

Twelfth Annual Department of Statistics Winter Workshop

The Twelfth Annual Department of Statistics Winter Workshop was entitled “Categorical” and was held in Emerson Alumni Hall from January 15–17. Eleven internationally renowned speakers in semi-parametric methodology were invited including:

- Alan Agresti, University of Florida
- Jon Forster, University of Southampton (Great Britain)
- Diane Lambert, Google
- Xihong Lin, Harvard University
- Peter McCullagh, University of Chicago
- Nancy Reid, University of Toronto (Canada)
- Jim Albert, Bowling Green State University
- Gary Koch, University of North Carolina
- Joseph Lang, University of Iowa
- Stuart Lipsitz, Brigham and Women’s Hospital, Harvard University
- Art Owen, Stanford University

The workshop covered topics from Bayesian model averaging for categorical data to sampling bias in logistic models to rank based tests for clustered data.

InfoTech Inc., the National Science Foundation, and the University of Florida Department of Statistics, College of Liberal Arts and Sciences, and the Graduate School provided funding. The winter workshop committee was composed of Linda Young (chair), Alan Agresti, George Casella, and Mike Daniels. Slides for the talks can be found on the winter workshop website at www.stat.ufl.edu/symposium/2010/#speakers. Next year’s workshop will be on “High-dimensional Inference”.

Projects

Faculty have been working on many interesting research projects involving theory, methodology and applications. Below are snippets from two projects addressing important problems.

Linda Young has been leading one of three research teams formed as part of a cooperative research effort between the National Institute of Statistical Sciences (NISS) and USDA’s National Agricultural Statistics Service (NASS) for the past 15 months. UF graduate student Kenny Lopiano as well as two NASS researchers, a NISS postdoctoral fellow, and a junior faculty member from North Carolina State University complete the team. The research focus has been on revising the methodology used to provide an annual estimate of the number of U.S. farms. New methods for adjusting for misclassification and non-response have been recommended with ground-truthing to a second-phase to the current aerial survey. Implementation is anticipated over the next year.

Mike Daniels has continued to work with researchers in the Health Science Center at UF on monitoring progression of Duchenne’s Muscular Dystrophy (DMD) in children. The idea is to image muscles to monitor progression of the disease. Issues include how best to quantify the images. This research is funded by a large NIH grant with patients being recruited in Florida, Pennsylvania, and Oregon.

From the Chair

Hello alumni, former faculty, and other friends of the department,

This is the second of an annual newsletter to keep you apprised of what is going on in the Department of Statistics at the University of Florida.

Department faculty are very active in research publishing over 30 papers this past year, many in the top journals in our field. They also continue to be very successful with grant funding. Faculty are principal investigator (PI) on grants from NSF, NIH, and NSA on inference and modeling for genomic data, (incomplete) longitudinal data, social data and algorithms for MCMC. The faculty are also involved in many collaborative projects with investigators all around campus and the world including projects in agriculture, muscular dystrophy, spinal cord injuries, health effects of air pollution, pine genomics, astronomy, the impact of recent legislation on hospital falls, landmine detection, and spatial mapping of malaria.

The faculty remain active in the profession holding various leadership positions including past chair of the Section on Nonparametric Statistics of the ASA, member of the Executive Committee of the Section on Statistical Education of the ASA, and Treasurer and Program Chair of ENAR.

Many department faculty also hold editor and associate editor positions at top journals. The department currently has the Joint Editor of the Journal of the Royal Statistical Society, Series B and associate editors for Journal of the Royal Statistical Society, Series B,

Message continued inside...

Department News

Faculty Updates

George Casella won the 2009 CLAS International Educator Award. He was also elected a Foreign Member, Spanish Royal Academy of Sciences (Real Academia de Ciencias Exactas, Físicas y Naturales. There are currently 96 foreign members in the world.)

Mike Daniels served as the 2010 ENAR program chair and started his two-year term as Treasurer of ENAR.

Malay Ghosh gave a plenary talk entitled “Benchmarking in Small Area Estimation” at a conference held in Economics University of Katowice, Poland in September 2009.

Megan Mocko was elected to the Executive Committee of the Statistical Education Section of the ASA.

Ron Randles gave a plenary lecture at the Conference on Nonparametric Statistics and Statistical Learning at the Ohio State University in May 2010. His lecture was titled “Robustness of Location Estimators to Distortion”.

Linda Young has recently completed revisions for the 3rd edition of the Introduction to Probability and Its Applications, thereby joining first author and emeritus faculty member Richard Scheaffer as the second author. She also was elected to serve an additional 3-year term on the National Institute of Statistical Science’s Board of Trustees and continues to serve as the treasurer of the International Biometric Society (IBS).

Retirements



Professor Alan Agresti: Alan received a BA in math from the University of Rochester in 1968, an

M.S. in statistics from University of Wisconsin in 1970, and a Ph.D. in 1972. The title of his dissertation was “Bounds on the extinction time of some branching processes” (advisor Stephen Stigler).

Alan came to UF in 1972 and spent his entire career here through becoming a Distinguished Professor in 2000. He received an Honorary Doctorate

of Science from De Montfort University in England in 1999, for “outstanding international contributions to research and scholarship in Applied Statistics, particularly, Categorical Data Analysis”. He is an elected fellow of the ASA and IMS. He has written over 120 papers including many that made fundamental contributions to categorical data analysis. In addition, he has written five books including what might be called, ‘the book’ on Categorical Data, which has thousands of citations.

The department celebrated Alan with a retirement dinner in April at the Harn Museum of Art on the UF campus.

In Memoriam: William Mendenhall III, 1925–2009



William Mendenhall III passed away on December 8, 2009 at 84 years of age.

Dr. Mendenhall earned his bachelor’s degree in mechanical engineering (1945) and master’s degree in mathematics (1950) from Bucknell University and his doctoral degree in statistics from North Carolina State University (1957).

Upon completion of his Ph.D., he spent a year at the University of London working with Professor M.G. Kendall to compile a comprehensive bibliography of research articles in life-testing. Upon his return to the states, he was appointed Assistant

Professor at North Carolina State University from 1958–1959 and then an Associate Professor of Mathematics at Bucknell University from 1959–1963. He came to UF in 1963 as Professor and founding head of the statistics department. He was the primary architect responsible for developing the department from its beginnings as a small unit in the College of Agriculture with no students and no academic programs to a nationally recognized department. After stepping down as department head in 1977 he served the University of Florida as Professor of Statistics until 1981 and as Professor Emeritus thereafter. Dr. Mendenhall was elected a Fellow of the Royal Statistical Society in 1957 and of the American Statistical Association

in 1979.

Dr. Mendenhall is best known for the more than a dozen texts on beginning statistics he authored or coauthored during his career. His books spanned a wide variety of areas of applications of statistics. His book, Introduction to Probability and Statistics, is a landmark text on introductory statistics in that it was the first book that emphasized the subject as a mathematical tool for making inferences based on carefully designed observations. The book is currently in its 12th edition and is used at many universities around the world. His other most well known textbook, Mathematical Statistics with Applications, first published in 1973 with R.L.Scheaffer as the coauthor, is

currently in its seventh edition (with coauthors D. D. Wackerly and R. L. Scheaffer). This book remains a bestseller.

Each year the Mendenhall Award is given to the top first year student. In addition, Dr. Mendenhall endowed a fellowship in honor of his wife, Joan, which is given to one of the top incoming graduate students each year.

He is survived by his wife of more than 60 years, Joan Mendenhall; his sons William M. Mendenhall, and Charles M. Mendenhall; and grandchildren Katherine J. Mendenhall, Marisa C. Mendenhall, Elena C. Mendenhall and Kristen R. Mendenhall.

2009 Challis Lectures

2009 Challis Lecturer Peter Hall

2009 Challis Lecturer was Professor Peter Hall. Professor Hall is Professor in the Department of Statistics at UC Davis and the University of Melbourne (Australia). He is a world-renowned expert in nonparametric statistics. He is an elected fellow of the Australian Academy of Science (AAS), the Institute of Mathematical Statistics (IMS), the American Statistical Association (ASA), and the Royal Society (FRS). Professor Hall has won numerous awards during his career including the prestigious Committee of Presidents of Statistical Societies (COPPS) Presidents' Award in 1989, the Pitman Medal of the Statistical Society of Australia Inc. (SSAI) in 1992, and the Hannan Medal of the AAS in 1994. In addition, he was the IMS Wald Lecturer in 2006.



Technical Lecture Title and Abstract

Modeling the Variability of Rankings. For better or for worse, rankings of institutions, such as universities, schools and hospitals, play an important role today in conveying information about relative performance. They inform policy decisions and budgets, and are often reported in the media. While overall rankings can vary markedly over relatively short time periods, it is not unusual to find that the ranks of a small number of highly performing institutions remain fixed, even when the data on which the rankings are based are extensively revised, and even when a large number of new institutions are added to the competition. In this talk we endeavor to model this phenomenon. We interpret as a random variable the value of the attribute on which the ranking should ideally be based, and we interpret data as providing a noisy approximation to this variable. We show that, if the distribution of the true attributes is light-tailed (for example, normal or exponential), then the number of institutions whose ranking is correct, even after recalculation using new data and even after many new institutions are added, is essentially fixed. Cases where the number of reliable rankings increases significantly when new institutions are added are those for which the distribution of the true attributes is relatively heavy-tailed.

Public Lecture Title and Abstract

Contemporary Frontiers in Statistics. The availability of powerful computing equipment has had a dramatic impact on statistical methods and thinking, changing forever the way data is analyzed. New data types, larger quantities of data, and new classes of research problem are all motivating new statistical methods. We shall give examples of each of these issues, and discuss the current and future directions of frontier problems in statistics.

2010 Challis Lecture

We are excited that the 2010 Challis Lectures, to be held September 13–14, will be given by Professor Persi Diaconis of Stanford University.

Abstracts for all the Challis lectures are available at www.stat.ufl.edu/challis/INDEX.html.

Video of the Challis lectures can be found at the website www.stat.ufl.edu/challis.

Funding

The Challis Foundation of Texas provided funding for this lectureship.

The University of Florida, in cooperation with the Gill Foundation of Texas, has established the George Challis Distinguished Lectureship in Statistics.

The George Challis Distinguished Lecturer in Statistics at the University of Florida for that year visits the university in the fall to deliver two lectures, one for a general audience and one for a technical statistics audience. There will be a banquet in honor of the award recipient.

The Department of Statistics at the University of Florida has already received the endowment to establish the Distinguished Lectureship, and

the first one was held in December 2001.

Jack and Linda Challis Gill created the Gill Foundation of Texas in 1997 as a private family foundation “to formalize the family involvement in education”. The Gills have been making personal gifts for over 20 years for teacher awards, scholarships, fellowships, academic chairs and major programs.

Linda Challis Gill wants to remember her father by supporting education and research at the highest levels, and hopes that the establishment of this award will further that goal.

...Message From the Chair, continued from the cover

the Journal of the American Statistical Association, and Biometrics.

We will bring in a class of 11 new graduate students this year. In the past year, our Ph.D. graduates have taken positions at the University of Iowa, the FDA, Worcester Polytechnic Institute, and the University of West Virginia. In addition, this past year graduate students in the department won travel awards to attend JSM 2010 from the Section on Bayesian Statistical Science and the Section on Health Policy Statistics.

We have re-started the UF dinner at JSM (in Vancouver this year). A group of 13 faculty, students, and alums went to Foggs N' Sudds for a fun dinner. Hope that next year in Miami an even bigger group will go out.

It is always nice to see retired faculty around the department, whether stopping in for a visit, teaching courses (still), or continuing their research. Emeritus Professor André Khuri just published a new book on linear models and Emeritus Professor Alan Agresti recently

finished a revision on his book on models for ordinal data. On a more somber note, the department was saddened with the passing of Dr. Bill Mendenhall, the founding chair of the department. Details on his career can be found on page 2.

Finally, we offer thanks for alumni and former faculty for their generous donations over the years. Please stop by the department the next time you are in Gainesville.



Best Regards,

Mike Daniels, Professor and Chair

