her Master's degree and is currently starting a job as a Clinical Researcher with the UCLA School of Medicine
- Demetria Gianopoulos graduated with her Master's degree and is now an Actuarial Analyst with Farmers Insurance
- Yan (Sabrina) He graduated this winter and is now working at Countrywide Financial Corporations. She is the senior statistics modeler.
- Min Seong Kim graduated with his Master's degree and is now a graduate Student in the Department of Economics at the University of California at San Diego
- Brian Kriegler received his Masters and is continuing toward a Ph.D. in our department
- Ziqiang Liu received his Masters and is continuing toward a Ph.D. in our department
- Jamie Lynn Pompa graduated with her Master's degree and is now a Weapon System Analyst with the Department of Defense
- Katie Tranbarger graduated with her Ph.D. and is now an Assistant Professor of Mathematics at Amherst College in Massachusetts.
- Xuelian Wei received her Masters and is continuing toward a Ph.D. in our department
- Yang Wen graduated with her Master's degree and is now a Research Scientist at the University of Washington
- Alan Wong graduated with his Master's degree and is now a Senior Analyst at Countrywide Financial
- Weihua Huang graduated in the fall of 2005 with a Ph.D. She is now working for J.D. Power and Associates.

- Tun-Hsiang Yang received his Masters and continuing toward a Ph.D. in our department.
- Ming Zheng graduated this fall 2005 with a Ph.D. and is now working at Roche Pharmaceutical company.

#### **Summer Internships**

While many statistics graduate students from around the country were lounging by the pool and relaxing this past summer, many of our very own set out to improve on their skills as future statisticians. The work that these students have put in at some of the finest research institutions in the country deserves recognition and we all thank you for representing the UCLA Statistics Department well.

- Ka Wong Fair Isaac, San Diego, CA
- Andrew Baek Fair Isaac, San Diego, CA
- Chris Barr Lawrence Livermore
   National Laboratory, Livermore, CA
- Jake Porway Bell Labs, Murray Hill,
   NJ

#### Celebrations

Congratulations to Nathan Yau who got engaged over the break, to Ariana Haig who got engaged very recently, and to Annie Che who got married in December. Your fellow classmates wish you nothing but the best for you and your spouses.

## **Staff News**



Dean Dacumos Awarded James LuValle Distinguished Service Award

We would like to congratulate Dean

Dacumos for receiving alle Distinguished Service

the James LuValle Distinguished Service Award.

The purpose of the GSA James LuValle Distinguished Service Awards is to acknowledge those faculty, staff and administrators who have served the needs of graduate students above and beyond what is expected. The Award is named after James LuValle the first Graduate Students Association President for his service and dedication in forming the UCLA GSA. This award is given out annually in three categories: Faculty, Administration, and Staff. Only graduate students may nominate an individual for this award.

#### Dean Dacumos Becomes Director of Student Services for Theater, Film, and Television

It is with sorrow and pleasure to announce that Dean Dacumos has left Statistics for Theater, Film and Television. Our first student affairs officer—joining the department at its inception in 1999—has taken on the challenging and exciting position of Director of Student Servers for TF&T.

Dean's good natured embrace to all the challenges he faced in our department provided an excellent model for us all. He will sorely be missed and we will find it difficult to replace him, no less for his friendship.

We wish him and his family all the best. Good-bye Dean.

#### Arno Ouwehand Goes to North Carolina

Arno Ouwehand has moved to North Carolina with his wife Vanessa Beddo. He is now working at Geomagic, Inc. in the Research Triangle Park as a senior systems administrator and web developer. Geomagic produces "digital convergence technology that unites physical and digital worlds, freeform and mechanical shapes, and discrete and continuous mathematics"<sup>5</sup>.

Arno was an important asset to our department—administrating the cluster, programming web applications, and helping with the support. We wish him the best in his new career and home on the east coast.

#### **New Hires**

Erik Waher has joined our computing support staff. Erik comes from In-

form Systems in Northern California where he provided Mac OS X information technology services to small businesses. He is honing his skills and learning more UNIX working with us. He is studying at Santa Monica College on his way toward attaining an MBA. He is an avid weekend auto racer and organizes track days at http://private-events.net.

On other new hire items, our net number of work-study have increased by one. Two left, but three have been hired recently. The new work-studies are:

- · Stephanie Downs
- · Mark Gin
- Lorena Gutierrez

Welcome all to the department.

#### **Debbie Barrera Chairs ABOG**

Here is something that we have neglected to tell you before—Debbie Barrera has been the chair of the UCLA Aca-



Debbie Barrera

demic Business Officers Group going on for more than two years, and she is also on their steering committee.

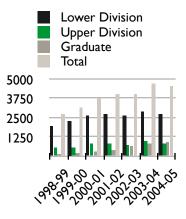
The primary charge of the UC Academic Business Officers Group (ABOG) Systemwide Steering Committee is to plan, organize, and coordinate the annual ABOG conference. In addition, the systemwide steering committee serves as a group that gathers and provides feedback regarding issues of importance to each campus's local Academic Business Officers Group. This committee meets a minimum of 3 times per year.

# Department News

#### The Statistics of Statistics

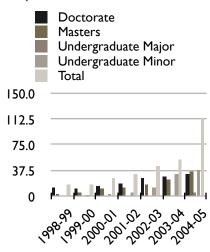
Since Statistics was established as a department on April 29, 1998, the one constant we have known is growth. We have grown in numbers of students, numbers of students taught, number of courses offered, and number of degree programs.

#### Course Enrollments 1998-2005



When Statistics began, we only had two degree programs: a Ph.D. Program and an M.S. Program. In Winter Quarter 2000, an Undergraduate Minor in Statistics was established. Several years later, in Fall Quarter 2004, an Undergraduate Major in Statistics was created.

#### Department Enrollments 1998-2005



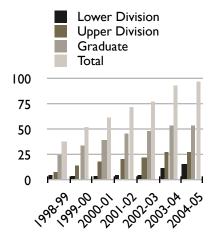
<sup>&</sup>lt;sup>5</sup> Excerpted from <a href="http://geomagic.com/company/about.us/">http://geomagic.com/company/about.us/</a>

Obviously our new undergraduate program assisted in our growth; where there used to be no statistics students, we now have some. But the less obvious fact was throughout the development of our undergraduate program, the numbers of students joining our graduate program strongly increased. The attached graph shows that total statistics students have increased 571% since 1998.

In addition to the growing number of statistics students at UCLA, we also saw an annual increase of 65% of students who took statistics classes since 1998. So in addition to helping educate more Statisticians, we are also helping more students from all disciplines learn statistics and how it can help them.

Students today are not as limited in variety of Statistic courses they can take at UCLA. The Department of Statistics now offers 155% more course options for this increasing student population.

#### Statistics Courses 1998-2005



Looking at the graphs, it may seem the numbers have been leveling off in the past year, but we do not anticipate a decline in growth. In Fall 2005, we had our first group of freshman start in the Undergraduate major in Statistics. Also, several projects, like a proposed professional Masters degree, are in the works that we hope will continue this growth trend in the Department of Statistics. All in all, growth still looks to be a constant in our Department.

#### Two New Journals

The Department of Statistics is launching two new journals.

The first is dedicated to publishing scholarly works on the subjects of technology and statistics education. Although statistics is a discipline in which advances in technology can have an enormous impact, there have not been any journals that address how these changes affect the curriculum, nor how technology can be best used to teach fundamental statistical concepts, nor how to best teach statistical software. The journal will be an electronic journal, published by BePress and archived in the California Digital Reserve. The editorial board, which consists of some of the top researchers in statistics education, will meet for the first time on May 6. The editor is Rob Gould. Additional support for the journal has been generously provided by the UCLA Office of Instructional Development, Stata Corp., Key Curriculum, UCLA Division of Physical Sciences, and Amgen.

The other journal in progress, which is also electronic, will be devoted to computational environmental statistics, and will be edited by Rick Paik Schoenberg. The journal will address the growing interplay between these three scientific disciplines, and will focus particularly on environmental applications of statistics, especially those involving extensive and/or innovative computation.

#### First Ever Faculty Retreat a Success

The first ever UCLA Statistics faculty/staff retreat was held on October 12, 2005 at scenic May's Landing in Malibu. While taking in the breathtaking views, the department discussed policy on hiring and teaching priorities, the role of the qualifying exams, the progress of graduate students, the core statistics courses for graduates and undergraduates, and other topics. The retreat was widely regarded as a success and will likely become an annual tradition.

#### **Graduate School Applications**

The Department of Statistics received 160 applications for Fall 2006, 88 for the Doctorate program and 72 for the Masters program. This is by far the most applications our program has received topping last year's record season (123 applications) by 30%. The increase in doctorate applications is 13% (from 78 to 88) and the increase of Masters applicants is 58% (from 45 to 71). Good luck to all the applicants.

#### **Department Babies Born Recently**

We would like to announce the birth of babies born recently to statistics department members.



Jadon Jin Zhu
b. 8/17/2005
Haiyong Xu & Weijun Zhu, parents



Jaakkina Harris b. 4/4/2005 Vivian Lew & Kivi Harris, parents



Mateo Keaton Hales-Garcia b. 3/5/2005 Jose & Katrina Hales-Garcia, parents





Roy Baek b. 8/17/2004 Andrew Baek & Sura (Christine) So, parents

#### Statistical Seedlings

# **Teaching**

#### **Statistical Consulting Class**

This year, 18 senior and sophomore Stats majors are getting real-life experience and helping their community. The Statistics Consulting Class (Stats 88/140SL/141SL) has teams of students solving problems for The UCLA Ashe Center, The Jewish Family Center, the LA's Best after school program, and Sony Pictures.

The Jewish Family Center wants to know whether clients find their counseling services useful and whether they show measurable improvements. A team of students is examining survey data to determine if customer satisfaction varies from site to site, whether psychological scores improve over time, and whether their are any identifiable demographic markers that might help the Center better distribute its counseling resources.

LA's Best, "the mayor's favorite charity", offers academically oriented afterschool programs to students in over 100 schools in the Los Angeles Unified School District. Funding for the program depends strongly on attendance, and so LA's Best would like to determine which factors predict attendance in their program.

Sony Pictures is asking the students to create a model that will predict DVD sales of movies based on a variety of factors.

UCLA's own Ashe Center is asking the students to examine data from the

Alcohol Harm Reduction Survey to better understand in which environment drinking habits are most likely to lead to harm.

The teams, lead by Vivian Lew, have already met with their clients to learn about the problem, the data, and how the clients will use their results. In March, the teams will present the clients with a progress report and, in June, with a final report and oral presentation. The students include Cheng-Hsueh Chiang, Daniel Nguyen, Desiree Cua, Hansel Pattynama, Irina Kukuyeva, Kwan Wong, Lulu Zhang, Nicholas Wang, Raymond Lin, Ruxi Zhang, Ryan Rosario, Tony Li, Wendy Shih, and Zaric Wong.

#### UCLA Hosts the 2005 Undergraduate Summer Program in Statistics, June 19 through June 24th

From June 19 through the 24th, UCLA hosted the Undergraduate Summer Program in Statistics. The week-long event was designed to introduce students to the exciting challenges facing today's "data scientists". The theme for this first meeting was visualization and its role in the practice of statistics.

The organizers were: Mark Hansen (UCLA), Vijay Nair (University of Michigan), Deborah Nolan (UC Berkeley), Duncan Temple Lang (UC Davis), and Bin Yu (UC Berkeley).

Speakers and guests included: Dean Dacumos (UCLA), Deborah Estrin (UCLA), David James (Bell Labs), Bill Kaiser (UCLA), Diane Lambert (Bell



Summer Program Participants

Labs), Doug Nychka (NCAR), John Rice (Berkeley), Terry Speed, Terry (Berkeley), Deborah Swayne (AT&T Labs), Yingnian Wu (UCLA).

For more information and pictures of this and future events please visit: <a href="http://summer.stat.ucla.edu">http://summer.stat.ucla.edu</a>.

# Introductory Statistics 10 is Redesigned and Preliminary Results are Positive

The redesign of Statistics 10, our largest introductory statistics course, continues successfully. This project, funded and supported in many ways by OID and designed and led by Mahtash Esfandiari, is a complete overhaul of the "traditional" format of an introductory course. At the heart of the project is an an electronic quiz bank that provides students with immediate feedback on their performance and provides faculty with an immediate profile of the class's understanding of the week's topics. This quiz tool, along with reliance on a new course management system called Moodle, allows the learning to be much more student-centered and, as a result, less time is spent lecturing. The Winter quarter is the first quarter in which all 400 Statistics 10 students are enrolled in the redesigned course. Although a full evaluation has not yet been completed, preliminary results show that 80%-90% of the students reported that they were more motivated, more active, and more engaged than they were in other similar courses, and they also reported that Stats 10 required more "upper level" thinking and less memory work than these other courses. Much of the success of the new course is due to the enthusiastic and diligent efforts of the TAs and GSRs involved: Ching Ti Liu, Jae Brodsky, Mike Choe, Brian Kriegler, Katlin Leung, Chris Barr, and Adam Sugano.

#### **Advancing Statistics**

### Research

# Image and Vision Science Workshops, Classes and Presentations

The 2005 International Workshop on Mathematical, Computational, and Applied Aspects of Computer Vision and Pattern Recognition<sup>6</sup> was held at the Lotus Hill Research Institute<sup>7</sup> in Ezhou, China. Its organizers included Songchun Zhu and Harry Shum, and was sponsored by the NSF and the Chinese NSF. Other members of the department's vision group also participated, including: Alan Yuille, Jacob Porway, and Siavosh Bahrami.



Song\_Chun Zhu

Song-Chun Zhu gave a one day tutorial in October to the International Conference on Computer Vision<sup>8</sup> in Beijing; and gave a two week course at the Lotus Hill Institute<sup>9</sup> in China.

The vision group gave six conference presentations in 2005. These can be found at:

http://www.stat.ucla.edu/~sczhu/conf\_p ub.html



Alan Yuille

#### Grants

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

#### Richard Berk

- "Classifying and Predicting High Risk Inmates", University of California/California Policy Research Center, 7/1/04-6/30/05
- "Ensemble Methods for Data Analsis in Behavioral, Social, and Economic Sciences", National Science Foundation, 10/1/04-9/30/06
- "Countywide Homeless Population Estimate and Street Count", Applied Survey Research, Inc./County of Los Angeles, 3/15/05-7/31/05

#### Ivo Dinov

 "Statistics Online Computational Resource for Education", National Science Foundation, 04/15/05-03/ 31/07

#### Mahtash Esfandiari

 "Faculty Committee on Educational Technology Blended Instruction for Statistics 10 and 10A, Funding for an Undergraduate and Graduate Research Assistant", Office of Instructional Development. Fund Dates: 7/1/05-6/30/07

#### Rob Gould and Mahtash Esfandiari

 "Statistics 10 Test Bank Funding for a Graduate Student Researcher", Office of Instructional Development, 6/15/05-6/30/06

#### Rob Gould

- "E-Journal in Teaching and Learning Statistics with Technology",
   Office of Instructional
   Development/Committee on Instructional Improvement Programs,
   1/30/06-6/30/06
- "Model Chance: A Technology-rich Environment for Learning Probability", University of Massachusetts/

National Science Foundation, 5/1/05-4/30/07

#### Mark Hansen

- "Algorithms and System Support for Data Integrity in Wireless Sensor Networks", NSF NeTS-NOSS, 9/ 05-9/08
- "Measure of Convenience", Center for Embedded Network Sensing Grant, 9/05-9/06
- "2005 Media Arts Fellow", Sponsored by the Rockefeller and Ford Foundations
- "Undergraduate Statistical Workshop", IPAM and NFS, June 19-24 2005

#### Ker-chau Li

 "High Dimensional Methods for Complex Data Refining", National Science Foundation, 6/1/04-5/31/ 07

#### Juana Sanchez

- "Lowering the Shoe-Leather Costs of Learning Modern Statistics for Upper Division Statistics Students", Office of Instructional Development. Fund Dates: 7/1/05-6/30/06
- "Funding Provided to Hire a Research Assistant to Compile, Edit, and Digitize Course Material", Office of Instructional Development, 4/05-7/05
- "Honoraria for Guest Speaker Dr. Andre Broido to Speak in Statistics C158", Office of Instructional Development.
- "Funding to Hire a Research Assistant to Assist in the Compilation,
   Editing, Programming and Illustration of Activities Created by Former
   Students of Statistics 10, 11, 12, 13,
   100A and 110A Courses", Office of
   Instructional Development, 5/05-6/
   05

<sup>&</sup>lt;sup>6</sup> http://www.lotushill.org/ch/AcademicActivities/2005Conference.html

<sup>&</sup>lt;sup>7</sup> http://www.lotushill.org

<sup>&</sup>lt;sup>8</sup> http://civs.stat.ucla.edu/MCMC/MCMC\_tutorial.htm

<sup>&</sup>lt;sup>9</sup> http://www.lotushill.org/ch/AcademicActivities/2005course.html

#### Hongquan Xu

• "Efficient Large Fractional Factorial Designs: Theory and Construction", National Science Foundation. Fund Dates: 7/1/05-6/30/08

#### Alan Yuille

- · "Image Parsing: Integrating Generative and Discriminative Methods", National Science Foundation, 1/5/ 05-12/31/07. Co-PI: Song-chun Zhu
- "Catalyst Proposal: National Science Foundation National Center for Perceptual Learning and Brain Plasticity", University of Minnesota/ National Science Foundation, 10/1/ 03-9/30/06
- "W.M. Keck Foundation Program in Vision and Image Sciences", W.M. Keck Foundation, 1/5/05-12/4/07

#### Song-chun Zhu

- "US-China Workshop on Computer Vision: Supplement to National Science Foundation IIS-0413214", National Science Foundation, 8/15/ 05-7/31/07
- · "Statistical Methods for Computer Vision with Special Emphasis on Improved Object Class Recognition Systems", Siemens Corporation Research, Inc.
- "C2Fuse: Computer Vision for Control and Command Systems", University of Colorado/US Navy/ Office of Naval Research, 4/1/05-3/31/08

#### Preprints, Papers & Reviews

## **Recent Papers**

One hundred and twenty-nine papers have been written since our last newsletter in Spring of 2004. These are are just the ones we have discovered so far.

Being too many to list in the newsletter, we list just a few of the recent highlights organized by center showing the breadth of the research being conducted

in the department. For a more complete list, please see one of our on-line papers web sites 10 or search Google on any our department member's names11.

#### **Center for Applied Statistics**

- Richard A. Berk, Azusa Li and Laura Hickman (2005), Statistical Difficulties in Determining the Role of Race in Capital Cases: A Re-analysis of Data from the State of Maryland, Journal of Quantitative Criminology
- Richard A. Berk, Yan He and Susan 2. Sorenson (2005), Developing a Practical Forecasting Screener for Domestic Violence Incidents, Evaluation Review, 29(4): 358-382
- Cleridy E. Lennert-Cody and Richard A. Berk (2005), Statistical Learning Procedures for Monitoring Regulatory Compliance: An Application to Fisheries Data, UCLA Statistics Preprint No. 426
- Richard Berk, Brian Kriegler and Donald Ylvisaker (2005), Counting the Homeless in Los Angeles County, UCLA Statistics Preprint No. 441
- Schoenberg, F.P. and Tranbarger, K.E. Description of Earthquake Aftershock Sequences using Prototype Point Processes
- 6. Veen, A. and Schoenberg, F.P. (2005). Assessing Spatial Point Process Models for California Earthquakes using Weighted K-functions: Analysis of California Earthquakes. in Case Studies in Spatial Point Process Models, Baddeley, A., Gregori, P., Mateu, J., Stoica, R., and Stoyan, D. (eds.), Springer, NY
- Peng, R. D., Schoenberg, F. P., Woods, J. (2005). A Space-time Conditional Intensity Model for Evaluating a Wildfire Hazard Index, JASA 100 (469), 26--35
- Peng, R., and Schoenberg, F.P., Estimating Fire Interval Distributions using Coverage Process Data, Environmetrics

- Schoenberg, F.P. and Johnson, E.A. Classification and Description of Wildfire Patterns using Prototype Point Processes
- 10. Schoenberg, F.P., Chang, C., Pompa, J., Woods, J., and Xu, H. A Critical Assessment of the Burning Index in Los Angeles County, California

#### **Laboratory of Statistical Genomics**

- Kao, K., Y. Yang, R. Boscolo, C. Sabatti, V. Roychowdhury, and J. Liao (2004), Determination of Multiple Transcription Regulator Activities in Escherichia coli using Network Component Analysis, Proceedings of the National Academy of Science 101: 641-646
- Lee, H., H. Wang, J.C. Jen, C. Sabatti, R.W. Baloh, and S.F. Nelson (2004), A Novel Mutation in KCNA1 Causes Episodic Ataxia without Myokymia, Human Mutation 24: 536
- Jen, J. C., H. Wang, H. Lee, C. Sabatti, R. Trent, I. Hannigan, K. Brantberg, G. M. Halmagyi, S. F. Nelson, and R. W. Baloh (2004), Suggestive Linkage to Chromosome 6q in Families with Bilateral Vestibulopathy, Neurology 63: 2376-2379
- Sabatti, C., L. Rohlin, K. Lange, and 7. Liao (2005), Vocabulon: a Dictionary Model Approach for Reconstruction and Localization of Transcription Factor Binding Sites, Bioinformatics 21: 922-931

#### Center for Vision and Image Sciences

- 1. S.C. Zhu, C. E. Guo, Y.Z. Wang, and  $Z_{i}$ 7. Xu (2005), What are Textons?, Int'l J. of Computer Vision, vol.62(1/2), 121-143, April/May, 2005
- Z.W. Tu, X.R. Chen, A.L. Yuille, and S.C. Zhu (2005), Image parsing: unifying segmentation, detection and recognition, Int'l J. of Computer Vision, 63(2), 113-140

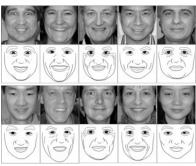
<sup>10</sup> http://preprints.stat.ucla.edu or http://repositories.cdlib.org/uclastat/

<sup>11</sup> http://directory.stat.ucla.edu



Figure Decomposition

- A. Barbu and S.C. Zhu (2005), Generalizing Swendsen-Wang to Sampling Arbitrary Posterior Probabilities, IEEE Trans. on Pattern Analysis and Machine Intelligence, vol.27, no.8, 1239-1253
- Z.W. Tu and S.C. Zhu (2005), Parsing Images into Regions, Curves, and Curve Groups, Int'l Journal of Computer Vision
- R. Maciuca and S.C. Zhu, First-hittingtime Analysis of Independence Metropolis Sampler, Journal of Theoretical Probability



Computer Sketching

- C.E. Guo, S.C. Zhu and Y.N. Wu
   (2005), Primal Sketch: Integrating
   Texture and Structure, UCLA Statistics Preprint No. 416 and also in
   print in Computer Vision and Image
   Understanding
- H. Chen and S.C. Zhu, A Generative Sketch Model for Human Hair Analysis and Synthesis, IEEE Trans. on Pattern Analysis and Machine Intelligence
- Hong Chen and Song Chun Zhu (2005),
   A Generative Model of Human
   Hair for Hair Sketching, <u>UCLA</u>
   Statistics Preprint No. 419
- Zijian Xu, Hong Chen and Song-Chun Zhu (2005), A High Resolution Grammatical Model for Face Representation and Sketching, <u>UCLA</u> <u>Statistics Preprint No. 420</u>

 Feng Han and Song-Chun Zhu (2005), Cloth Representation by Shape from Shading, <u>UCLA Statistics Preprint</u> <u>No. 422</u>

# **Center for the Teaching of Statistics**

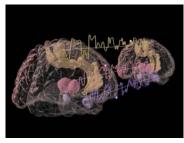
- Mahtash Esfandiari (2004), Application of "Case Based Approach"
   Along with "Generative Model of Teaching" and "Technical Writing" to the Teaching of Applied Statistics, UCLA Statistics Preprint No. 375
- Yung-Ai Alice Chuang and Mahtash Esfandiari (2004), Are our Assessment Methods of Student Performance in Statistics 10 in Alignment with the New Trends in Statistics Education?, UCLA Statistics Preprint No. 410
- Sanchez, J. and He, Y. (2005). Internet
  Data Analysis for the Undergraduate Statistics, Curriculum. Journal of
  Statistics Education. Volume 13(3)
- Sanchez, J. and Liu, C.T. (2004). Bayesian Hierarchical Model of the Browsing Behavior of WWW Users. Computer Science and Statistics. Vol 36. Proceedings of the 36th Symposium on the Interface. Baltimore, Maryland, May 26-29
- Juana Sanchez and Ching-Ti Liu (2004), Bayesian Hierarchical Model of the Browsing Behavior of World Wide Web Users, <u>UCLA Statistics Preprint No. 392</u>

#### Studio of Bio-data Refining and Dimension Reduction

- Ker-Chau Li (2004), A functional Genomic Study on NCI's Anticancer Drug Screen, Nature, Volume 4, Number 2, Pages 127-135
- Ker-Chau Li, Ching-Ti Liu, Wei Sun, Shinsheng Yuan and Tianwei Yu (2004), A System for Enhancing Genomewide Coexpression Dynamics Study, PNAS – Proceedings of the National Academy of Sciences of the United States of America, October 18

#### **Miscellaneous Papers**

- Peter M. Bentler (2004), Maximal Reliability for Unit-weighted Composites, <u>UCLA Statistics Preprint No.</u>
  405
- Kees van Montfort and Jan de Leeuw (2004), Factor Analyses for Nonnormal Variables by Fitting Characteristic Functions, <u>UCLA Statistics</u> <u>Preprint No. 397</u>
- C. Roger Nance and Jan de Leeuw
  (2005), The Obsidian Blade Sequence at El Ujuxte, a Late Preclassic Site on the South Coast of Guatemala, Statistics Preprint No. 431
- Jan de Leeuw (2004), Comments on Pardoe, Weitner, and Frase: Sentencing Convicted Felons in the United States: A Bayesian Analysis Using Multilevel Covariates, <u>UCLA Statis-</u> <u>tics Preprint No. 385</u>
- 5. Dinov ID, Valentino D, Shin BC, Konstantinidis F, Hu G, MacKenzie-Graham A, Lee EF, Shattuck DW, Ma J, Schwartz C and Toga AW (2005), LONI Visualization Environment, Journal of Digital Imaging
- Dinov ID, Boscardin, JW, Mega MS, Sowell EL, Toga AW. (2005), A Wavelet-Based Statistical Analysis of fMRI Data: I. Motivation and Data Distribution Modeling, NeuroInformatics, Humana Press, 3(4), 319-343



- Thomas Ferguson, Chris Ferguson and Céphas Gawargy (2004), U(0,1) Two-Person Poker Models
- Xiaowei Yang and Jinhui Li (2005),
   Selection Models with Augmented
   Gibbs Samplers for Continuous
   Repeated Measures with Nonignorable Dropout, <u>UCLA Statistics Preprint No. 451</u>

- Mark O. Goodarzi, Stephen Erickson, Sidney C. Port, Robert I. Jennrich, and Stanley G. Korenman (2004), Cell Function: A Key Pathological Determinant in Polycystic Ovary Syndrome, The Journal of Clinical Endocrinology & Metabolism 90(1):310–315
- Frederic Paik Schoenberg (2004), Characterization and Simplification of Non-simple Marked Point Processes, UCLA Statistics Preprint No. 377
- Katherine Tranbarger and Frederic Paik Schoenberg (2004), On the Computation and Application of Prototype Point Patterns, <u>UCLA Statistics</u> <u>Preprint No. 406</u>
- Kim, T. H, Barrera, L. O., Zheng, M.,
   Qu, C., Singer, M. A., Richmand, T. A.,
   Wu, Y. N., Green, R. G. and Ren, B.
   (2005), A High-resolution Map of Active Promoters in the Human Genome, Nature, 436, 876-880
- Ming Zheng, Leah O. Barrera, Bing Ren and Ying Nian Wu (2005), ChIP-chip: Data, Model, and Analysis, <u>UCLA</u> <u>Statistics Preprint No. 443</u>
- Jinhui Li Xiaowei Yang, Yingnian Wu, and Steven Shoptaw (2005), A Random-effects Markov Transition Model for Poisson-distributed Repeated Measures with Nonignorable Missing Values, <u>UCLA Statistics</u> <u>Preprint No. 444</u>
- Xu, H. and Lau, S. (2005). Minimum Aberration Blocking Schemes for Two- and Three-Level Fractional Factorial Designs, Journal of Statistical Planning and Inference. Available online 28 June 2005
- Xu, H. (2005), A Catalogue of Three-level Regular Fractional Factorial Designs. Metrika, 62, 259-281.
- Xu, H. (2005), Some Nonregular
   Designs From the Nordstrom and
   Robinson Code and Their Statistical
   Properties, Biometrika, 92, 385-397
- 18. Xu, H. and Wu, C. F.J. (2005). Construction of Optimal Multi-Level

- Supersaturated Designs, Annals of Statistics, 33, No. 6.
- Xu, H. and Deng, L. Y. (2005). Moment Aberration Projection for Nonregular Fractional Factorial Designs, Technometrics, 47, 121-131

#### Computing Matters

# **Bits && Bytes**

#### **Course Management Systems**

Increasingly used by schools worldwide, *course management systems* are web applications that facilitate the administration and participation of online courses.

Course management systems (not to be confused with content management systems) are complex applications which, in order to be successful with non-technical users, must be simple to use. They assemble together many sub-applications and sub-systems—for example, forums, wikis, quizzes, assignments, journals (blogs), lessons, timed activities, gradebooks, access control, versioning, and document editing—and, organize them by groups of users—such as, course-groups, researchgroups, and project-groups. They also protect the privacy of the participants and their content from non-participants.

Having evolved from differing philosophical, cultural and technical perspectives, course management systems are not standardized and vary greatly in their feature sets and even names. Other names used for these systems are: collaborative learning environments (CLE), online learning environments (OLE), learning management systems (LMS), and virtual learning environments (VLE).

An important distinguishing factor between course management systems is their focus on collaboration tools—an important feature for research institutions. Some course management systems, like <a href="Sakai">Sakai</a>, come from a collaboration genesis; while others, like <a href="Moodle">Moodle</a>, come from a pedagogical one. What is appar-

ent is that a convergence of these two approaches is occurring. For example, Sakai is building many tools that are fashioned after Moodle's teaching modules, and Moodle is building a *document management system* (DMS) which will facilitate the sharing, editing and versioning of materials—all fundamental capabilities of online collaboration systems.

Several departments at UCLA have in production or are evaluating course management systems. <u>Statistics</u> and <u>Education</u> are each using their own installations of Moodle to teach their online courses. <u>Anderson and Humanities are piloting a shared installation of Sakai</u>.

UCLA is committed to course management systems. They solve important problems such as distance learning, group collaboration, standardizing interfaces, document management, assessing the performance of students in large classes, and the efficacy of instruction. It will not be long before these systems are a common and integral part of the university experience for students, instructors, and researchers worldwide.

#### A Podcast is Coming to a Course Near You

Stanford University has started podcasting its faculty lectures and interviews<sup>12</sup> using Apple's free iTunes® distribution service. Now any university can do the same<sup>13</sup>.

There are two recording approaches that can be used to create podcasts: record at the live presentation or record in a studio. Each approach presents its own technical challenges, but with the proper production infrastructure in place, either one can be employed without extra effort on the part of the lecturer.

The potential benefits for students and subject retention are debatable but some interesting things occur with podcasts: 1) students can play them repeatedly—anywhere, anytime; 2) slides and whiteboard presentations can be included

<sup>12</sup> http://itunes.stanford.edu/

<sup>13</sup> http://www.apple.com/education/solutions/itunes\_u/

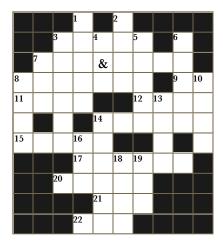
in-sync with the audio. No one could doubt that podcasts would make an impact on instruction.

UCLA may be participating in the podcast phenomenon. Of course, we will keep you posted on developments in future issues.

#### Games and Puzzles

# **Just for Fun**

¡Su rompecabezas!



#### ACROSS:

Artist's tripod

- 7. UCLA Stat duo, or '60s band that sang "Deadman's Curve"
- 8. Author with the most Annals of Statistics papers in the 80s
- 9. Degrees of freedom parameter
- 11. Jealousy
- UCLA Stat student and former Wolverine
- 14.  $\theta_1$  and  $\theta_2$
- 15. One who adjusts a parameter?
- 17. UCLA Stat student who plays the piano
- 20. "\_\_\_\_ Love": 1989 movie starring Al Pacino and Ellen Barkin
- 21. Fed. Research Granting agency
- 22. PhD student who used to have "really long hair" DOWN:
- Student Affairs Clerical Support Specialist
- 2. PhD student who teaches for UCLA extension
- 3. Stat student with a new yellow Mustang
- 4. Initials of mail-order surcharge
- 5. One MS student's last name and another's middle name

- Recently married UCLA Stat student
- 7. Stat administrator who watches TLC
- 8. MS student from China
- 10. Registration and student records site
- 13. Computer vision expert
- 14. SGSA dictator
- 16. Word preceding "ball" or "sight"
- 18. Stat computer guru
- 19. Exclusively in the case that

#### Support Statistics Teaching and Research

# Giving

The UCLA Department of Statistics is growing rapidly, and our sources of public funding are not keeping up with our increasing demands. Funding from donors like you will help us maintain state-of-the-art computing facilities for our undergraduate majors and our graduate students. You can also help provide financial assistance for our grad students to support their research and teaching. Donate and advance Statistics' mission of promoting the use of data in the understanding of our environment, our social relationships, and our physical and virtual selves.

#### How to Give

#### **Give Online**

You can make donations easily and securely online 14. Donate to one of four areas: *Undergraduate Teaching, Graduate Student Support, Computing Support*, or *Discretionary*.

#### Give by Mail

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#### **More Information**

For more information please see our web page for online giving. 15 or contact Jennifer Ono, Fund Manager, at 310-825-8430 or e-mail at giving@stat.ucla.edu.

<sup>14</sup> https://giving.ucla.edu/statistics

<sup>15</sup> http://giving.stat.ucla.edu



#### Events at UCLA and Statistics

### **Calendar**

February 20	President's Day Holiday
March 17	Winter Courses End
March 20-24	Finals Week for Winter Quarter
March 31	Ceasar Chavez Holiday
Apríl З	Spring Courses Begin
May 29	Memorial Day Holiday
June 9	Spring Courses End
June 12-16	Finals Week for Spring Quarter
June 17	Statístics End-of-the-Year Commencement & Celebration
June 26	Summer Session A Begins
July 4	Independence Day Holíday
August 7	Summer Session C Begins
September 4	Labor Day Holíday
September 18-22	Qualifying Exams
September 26-27	New Statistics Graduate Student Orientation
September 28	Fall Courses Begin

#### **CREDITS**

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