

# University of Connecticut Department of Statistics

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and Ming-Hui Chen**

The Department of Statistics at the University of Connecticut was founded in 1962. However, long before the official formation of this department, on September 16, 1950, Geoffrey Beall was appointed professor of statistics. As one of the major statistics departments in New England, it provides outstanding preparation for careers in academia, industry, or government. With a core faculty of 15 members whose teaching and research expertise span virtually all major specializations in statistical science, our department has both national and international reputation in undergraduate and graduate education, research, and service to the profession. The department offers BA/BS majors, BA/BS majors in mathematics and statistics jointly as well as Masters and PhD degrees in statistics.

Over the years, more than 117 PhD and 255 MS degrees have been awarded. Our graduates have found attractive positions in academia, industry, government, and other institutions including medical centers of repute.

The university's main campus is at Storrs, Connecticut where the department is housed on the third floor of CLAS Building. The department plays a key role in

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hiring and nurturing statistics faculty members, including lecturers, who offer statistics courses in other campuses at Avery Point, Hartford, Stamford, Torrington, and Waterbury.

## **A History of the Department**

Robert H. Riffenburgh, PhD Virginia Polytechnic Institute 1957, was hired in 1962 to design and develop the statistics program and headed the department until 1968. He resigned from the department in 1970 and moved to the Naval Ocean Systems Center and San Diego State University, California. Gottfried E. Noether, who received his PhD from Columbia University, was the second head of the department during 1968–1982. Uwe Koehn, who received his PhD from the University of Illinois and joined the University of Connecticut in 1968, served his first term as the head of the department from September 1982 to August 1987 and then served a second term from April 1991 to December 1996. Nitis Mukhopadhyay was the head of the department from September 1987 to October 1990. Dipak K. Dey served as the department head from January 1997 to June 2011. Joseph Glaz became the department head in July 2011.

During Riffenburgh's headship, the MS and PhD programs in statistics were developed and students recruited, an NIH biostatistics training grant was obtained, and the departmental colloquia series began with many illustrious speakers, including Frank Anscombe, George Barnard, M. G. Kendall, Tjalling Koopmans, P. C. Mahalanobis, C. R. Rao, Nicholas Rashevsky, John Tukey, Jimmy Savage, and Colin White. Also under Riffenburgh, the department expanded greatly, bringing on board Earl J. Bell (lecturer), Marilynn Dueker (lecturer), Friedrich Gebhardt, Alan E. Gelfand, Bruce McK. Johnson, Uwe Koehn, Gottfried E. Noether, Harry O. Posten, Dolly Smith (lecturer), Hugh Fairfield Smith, H. Jean Thieboux, Derrick S. Tracy, and Sam Zahl. Timothy J. Killeen and Joseph Glaz were hired during Noether's headship. The department continued to grow during Koehn's term when Dipak K. Dey, Nitis Mukhopadhyay, Lynn Kuo, and Richard Vitale were hired. During Mukhopadhyay's term, Nalini Ravishanker, Suman Mazumdar, Igor Perisic, and Sandy Addelstein (lecturer) were hired. During Dey's term, Yazhen Wang, Vladimir Pozdnyakov, Ming-Hui Chen, Zhiyi Chi, Enrique Alvarez, Cyr M'Lan, Ofer Harel, Jun Yan, Sangwook Kang, Alejandro Vilagran, and Kathleen McLaughlin (lecturer) were hired. To get a glimpse at some of the faculty members, one may see Figures 1, 2, 3 and 4.

At the department's founding in 1962, statistical computation was conducted on electric calculators, which Riffenburgh replaced with electronic calculators. Computer access for large programs was limited to the University's IBM mainframe computer. By 1985, a single computer terminal and a card-punching machine were located in a corner of our mailroom. Until early 1987, every faculty member, student, and staff had a mainframe account with small annual allocation



**Fig. 1** From *top* clockwise: Robert H. Riffenburgh, Hugh Fairfield Smith, Gottfried E. Noether, Samuel Zahl, H. Samuelson, Earl J. Bell, H. Jean Thieboux, and Derrick S. Tracy



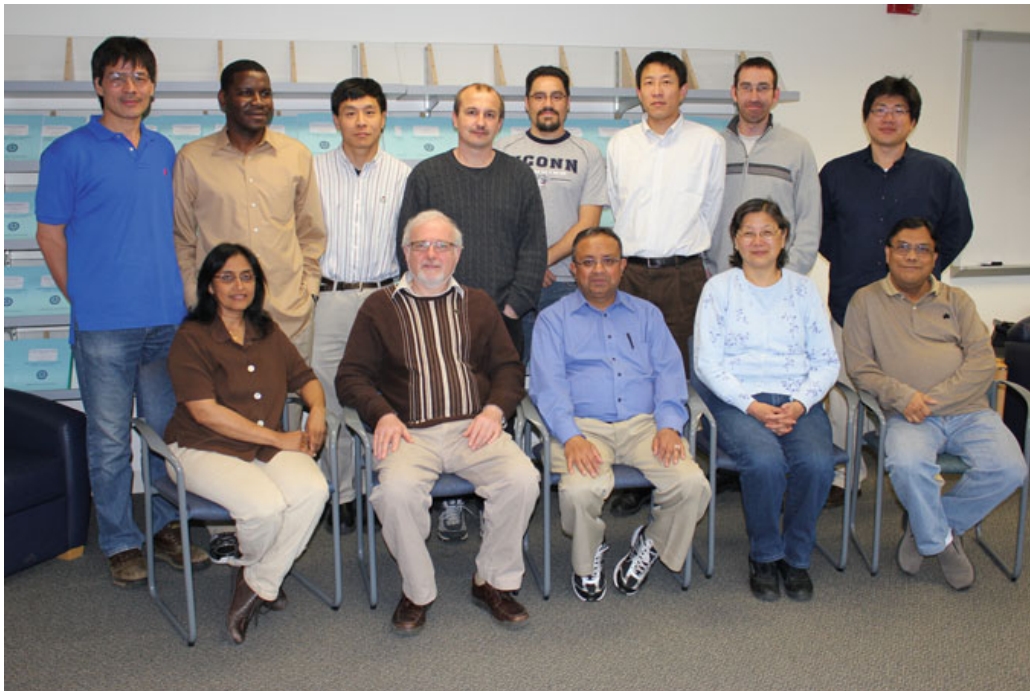
**Fig. 2** From *left to right*: Harry O. Posten, David Salsburg, and Timothy J. Killeen

each. When Mukhopadhyay became the head in September 1987, he negotiated with the dean to buy two free-standing computers with connections to the IBM mainframe. This was a big move forward at the time which eventually energized faculty members to win several NSF awards to build our own high-power computer labs in the years that followed.

From the initial stages to the late 1980s, the administrative staff included Jeanne R. Young and Alice Kristoff. Since the early 1990s, Cathy Brown and Tracy Burke have been the mainstay in our central office.



**Fig. 3** From *left to right*: **a** Nitis Mukhopadhyay, Alan E. Gelfand, and D. R. Cox during Pfizer colloquium 1994; **b** Nitis Mukhopadhyay, Uwe Koehn, Dipak K. Dey, and Harry O. Posten; and **c** Rick Vitale



**Fig. 4** From *left to right*, *Top row*: Ming-Hui Chen, Cyr M'Lan, Zhiyi Chi, Vladimir Pozdnyakov, Alejandro Villagran, Jun Yan, Ofer Harel, and Sangwook Kang; *Bottom row*: Nalini Ravishanker, Joseph Glaz, Dipak K. Dey, Lynn Kuo, and Nitis Mukhopadhyay. Not shown are Suman Majumdar and Rick Vitale. Spring 2011

### **Pfizer Colloquium Series and Films for the Archive of ASA**

The founding of Pfizer colloquium series began nearly 35 years ago in this department under Harry O. Posten and David S. Salsburg. Salsburg is this department's first PhD (1966) degree recipient and he held a high-level position at Pfizer Global Research and Development in Groton, Connecticut. The purpose of

the colloquium was to make films of distinguished statisticians for the archive of the American Statistical Association (ASA). This joint enterprise has been continually supported by funding from this department, Pfizer Global Research and Development in Groton, Connecticut, and ASA.

Colloquium director Posten videotaped J. Neyman (1979), H. Cramer (1980), C. R. Rao (1981), G. E. Noether (1983), M. Hansen (1985), Herman Chernoff (1989), and many more. Timothy J. Killeen helped Posten with finer details of filming. From 1985, Mukhopadhyay contributed to the project. In a number of these wonderful films, Frank J. Anscombe from Yale University did a splendid job introducing the distinguished statistical scientist and the lecture.

Posten also worked with colleagues at other institutions to videotape distinguished statisticians for ASA's archive, for example, Ed Deming (1981), George Box (1982), R. C. Bose (1983), Oscar Kempthorne (1991), Marvin Zelen (1997), and many more.

Since Posten's passing, Mukhopadhyay has been directing this project, filming Brad Efron (2001), David R. Brillinger (2004), Chris Heyde (2005), Emanuel Parzen (2006), Barbara Bailer (2007), and Stephen E. Fienberg (2009).

This lengthy series of historically invaluable films are preserved in the archives of the ASA and distributed by the ASA.

## **New England Statistics Symposium**

The New England Statistics Symposium (NESS) began at the University of Connecticut in 1987 under the inspiration of Herman Chernoff from Harvard University. Its purpose was to bring together New England statisticians to share research, discuss emerging issues, and network with colleagues. The annual NESS falls on a Saturday after April 15, hosted in odd years by the Department of Statistics at the University of Connecticut and in even years at another New England institution. Since 1988, other host institutions have included University of Massachusetts-Amherst (1988), University of Lowell (1990), Bentley College (1992), University of Rhode Island (1994), Worcester Polytechnic Institute (1996, 2006), Massachusetts Institute of Technology (1998), Brown University (2000), Yale University (2002), Harvard University (2004, 2010), Suffolk University (2008), and Boston University (2012). While only 52 participants attended the first NESS, current attendance exceeds 150.

The year 2011 marked the twenty-fifth anniversary of NESS. In the early years, the NESS was a one-day affair. Since 2009, NESS has expanded to 2 days by offering short courses on the first day and technical sessions on the second. Each year, NESS features two plenary speakers, special theme sessions, and contributed papers covering all aspects of statistics and probability. Plenary speakers, originally only from New England, in recent years have come from both far and near.

The impressive list of plenary speakers included John Hartigan, Donald B. Rubin, and Gottfried Noether (1987); Herman Chernoff and Andrew Rukhin (1989); Yali

Amit and Persi Diaconis (1990); Nan Laird and David Pollard (1991); Alan Gelfand and Robert Devaney (1992); Carl Morris and Stuart Geman (1993); Herman Chernoff and David Salsburg (1994); Andrew Barron and Cyrus Mehta (1995); Gerald Hahn and John Pratt (1996); Constantine Gatsonis and Richard Dudley (1997); James Stock and L. J. Wei (1998); Louise Ryan and Donald Geman (1999); David Mumford and Dipak K. Dey (2000); Joseph G. Ibrahim and Joseph Horowitz (2001); Leon Gleser and Bruce Levin (2002); Xiao-Li Meng and J. Michael Steele (2003); George Cobb and Andrew Lo (2004); Evarist Gine and David Harrington (2005); Lawrence H. Cox and Soren Bisgaard (2006); Paul Dupuis and Nitis Mukhopadhyay (2007); Andrew Lo and Martin Wells (2008); James O. Berger and Richard A. Davis (2009); Iain Johnstone and Jennifer Tour Chayes (2010); Brad Carlin and Jun S. Liu (2011); and Rick Durrett and Robert Kass (2012).

Since 2005, IBM T. J. Watson Research Center has sponsored the IBM student award given when UConn Department of Statistics hosts NESS. Since 2009, Smith Hanley Associates LLC has provided financial support for graduate students to attend NESS. In 2010, Microsoft and Google also sponsored the NESS student award.

## **Other Major Events and Activities in the Department**

### ***Joint UConn-UMass Colloquium Series***

The joint UConn-UMass colloquium series was conceived in 1988 by Andrew Rukhin, University of Massachusetts-Amherst. In the fall semester, it is hosted by UMass-Amherst with a presentation by a UConn faculty and, in the spring semester it is hosted by us with a presentation by a UMass faculty. These colloquia are heavily attended by students and faculty alike from both institutions. This series has survived 24 years with no break, quite some feat by any standard.

### ***International Workshop in Applied Probability 2006***

The International Workshop in Applied Probability (IWAP) was originally orchestrated by Joe Glaz and some of his very close associates. The first and second IWAP were held at Caracas, Venezuela (2002) and Piraeus, Greece (2004), respectively. The third IWAP, was hosted by our department during May 2006. Bernoulli Society, IBM Research, Institute of Mathematical Statistics, Office of Naval Research, Taylor & Francis Group and the University of Connecticut sponsored the workshop. Nearly 200 participants from 26 countries took part in IWAP 2006. During the conference 160 invited talks were presented arranged in 40 parallel sessions, and 8 plenary lectures were delivered by Louis H. Y. Chen, Robert J. Elliott, Alan E. Gelfand, Steven Haberman, Nikolaos Limnios, Hosam

M. Mahmoud, Servet Martinez, and Gennady Samorodnitsky. Glaz was the chair of the local organizing committee. Faculty members from this department served extensively on the scientific and local organizing committees, organizing invited sessions, and presenting invited talks.

### ***International Chinese Statistical Association Applied Statistics Symposium 2006***

The International Chinese Statistical Association (ICSA) Applied Statistics Symposium was hosted by our department during June 2006. This annual statistics symposium featured keynote lectures by Xiao-Li Meng, James O. Berger, and Terry P. Speed, and plenary talks by Kung-Yee Liang and Jun S. Liu. There were also eight sets of nine concurrent oral presentation sessions and one poster session. More than 318 participants came from many countries around the world. This symposium received strong support from our university community and 11 companies, including Bristol-Myers-Squibb, Boehringer-Ingelheim Pharmaceuticals, Pfizer Global R&D, GSK, Organon, Amgen, Merck, IBM, Sanofi-Aventis, Johnson & Johnson, and Eisai Medical Research.

### ***International Indian Statistical Association Conference 2008***

The International Indian Statistical Association (IISA) conference was hosted by this department during May 2008, sponsored by us, the ASA, and partners from business and industry. It was attended by nearly 180 participants from academia (including many students), government, and industry from many parts of the world, including Bangladesh, Brazil, Brunei, Canada, Egypt, France, Germany, India, Italy, Japan, Russia, Spain, Sweden, and the USA and was the most highly attended IISA conference held in North America at the time. The program included plenary lectures by Jayaram Sethuraman and Marvin Zelen. A special feature was a series of lectures named after R. R. Bahadur, D. Basu, V. S. Huzurbazar, P. R. Krishnaiah, and P. V. Sukhatme and presented by Evarist Gine, Glen Meeden, L. J. Wei, Barry Arnold, and Sanat Sarkar, respectively. Dey, Mukhopadhyay (Chair), and Ravishanker served in the local organizing committee.

### ***Statistical Consulting Services***

Riffenburgh started the department's consulting service to other university departments in 1963. Koehn continued and expanded the consulting services in the 1980s and 1990s. Currently, the Statistical Consulting Services (SCS), primarily

supported by this department, serves as a statistical consulting resource for external clients from business, government, and industry and provides statistical advice for faculty and graduate student research. It generates collaborative research projects and serves as a hands-on applied statistics training ground for our graduate students. The SCS also conducts short courses when appropriate. In the recent past, SCS has provided consulting services not only to various departments within the Storrs campus but also to the Law School, the University of Connecticut Health Center, and some local companies.

### ***Department's Colloquia Series and Students' Seminar Series***

This department retains its vigorous colloquium series throughout the year, hosting 12–15 colloquia each semester presented by active researchers in statistical science. Recently, colloquia series were run by Chi, Glaz, Harel, Yan, and Kang.

Additionally, we host a separate Students' Seminar Series, also held every week. Our graduate students make presentations accessible to all students and are encouraged to post their presentations on our website as student journals. This extremely important activity started in the late 1980s and is still going strong, currently coordinated by Kuo.

### ***Pfizer Global Research and Development Student Fellowship Program***

In December 2007, this department and Global Research & Development of Pfizer, Inc. jointly agreed to institute a Pfizer Global Research & Development Student Fellowship program. Under this agreement, a student fellow is selected from the graduate students in the department. This student fellow works at Pfizer for 10 hours per week during regular semesters and 20 hours per week in the summer. The student fellows included Wangang Xie (2008), Miaomiao Ge (2009–2011), and Ouyang Guang (2011–2012).

### ***Traveler's Research & Development Student Fellowship Program***

In 2000, this department and Travelers, Inc. jointly agreed to institute a Traveler's Research & Development Student Fellowship program, under the leadership of our alum Keith Holler. Under this agreement, a student fellow was selected from the graduate students in the department. This student fellow worked at Travelers for 10 hours per week during regular semesters and 20 hours per week in the summer.



The student fellows included Hai Xu and Yuchen Gu, both of whom later took permanent positions at Travelers. Currently, this program is being continued under the leadership of our alum, Patrick Wang from Travelers.

### ***Founding and Organizing International Conferences Elsewhere***

Glaz has been instrumental in inspiring and then continues organizing the IWAP internationally every 2 years. Mukhopadhyay inspired and founded the International Workshop in Sequential Methodologies (IWSM) and continues to organize the IWSM internationally every 2 years. Mukhopadhyay was instrumental in founding the first International Sri Lankan Statistical Conference that was hosted by University of Peradeniya, Kandy, Sri Lanka during December 28–30, 2004. De Silva and Mukhopadhyay published the jointly edited *Proceedings of the International Sri Lankan Statistical Conference: Visions of Futuristic Methodologies*. Mukhopadhyay was a Vice-Chairman for the sixth Calcutta Triennial Statistics Symposium that was held during December 2006 in Calcutta, India. He coedited its proceedings jointly with Manisha Pal as a special issue of the *Calcutta Statistical Association Bulletin*, October 2009.

### **Kudos to the Department**

The department includes a large number of high-profile colleagues who are elected Fellows and Members of some of the internationally leading learned societies. Chen, Dey, Glaz, Mukhopadhyay, and Vitale are elected Fellows of the Institute of Mathematical Statistics. Chen, Dey, Glaz, Kuo, Mukhopadhyay, and Ravishanker are elected Fellows of the ASA. Chen, Dey, Mukhopadhyay, and Vitale are elected Ordinary Members of the International Statistical Institute.

Dey and Glaz are both elected members of Connecticut Academy of Arts and Sciences. Dey received the Outstanding Alumni Award (2007) from Purdue University. Starting July 1, 2011, Dey is serving as an Associate Dean in the College of Liberal Arts and Sciences, after serving this department as its head during the past 14 years. He has become a Fellow of AAAS in 2011.

Glaz (2006), Mukhopadhyay (2008), and Pozdnyakov (2006) received the Abraham Wald Prize in Sequential Analysis. Dey (2008) received the Board of Trustees Distinguished Professorship from the University of Connecticut. Harel received a 5-year career award supported by National Institute of Health (2010–2015) for missing data methodologies in HIV prevention trials.

A large number of us have provided outstanding support to our profession by serving in the editorial board of numerous journals of international repute. In particular: Chen has been a co-editor of *Sankhyā* since 2004, and one of the editors of *Bayesian Analysis* since 2010. Dey was a co-editor of *Sankhyā* during

1999–2001 and editor of *IMS Bulletin* during 1998–2001. Glaz founded *Methodology and Computing in Applied Probability* in 1997 and continues as editor-in-chief. Mukhopadhyay co-edited *Sequential Analysis* in 2003 and has been its editor-in-chief since 2004. Ravishanker has been an editor of *Applied Stochastic Models in Business and Industry - Theory & Methods* since 2008.

## Research Profile

The areas of expertise of the faculty recognized internationally include: *applied probability* (Chi, Glaz, Mukhopadhyay, Pozdnyakov, Vitale), *Bayesian phylogenetics* (Chen, Kuo), *Bayesian statistical methodology and computation* (Chen, Dey, Harel, Kuo, M'lan, Ravishanker, Villagran, Yan), *categorical data analysis* (Chen, Dey), *causal inference* (Harel), *convex-geometric methods in probability and statistics* (Vitale), *copulas* (Yan), *decision theory* (Chen, Dey, Kuo, Mukhopadhyay), *design and analysis of epidemiological studies* (Kang), *diagnostic testing* (Harel), *distribution theory and methods* (Dey, Mukhopadhyay), *econometrics* (Dey, Yan, Mukhopadhyay), *environmental engineering and transportation engineering* (Ravishanker), *environmental sampling* (Mukhopadhyay), *estimating equations* (Yan), *geometrical probability* (Glaz), *large deviations* (Chi), *limit theorems and approximations* (Mukhopadhyay, Pozdnyakov), *longitudinal data analysis* (Chen, Dey, Harel, Kuo, Yan), *mathematical finance* (Dey, Pozdnyakov), *microarray data analysis* (Chen, Kuo, M'lan), *missing data analysis* (Chen, Harel, Mukhopadhyay, Yan), *multiple comparisons* (Chi, Glaz, Mukhopadhyay), *multivariate analyses* (Dey, Mukhopadhyay, Ravishanker), *nonparametrics* (Mukhopadhyay), *nonparametric Bayesian statistics* (Dey, Kuo), *occurrence of patterns* (Pozdnyakov), *probability approximations* (Glaz, Mukhopadhyay), *probability inequalities* (Glaz, Mukhopadhyay, Vitale), *reliability* (Dey, Mukhopadhyay), *scan statistics* (Glaz), *selection and ranking* (Mukhopadhyay), *sequential analysis* (Glaz, Harel, Mukhopadhyay, Pozdnyakov, Yan), *simultaneous inference* (Dey, Glaz, Mukhopadhyay, Ravishanker), *spatial statistics* (Dey, Yan), *statistical genetics* (Dey), *statistical inference* (Dey, Majumdar, Mukhopadhyay), *statistical methods in actuarial science and marketing* (Ravishanker), *statistical shape analysis* (Dey), *stochastic geometry* (Vitale), *stochastic processes* (Chi), *survey sampling* (Harel, Kuo, Mukhopadhyay), *survival data analysis* (Chen, Dey, Kang, Kuo, Mukhopadhyay, Ravishanker, Yan), *statistical image analysis* (Dey), and *time series analysis* (Dey, Mukhopadhyay, Ravishanker, Villagran).

This research profile may be broadly classified into three clusters supplemented with a list of selected books and papers in the reference section.

## ***Statistical Methodology***

Chen and Dey developed a new theory for skew link functions useful for categorical and longitudinal data analysis. They also made contributions to model determination, variable selection, prior elicitation, and Bayesian meta-analysis. Chen has advanced Bayesian statistical computing by providing new algorithms along with theory and software. Chi has developed major new results in multiple hypothesis testing. Glaz has developed probability inequalities and approximations for both discrete and continuous scan statistics. Dey developed unified theory, methodology, and application of skew-elliptical distribution.

Gelfand retired from here in 2002 and immediately started on a new career path. We appreciate the contributions that he had made during the years from 1969 to 2002. His blockbuster paper with Adrian Smith on sampling-based approaches to calculating marginal densities was published in 1990.

Harel has come up with a novel approach and coined the phrase “outfluence” to evaluate the importance of missing observations in data analysis. He has also provided more insight for the understanding of partial and latent ignorability of missing data and multiple imputations. Kuo formulated a stochastic search procedure using indicator functions for the Bayesian variable selection. She was the originator of sampling-based procedures for nonparametric Bayesian statistics, survival analysis, software reliability, and quantal bioassay. M’Lan has developed Bayesian sample size determination methods for cohort studies.

Mukhopadhyay has published intensely on key sequential, two-stage, and multi-stage sampling designs from perspectives of point estimation, hypothesis testing, ranking and selection, clinical trials, and nonparametrics. He also published a series of papers on sufficiency, ancillarity, minimum variance unbiased estimation, UMP tests, maximal invariants, and UMPI tests. Ravishanker has introduced Bayesian sampling-based approaches to ARMA processes and multivariate survival analysis with positive stable frailties. Yan has proposed novel methods for copulas, temporal process regression, dynamic survival models, and spatial statistics.

## ***Applied Probability and Stochastic Processes***

Chi has made contributions to large deviation and stochastic processes. Majumdar has worked on probability metrics and the central limit theorem. Glaz has made theoretical contributions in scan statistics, probability inequalities for multivariate distributions with dependence structures, approximations and inequalities for order statistics for dependent observations, and combinatorial and geometrical probability. Mukhopadhyay has produced probability distributions of stopping times, bounds, and approximations for t- and F-distributions, independence, correlations, nonassociation, multivariate t-distributions, and optimality of Jensen’s inequality with unusual applications. Pozdnyakov has investigated patterns of waiting times in gambling, martingale approaches to scan statistics, and future prices. Vitale has discovered a

strong law of large numbers for random compact sets and has focused on the relationship between convex geometry and questions in probability and statistics, including novel stochastic and correlation inequalities, bounds, and moments.

### ***Interdisciplinary Research***

This is one of the hallmarks in this department. Most faculty members are proactively involved in interdisciplinary research with other scientists. It not only helps to shape the research directions for us, but also helps to foster visibility within our university and scientific community.

Chen works with Anthony V. D'Amico at Harvard University on various issues arising in prostate cancer research. He also works with other scientists on Bayesian phylogenetics, clinical trials, meta-analysis, missing data, microarray, and structural equations. Chi has collaborated with neuroscientists on projects studying neural activity and its relation to sensory input and learning. Dey has collaborated with Kent Holsinger at UConn Ecology and Evolutionary Biology (EEB) on population genetics and ecology. He also collaborated with other scientists on cancer risk studies, data mining, proteomics, survival analysis, and statistical image processing.

Glaz collaborated with Peter Willett at UConn Electrical Engineering Department on applications of scan statistics. Harel has served as a biostatistical consultant, nationally and internationally, since 1997. Through his collaborative consulting, he has been involved with a variety of research areas, including Alzheimer, diabetes, nutrition, HIV/AIDS, and alcohol and drug abuse prevention.

Kuo collaborates with David Rowe at University of Connecticut Health Center and Dong-Guk Shin from Computer Science Engineering at UConn on microarray analysis, pathway, genetic network, and stem cell research. She also collaborates with Chen jointly with Lewis at UConn EEB on Bayesian phylogenetics. Mukhopadhyay has collaborated with Alex Tartakovsky and Aleksey Poluchenko from University of Southern California on network surveillance, change-point problems, and security monitoring.

Ravishanker works with J. N. Ivan at UConn on transportation engineering and with other scientists on actuarial science, environmental engineering, and marketing. Yan works with M. Willig at UConn Center for Environmental Sciences & Engineering on spatial-temporal data modeling and analysis. He also works with other scientists on biostatistical research.

### **Some Former PhDs**

In the history of this department, we have been very fortunate that all its past graduates have made their own mark in the profession. We distinctly feel proud of all of them and we thank them for giving us the great opportunity to be a part

of their lives during the formative years. Here, we present a short but representative list:

David Salsburg (PhD 1966) became one of the Vice-Presidents of Pfizer Global Research in Groton, Connecticut. Chris P. Tsokos (PhD 1968) has been the Director and a University Distinguished Professor at the University of South Florida-Tampa. Matthew Goldstein (PhD 1970) has been the Chancellor at CUNY. Salsburg (2008) and Tsokos (2010) won the first two Alumni Awards from this department.

Brad Carlin (PhD 1989) is the Head for the Division of Biostatistics and a University Chair Professor at the University of Minnesota. He who received the APHA Mortimer Spiegelman Award in 2000. Saibal Chattopadhyay (PhD 1993) became the Dean at the Institute of Management Calcutta, India. Bani Mallick (PhD 1994) became a University Distinguished Professor at Texas A&M in 2011. Sudipto Banerjee (PhD 2000), Division of Biostatistics, University of Minnesota, received the APHA Mortimer Spiegelman Award in 2011.

## Summary and Outlook

In the 50 years of this department's history, it has made extensive and exemplary contributions to the profession of statistics. The vibrancy and relevance of its curriculum and research arguably have been second to none. The diversity, breadth, and depth this department has to offer could easily be the envy of many. But that does not mean that we are standing still and basking in our past glory. We will not do so. The world changes and presents daunting new demands and we pledge to change and adapt to live up to the future. We are continuing to train ourselves and our students to face the challenges that are yet to come.

**Acknowledgment** Our sincere thanks go to Robert H. Riffenburgh for providing helpful information. We also thank Keith Conrad for sharing the minutes from past UConn Board of Trustee meetings.

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