

*Embargoed until 9 a.m. (EDT) August 10, 2015*

## **AMERICAN STATISTICAL ASSOCIATION PRESENTS 2015 AWARDS**

*Ceremony held yesterday during Joint Statistical Meetings in Seattle*

**SEATTLE, WA, AUGUST 10, 2015** – The American Statistical Association (ASA), the nation’s preeminent professional statistical society, announced the honorees of its prestigious annual awards last evening.

Honorees were presented their respective award during a special ceremony at the [2015 Joint Statistical Meetings \(JSM 2015\)](#) in Seattle. The list of the ASA’s awards and the honoree(s) for each follows:

### **Samuel S. Wilks Memorial Award**

The Wilks Memorial Award honors the memory and distinguished career of Sam Wilks by recognizing outstanding contributions to statistics that carry on the spirit of his work. The Wilks Award is made possible in part by a donation from Alexander Mood, who was a student of Wilks. The 2015 honoree is **James O. Berger**, Duke University professor of statistics. Berger has made fundamental contributions to the foundations of statistics and to statistical decision theory. He is one of the world’s leading figures in Bayesian statistics—particularly in objective Bayes thinking. Berger has made seminal contributions to the areas of model selection, multiple inference, computer modeling and simulation. Now he is a leader in the area of uncertainty quantification, having co-founded the journal in this field. Berger also has made important interdisciplinary contributions, in particular to astronomy, geophysics and medicine. He has supervised 34 doctoral dissertations, published more than 180 papers and written or edited 16 books or special volumes. Most noteworthy, his landmark book titled “[Statistical Decision Theory and Bayesian Analysis](#)” remains a popular and definitive reference 30 years later.

### **Gottfried E. Noether Awards**

The Noether Awards were established by the wife and daughter of the late Gottfried Emanuel Noether, professor at the University of Connecticut, as a tribute to his memory. The Senior Scholar Award recognizes a distinguished researcher or teacher who supports research in nonparametric statistics. The Young Researcher Award is presented to an accomplished young researcher to promote research and teaching in nonparametric statistics. The respective honorees are:

- The 2015 Senior Scholar Award honoree is **Willem Rutger van Zwet** of Leiden University in Leiden, the Netherlands. He was honored for outstanding contributions to the theory, application and teaching of nonparametric statistics.

- The 2015 Young Researcher Award honoree is **Han Liu**, assistant professor of operations research and financial engineering at Princeton University. Liu was honored for his outstanding early-career contributions to nonparametric statistics.

### **Outstanding Statistical Application Award**

Each year, the ASA recognizes the author(s) of a paper that is an outstanding application of statistics in the physical, biological or medical sciences with this award. The 2015 honorees are **Anne R. Cappola**, associate professor of medicine at the University of Pennsylvania Perelman School of Medicine; **Wensheng Guo**, University of Pennsylvania professor of biostatistics; **Ziyue Liu**, assistant professor of biostatistics at the Indiana University Schools of Public Health and Medicine; and **Leslie J. Crofford**, professor of medicine and of pathology, microbiology and immunology at Vanderbilt University. They were honored for their paper titled "[Modeling Bivariate Longitudinal Hormone Profiles by Hierarchical State Space Models](#)," published in the *Journal of the American Statistical Association* (Volume 109, Issue 505, 2014). Their paper presented an elegant and broadly applicable solution to model bivariate longitudinal hormone data revealing the role of hypothalamic-pituitary-adrenal (HPA) axis dysfunction in patients with chronic fatigue syndrome (CFS) and fibromyalgia. The model they proposed is flexible to allow complex individual profiles and relationships between two hormones while remaining computationally efficient. Nearly all applied statisticians are encountering complex longitudinal data with increasing frequency. Allowing for efficient estimation and inference within a flexible framework provides an elegant and much-needed solution. This paper not only provides sound methodology for this particular application, but, to quote the nominating letter, the "proposed method can be used to model many different cross-relationships ... symmetric or asymmetric, concurrent or lagged in time, on the overall signal levels or on a particular signal component, static over time or time-varying."

### **W.J. Dixon Award for Excellence in Statistical Consulting**

Established through a gift from the family of Wilfrid J. Dixon, this award recognizes outstanding contributions to the practice of statistical consulting. The 2015 honoree is **Janet Wittes**, president and founder of Statistics Collaborative, Inc. (SCI), a Washington, D.C.-based consultancy. She founded SCI in 1990 after completing her education by earning a doctorate from Harvard University and several career stops, including at the University of Pittsburgh, George Washington University, Hunter College and National Heart, Lung and Blood Institute. Wittes coauthored a leading textbook on monitoring of interim data for clinical trials and is widely published in leading statistical and scientific journals. She served as president of the Society for Clinical Trials (SCT) and the Eastern North American Region of the International Biometric Society and editor of SCT's *Journal of Clinical Trials*. She is a leading consultant in biostatistics thanks to her extensive experience and academic accomplishments. Many pharmaceutical and medical device companies seek her advice and often contract with SCI to provide statistical analysis for their research projects. Wittes has the unique ability to engage scientific colleagues in a nonthreatening manner to understand their needs and provide appropriate advice and assistance. Wittes is often described as a "beacon of integrity." Her many clients worldwide find her guidance extremely helpful and often engage her in long-term collaborations.

### **Jackie Dietz Best *Journal of Statistics Education* Paper Award**

This award, established in 2011, is given annually to the best paper in the *Journal of Statistics Education* in the previous year. It is named in honor of Jackie Dietz, the founding editor of the journal. The 2015 honorees are **Jennifer J. Kaplan**, University of Georgia assistant professor of statistics; **John Gabrosek** and **Phyllis Curtiss**, Grand Valley State University professors of statistics; and **Christopher J. Malone**, assistant professor of statistics at Winona State University. They were recognized for their paper titled "[Investigating Student Understanding of Histograms](#)," published in the *Journal of Statistics Education* (Volume 22, Number 2, 2014). Since histograms are adept at revealing the distribution of data values, especially the shape of the distribution and any outlier values, this paper was deemed fundamental to statistics education. The authors identified and discussed four misconceptions prevalent in student understanding of histograms. In addition, they presented pre- and post-test results on an instrument designed to measure the extent to which the misconceptions persist after instruction. The results presented indicate not only that the misconceptions are commonly held by students prior to instruction, but also that they persist after instruction. Future directions for teaching and research also were considered.

### **Waller Awards**

These honors—the Waller Distinguished Teaching Career and Waller Education awards—were established with a contribution from retired ASA Executive Director Ray Waller and his wife, Carolyn. The former recognizes an individual for sustained excellence in teaching and statistics education, and the latter honors an individual for innovation in the instruction of elementary statistics.

The 2015 Waller Distinguished Teaching Career Award honoree is **Robert Stephenson**, professor of statistics at Iowa State University. Stephenson has taught thousands of students at the institution during his 35-year career. His students affectionately refer to him as “Dr. Bob” and describe him as “a genuinely nice guy,” an “awesome teacher” and “one of the best professors.” He is humorous, approachable, understandable, enthusiastic, organized, available and “a very smart guy, [who] brings his intelligence level down to allow the students to fully understand him.” In addition to teaching undergraduates, Stephenson has mentored hundreds of graduate students and junior faculty in the teaching of introductory statistics. As director of undergraduate education in the department of statistics, he has supervised the program’s growth from 30 majors to more than 100 in the last decade. He shares his wisdom and experiences with other statisticians at conferences and meetings and through publications. But his work with the *Journal of Statistics Education*, the Advanced Placement Statistics Program, the editorial board of *STATS*, and Guidelines for Assessment and Instruction in Statistics Education deserve special recognition because of the impact these have had on so many teachers.

The 2015 Waller Education Award honoree is **Rebecca Nugent**, professor of statistics at Carnegie Mellon University. Nugent was singled out for her inexhaustible energy and inspirational classroom teaching style. She is relentless in seeking and constructing situations in which her students engage in rigorous, real-world statistics and have loads of fun doing it. “Thunderdome,” a competition/party to see which student group's computer algorithm can do the best job of classifying a set of data, is just one example of her creativity. Another is her course titled “Topic Detection and Document Clustering: What on Earth Were They Talking About at Enron Before It Imploded?” The award is in recognition of her hard work in

and out of the classroom with her students, which was cited repeatedly by her students, peers at Carnegie Mellon and colleagues around country.

### **W.J. Youden Award**

The W.J. Youden Award in Interlaboratory Testing recognizes the authors of publications/papers who make outstanding contributions to the design and/or analysis of interlaboratory tests or that describe ingenious approaches to the planning and evaluation of data from such tests. The 2015 honorees are **Alexander Franks**, statistics doctoral student at Harvard University; **Gábor Csárdi**, postdoctoral research associate in the Harvard University Department of Statistics; **D. Allan Drummond**, assistant professor of biochemistry and molecular biophysics at The University of Chicago; and **Edoardo M. Airoidi**, Harvard University associate professor of statistics. In their paper titled "[Estimating a Structured Covariance Matrix from Multilab Measurements in High-Throughput Biology](#)," published in the *Journal of the American Statistical Association* (Volume 110, Issue 509, 2015), the authors propose a multi-level generalized linear model, with full uncertainty quantification, for a meta-analysis study of 27 high-throughput multi-platform data sets to obtain a credible estimate of the degree of coordination between transcription and translation in yeast. They demonstrate that previous understanding of the strength of the relationship between mRNA levels and steady-state protein levels is underestimated due to analyses that relied on overly simple statistical models that did not account for collinearity, systematically missing data and high-noise conditions. Their paper develops new theoretical results for characterization of the impact of such misspecifications on the covariance or correlation between high-dimensional responses in high-throughput biology. The paper is outstanding research that elucidates the importance of careful statistical analysis to accurately assess findings of multi-lab experimental testing.

### **Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society**

The Karl E. Peace Award is bestowed upon a distinguished individual who has made substantial contributions to the statistical profession that has led to direct ways to improving the human condition. The award was established by Christopher K. Peace, son of Karl E. Peace, on behalf of the Peace family, to honor the life work of his father. The 2015 honoree is **James J. Cochran**, professor of applied statistics at the University of Alabama. Cochran has worked tirelessly to promote statistical training and expertise in the developing world. He believes statistical methods can be used to improve health and living conditions in developing countries and is dedicated to this effort. This belief led him in 2008 to be a co-founder and co-chair of the volunteer organization, Statistics without Borders (SWB). SWB now has an extensive group of volunteers who provide their statistical expertise pro bono to projects around the world. With Mark Griffin, he founded the Friends of Australasia, an ASA Outreach Group that helps develop statistical expertise in the Pacific Islands. In 2011, Cochran chaired the first International Conference for Health Statistics in the Pacific Islands; the event was themed "Making Statistics Work for Society." He is the founding chair of the International Education Initiative and in this position he has organized and led workshops in many countries, including Uruguay, South Africa, Colombia, India, Argentina, Kenya, Cameroon, Croatia, Namibia and Cuba. Cochran also is a mentor and adviser to his students in the U.S. and Africa.

### **Wray Jackson Smith Scholarship**

The ASA's Government Statistics Section and Social Statistics Section present this scholarship annually in memory of Wray Jackson Smith, a founding member of the Government Statistics Section and longtime contributor to federal statistics. The scholarship is cosponsored by the Washington Statistical Society, Caucus for Women in Statistics, Harris-Smith Institutes, Mathematica Policy Research and Synectics for Management Decisions, Inc. It rewards promising young statisticians for their diligence and encourages them to consider a future in government statistics. The 2015 scholarship honoree is **Jonathan Auerbach**, a doctoral student statistics at Columbia University. Auerbach's interests lie at the intersection of policy and statistics. Prior to starting the doctoral program, he worked on a variety of research projects with New York City agencies focusing on program evaluation. Currently, Auerbach is working with the city's Department of Parks and Recreation to access its natural disaster response and with the Departments of Small Business Services and Design and Construction on identifying the impact of their Minority Woman Business Enterprise certification program. At next year's Joint Statistical Meetings in Chicago, he plans to present his recent work for New York City's Department of Parks and Recreation.

### **Statistics in Physical Engineering Sciences Award**

Established in 1990, this award recognizes outstanding collaborative endeavors between statisticians and chemists. The award is sponsored by the Chemometrics Committee of the ASA Section on Physical and Engineering Sciences. Beginning this year, the award's scope has been expanded to recognize outstanding collaborative endeavors between statisticians and scientists throughout the physical and engineering sciences. The 2015 honorees are **Ming Li**, founder of REANCON.com; **William Q. Meeker**, professor of statistics at Iowa State University; and **R. Bruce Thompson** (deceased), distinguished professor of engineering at Iowa State University. They were recognized for their collaborative and innovative work that applies a nonlinear physics-based model to estimate the probability of detection (POD) of defects in titanium forgings by nondestructive evaluation (NDE). NDE has been used for decades to find defects in safety critical components on aircraft. By combining the principles of statistics and physics, the authors developed a novel and statistically valid approach to estimating PODs for NDE methods from limited data.

JSM 2015 is being held August 8–13 at the Washington State Convention Center in Seattle. More than 6,000 statisticians—representing academia, business and industry, as well as national, state and local governments—from numerous countries are attending North America's largest statistical science gathering.

### **About JSM 2015**

JSM, which has been held annually since 1974, is being conducted jointly this year by the [American Statistical Association](#), [International Biometric Society](#) (ENAR and WNAR), [Institute of Mathematical Statistics](#), [Statistical Society of Canada](#), [International Chinese Statistical Association](#), [International Indian Statistical Association](#), [Korean International Statistical Society](#), [International Society for Bayesian Analysis](#), [Royal Statistical Society](#), and [International Statistical Institute](#). JSM activities include oral presentations, panel sessions, poster presentations, professional development courses, an exhibit hall, a career service, society and section business meetings, committee meetings, social activities and networking opportunities. [Click here for more information about JSM 2015.](#)

***About the American Statistical Association***

The ASA is the world's largest community of statisticians and the second-oldest continuously operating professional society in the United States. Its members serve in industry, government and academia in more than 90 countries, advancing research and promoting sound statistical practice to inform public policy and improve human welfare. For additional information, please visit the ASA website at [www.amstat.org](http://www.amstat.org).

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