

# SILVER STATE-ISTICS

**NEVADA Chapter of American Statistical Association** 



Nevada Chapter Newsletter

Vol. 9 No. 2

#### Dear Nevada ASA Members and Friends.

Read on for information on what our Chapter has been up to and what we are planning for the future. Please keep an eye on our website for more details on all upcoming events.

www.amstat.org/chapters/nevada/

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- ♣ Fall Symposium and 11<sup>th</sup> Annual Meeting in Las Vegas, Saturday, October 6, 10:00 3:00 in SWRC Room 1010 on the UNLV campus, to be followed by the Business Meeting of the chapter. You will be receiving a flyer about registration and costs. Information about speakers follows; please invite your "significant" colleagues.
- ♣ Meet-and-Greet on the UNLV campus Wednesday, September 19, 5:30-6:30 in CBC C128. Free pizza. Please invite students and faculty you know. Offcampus guests are welcome too! Please RSVP to kaushik.ghosh@unlv.edu.

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# President's Message

Alicia Chancellor Hansen

Greetings! It is a busy time of year for our Chapter. We are gearing up for elections and our Annual Meeting. If you are a member, please remember to vote. If you aren't a member, please consider joining the Chapter. I hope you can join us in Las Vegas on Saturday, October 6 from 10am to 3pm for our Fall Symposium and Annual Meeting. It will be followed by the Chapter Business Meeting. It would be great to see you there! Until next time....

Please don't hesitate to contact me with any comments or suggestions at <a href="mailto:achansen@sbcglobal.net">achansen@sbcglobal.net</a>

#### Flections 2012!

Our Southern Vice President and Treasurer offices are up for election now. If you are a member of NV-ASA you will be receiving a ballot. Please return it promptly; results will be announced during our Annual Meeting.

Our Constitution provides for a staggered election of officers in order to ensure continuity. The Chapter Representative is a three-year position, consistent with national ASA rules; the others are two-year positions. Current officers are listed at the end of this Newsletter.



Our 2012 Annual Meeting will be held Saturday, October 6, 2012 in Las Vegas. This will mark the 10<sup>th</sup> anniversary of the Chapter; the first Annual Meeting was held October 5, 2002.

**Ron Wasserstein:** Dr. Wasserstein, the National ASA Executive Director, will be the keynote speaker. His topic will be "Live! from the ASA"; his talk will include such things as educational and advocacy efforts, accreditation, meetings, publications, International Year of Statistics, and the 175<sup>th</sup> Anniversary of the American Statistical Association.

Jay Shen: Dr. Shen is Professor with the Department of Healthcare Administration and Policy in the School of Community Health Sciences at UNLV. He will speak on "Applications of Statistical Methods in Health Services and Policy Research". From a health services and policy researcher's point of view and experience, he will describe rationales for using statistical methods and techniques in the health care fields. He will also discuss several statistical models that have become more popular in recent years in health services research, as well as examples of applying some of these models in his own research projects.

Anna Panorska: Dr. Panorska is Professor and Graduate Director in the Mathematics and Statistics Department at UNR. Her talk is entitled "Testing Exponentiality vs Pareto Distribution via Likelihood Ratio"; co-authors are Tomasz Kozubowski and Fares Oeadan, with contributions from Alexander Gershunov and Debra Rominger. The authors consider the problem of maximum likelihood estimation of the parameters of a Pareto Type II (Lomax) distribution. In a certain parameterization and after modifying the parameter space to include the exponential distribution as special case, MLEs always exist; they have a non-standard asymptotic distribution in the exponential case due to lack of regularity. The authors also develop a likelihood ratio test for exponentiality vs Pareto Type II, along with relevant asymptotic theory and convenient computational An empirical power study and power formulae. comparisons with other tests are also provided.

**Deb Stiver:** Ms. Stiver, with the UNR Department of Economics, is a Senior Board Member with International Development Missions, Inc. Her title is "Working in Developing Countries: Sampling and Data Collection Issues". Statistical analysts working in developing countries face unique challenges in data collection and sampling. Deb will illustrate several of these using a case study involving health care and clean water development projects in rural communities in Kenya, East Africa.

Charles Davis: Dr. Davis, Principal Statistician of EnviroStat and now Visiting Associate Professor in Mathematical Sciences at UNLV, will present "Quasi-Non-Parametric Upper Tolerance Limits for Occupational Exposure Evaluations", co-authored with Paul Wambach, CIH, U.S. DOE (retired). UTLs are often used in comparing datasets of exposure data with

"ceiling standards" or other regulatory criteria (RC). The usual 95%-95% nonparametric UTL requires 59 observations, however, which may seem excessive particularly for clean situations or small studies. There is an AIHA Rule-of-Thumb which states that 6-8 observations less than a tenth of the RC should give a "pass". QNP UTLs bridge the gap between these, giving a "pass" with 30 observations less than half the RC, etc. They are based on an assumed LN distribution with  $\sigma \leq 2.0$ , but their performance is seen to be insensitive or conservative with respect to that assumption. More importantly, their performance is insensitive to the amount of (heteroscedastic, normally distributed) analytical variation affecting the measurements.  $\blacklozenge$ 

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## Call for Nominations

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Hokwon Cho

Past-President and Election Chair

We will have two officer vacancies at the end of 2012. The positions are Treasurer and Southern Vice-President. Please consider nominating yourself or one of the other outstanding candidates available from our membership. Nominations should be sent by email to Hokwon Cho, Election Chair, at

<u>cho@unlv.nevada.edu</u>. Nominations will close at 5 pm on Friday, September 21, 2012.

The two officer descriptions follow below. All officers serve as members of the NV-ASA Executive Committee. These positions have a term of two years beginning January 1, 2013 and ending December 31, 2014. Nominees must be members of the Nevada Chapter of the American Statistical Association. The Treasurer must also be a member of the national American Statistical Association. For further details, please see the NV-ASA constitution link at: <a href="http://www.amstat.org/chapters/nevada/constitution.html">http://www.amstat.org/chapters/nevada/constitution.html</a>.

**Treasurer**: The Treasurer is a member of the NV-ASA Executive Committee. The Treasurer shall keep the roll of members of the Chapter, keep an accounting of member dues, receive and disburse Chapter funds, maintain records of Chapter finances, and pay all Chapter bills as needed and authorized by the Chapter's Constitution. The Treasurer shall also present a report of the Chapter's financial position at the annual meeting.

**Southern Vice President**: The Southern Vice President is a member of the NV-ASA Executive Committee. This officer is responsible for the planning and implementation of the annual chapter program activities in Southern Nevada and serves as Co-Chair with the Northern Vice President to coordinate statewide activities. Examples of activities include Career Day, Speaker Events and Symposiums.

Note that the Treasurer must be a full member of the National ASA (Student membership counts). This requirement does not apply to the VPs. 署

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### **ASA News & Notes**

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The following comes to us from Rick Peterson of the National ASA:

"In an effort to better inform and engage chapter officers and members, the ASA is launching a program called "ASA News & Notes" in which we regularly will send announcements and press releases about relevant national activities, initiatives and programs to ASA Chapter leaders.

"The focus of the first of these communications is a press release on ASA President Bob Rodriguez's keynote address at the recent Joint Statistical Meetings where he called on the association to become the "Big Tent" for all statisticians.

"We hope you will find this new communications program a valuable source of information about ASA that will enhance the ASA membership experience of all your Chapter's members. The more members are aware of the many, many benefits of ASA membership, including promotion of the profession, the better chance they will increase their involvement with your local chapter and ASA on a national level."

Here is President Rodriguez's press release.

ASA President Robert N. Rodriguez Calls for Creating the 'Big Tent' for All Statisticians. Future of statistical profession becomes unlimited, says ASA leader.

Alexandria, VA, August 13, 2012. While making the point that the future strength of the organization lies in serving anyone who solves problems using statistical methods, American Statistical Association (ASA) President Robert N. Rodriguez called for the association to become the "Big Tent" for all statisticians. Rodriguez, who is the senior director of statistical research and development at SAS Institute, Inc. in Cary, N.C., made these remarks during his presidential address at the recently concluded Joint Statistical Meetings in San Diego. The annual worldwide gathering of statisticians drew 6,300 professionals from the United States, Great Britain, Canada, China, India and numerous other countries.

"Now is the perfect time to build ASA as the 'Big Tent

for statistics'," said Rodriguez. Today, the landscape for statistical practice is expanding quickly. We must ensure that statisticians of any type—regardless of training, experience and area of practice—find value in joining and remaining as members of our association." To make this transformation, Rodriguez said the ASA must attract all kinds of statisticians, serve their professional development needs and promote their societal contributions to the media, the public and policymakers. Rodriguez said it is critically important that the ASA serve statisticians in new fields of practice, which are emerging because our society increasingly is data-rich and data-dependent. A recent study by McKinsey Global Institute predicts that the United States will need vastly more professionals—between 140,000 and 190,000—with expertise in statistical methods by 2018.

Rodriguez pointed to the example of "Big Data"—or data sets that are so large and so complex they are difficult to work with—and offered steps for the ASA to connect with and serve this emerging field. His three-step plan includes the following:

- Engaging data scientists outside the ASA who are involved in Big Data problems, research and technology
- 2. Explaining to the media and the public why statisticians are essential in this emerging field and how their contributions are providing value to consumers of Big Data
- 3. Providing training that prepares ASA members for work with Big Data

Speaking about the needs of younger statisticians, Rodriguez said they will find three distinct value propositions from participating in the ASA Big Tent. The first is the power to remain in demand. "The students I meet are career-minded. They know statistics graduates are in demand and they want to know what will keep them in demand after they leave school," said Rodriguez. "I tell them that the best place for them to keep learning is the ASA. Here is where they will learn from outstanding researchers and teachers, where they will learn to serve and to lead and where they will learn from their established colleagues."

The second is the power to become purpose-driven and work with a broader view of what they are accomplishing as statisticians. "Purpose-driven statisticians do better science, they transform business, they inform public policy and they empower students," explained the ASA leader. "Young people want to be part of something bigger, and ASA is the best place for them to meet outstanding statisticians who are purpose-driven."

The third is the power to reach higher with the statistical

profession. "We reach higher by influencing the use of statistics in policy decisions at the national level. This level of influence matters to the young people I meet," said Rodriguez. Areas where ASA members are having impact and "reaching higher" include shaping how statistics is taught in grades K–12, participating in climate science discussions on Capitol Hill and working with congressional offices to improve the science in forensic science, he added.

"I believe the power of the Big Tent gives us the ability to engage the young people who are the future of our association. Young people who draw on the power of the Big Tent will gain personal success. They will experience that moment of transformation when statistics is more than a job, and they will experience a greater scope of accomplishment," said Rodriguez.

"By becoming the Big Tent for statistics, ASA will gain the vigor, the vitality and the visibility it needs for the next 25 years," concluded Rodriguez. "At the 200th anniversary of our association, our members will celebrate what we accomplished in the Big Tent. Above all, they will celebrate what our profession accomplished to improve human welfare and serve society's deepest needs."

#### **About the American Statistical Association**

Headquartered in Alexandria, Virginia, the American Statistical Association is the world's largest community of statisticians and the second-oldest continuously operating professional society in the United States. For more than 170 years, the ASA has supported excellence in the development, application and dissemination of statistical science through meetings, publications, membership services, education, accreditation and advocacy. 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 about the American Statistical Association, please visit the ASA website at www.amstat.org or call (703) 684-1221. ⊕

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# New Faculty at UNLV

We welcome Dr. Guogen Shan to NV-ASA. Dr. Shan is a new Assistant Professor in the Epidemiology & Biostatistics Program of the School of Community Health Sciences at UNLV. He received his PhD from SUNY Buffalo in 2011, and served as a research statistician at the Brain Trauma Institute in New York. His expertise is in clinical trials. SCHS is delighted to have Dr. Shan join their team. ૠ

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The UNLV Mathematical Sciences Department maintains an active statistics seminar series, typically meeting on Fridays at 11:00-12:00 every few weeks during the academic year. Notices are sent to those on the NV-ASA email list; for more information about individual programs go to

http://faculty.unlv.edu/cho/statseminar.htm.

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Only a minority of the people who receive this newsletter are members of the Nevada Chapter of the American Statistical Association (NV-ASA). Dues are nominal: at most \$20 per year, \$10 a year for members of the national ASA, and \$2 for student members of the national ASA. There are two ways to join. You can join NV-ASA when you renew your national ASA membership (or join for the first time); this can be done on-line at www.amstat.org. Otherwise, whether a national ASA member or not, you can join through PayPal on our website www.amstat.org/chapters/nevada/ or by contacting our Treasurer Kaushik Ghosh. Any way you do it, please obtain an information form from our website, complete it, and send it to Kaushik at the address listed on the form.

Why should you join? NV-ASA events provide opportunities for networking and contact with other statisticians working in a wide variety of areas in Nevada. But in addition to that, a major reason is that your dues support the outreach activities of the NV-ASA including the K-12 Poster Competition, Career Days, and now the *World of Statistics* programs for teachers. Our financial needs are not great, so long as we all pitch in our modest amounts. \*\*

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**F**rom our Constitution:

"The purpose of this Chapter is to be a state and local area leader in promoting all aspects of sound statistical science and practice, including the advancement of statistical education, professional practice, and research."

"The Chapter shall sponsor educational, professional and scientific activities that benefit professional statisticians, students, and users of statistics. The Chapter shall promote effective unified action amongst all groups having an interest in or concern with statistics and probability. The Chapter shall foster communication between the statistical community, other scientific organizations, and the media for the enlightenment of the general public and enhancement of the general welfare. The Chapter shall promote the proper application of statistics in all fields, shall work for the improvement of statistical education at all levels, and shall seek opportunities to advance the statistics profession and professional work opportunities." \*

# **NV-Chapter Current Officers**

President: Alicia Chancellor Hansen (2012-13) Hokwon A. Cho (2012-2013) Past President: Southern Vice President: Andy Chance (through 2012) Northern Vice President: Anna Panorska (through 2013) Hong Wei (through 2013) Secretary: Kaushik Ghosh (through 2012) Treasurer: Chapter Representative: Debra Stiver (through 2013) David W. Thiel **Education Committee Co-Chair:** Webmaster: Alicia Chancellor Hansen

#### Editor:

Charles B. Davis

# **Typesetting**: Hokwon A. Cho

Silver State-istics welcomes news items and letters from members and friends of the NV-ASA on matters of interest to the Chapter and the profession. Manuscript or items can be sent as a Microsoft Word document, PDF, or within an e-mail.

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For contact information, please see our website.



www.amstat.org/chapters/nevada/