San Antonio Chapter and UTSA Department of Management Science and Statistics Welcome N. Balakrishnan

The San Antonio Chapter of the American Statistical Association and the UTSA Department of Management Science and Statistics will co-sponsor our next meeting. Please mark your calendars now and feel free to use the attached flyer to notify colleagues and co-workers.

Date: Friday, April 12, 2013
Time: 2:30 pm
Location: UTSA BB 3.03.02
Business Building
UTSA Main Campus

Talk Title: *A Random-Sum Wilcoxon Statistic and Its Application to Analysis of ROC and LROC Data*

Speaker: Professor N. Balakrishnan, Department of Mathematics and Statistics, McMaster University, Ontario, Canada

Parking: **New parking garage open:** Short-term paid parking spaces are located in the new Bauerle Road Garage (BRG). For a campus map please visit: [http://www.utsa.edu/auxiliary/docs/MainDTC_Parking_Map.pdf](http://www.utsa.edu/auxiliary/docs/MainDTC_Parking_Map.pdf)

Abstract:
The Wilcoxon-Mann-Whitney statistic is commonly used for a distribution-free comparison of two groups. One requirement for its use is that the sample sizes of the two groups are fixed. This is violated in some of the applications such as medical imaging studies and diagnostic marker studies; in the former, the violation occurs since the number of correctly localized abnormal images is random, while in the latter the violation is due to some subjects not having observable measurements. For this reason, we propose here a random-sum Wilcoxon statistic for comparing two groups in the presence of ties, and derive its variance as well as its asymptotic distribution for large sample sizes. The proposed statistic includes the regular Wilcoxon statistic. Finally, we
apply the proposed statistic for summarizing location response operating characteristic data from a liver computed tomography study, and also for summarizing diagnostic accuracy of biomarker data.

**Upcoming Chapter Meeting: April 18th at Trinity University**

Mark your calendars now for this upcoming Chapter event to take place at Trinity University on Thursday April 18th. Our speaker will be Matthew A. Hibbs, Assistant Professor, Computer Science Department, Trinity University. We will begin gathering at 6:30 pm and the presentation will begin at 7:00 pm at Center for the Sciences and Innovation building, Room CSI 437. See campus map [http://www.trinity.edu/departments/public_relations/tour/map/color_campus_map_new.pdf](http://www.trinity.edu/departments/public_relations/tour/map/color_campus_map_new.pdf). More details available soon.

**Bob Mason Awarded ASQ Shewhart Medal**

Congratulations to Bob Mason, Institute Analyst at Southwest Research Institute, who is being recognized for his outstanding work in quality control for the automotive and petroleum industries. [http://www.swri.org/9what/releases/2013/masonb.htm](http://www.swri.org/9what/releases/2013/masonb.htm)

**Leslie Moore Wins 2013 Don Owen Award**

The 2013 Don Owen Award given by the American Statistical Association San Antonio chapter was presented to Dr. Leslie M. Moore on March 22, 2013 at the Conference of Texas Statisticians by chapter vice president, Peter Olofsson. The conference was held at Rice University, Houston, Texas and was organized by Dr. Dennis D. Cox of the Department of Statistics. Dr. Moore was nominated by Dr. Michael Hamada of Los Alamos National Laboratory.

Dr. Moore is a Research Scientist at Los Alamos National Laboratory. She received her doctoral degree in Mathematics from the University of Texas, Austin, in 1985 after which she worked for 7 years at Los Alamos, one year at the Institute of Statistics and Decision Sciences at Duke University, 6 years at Comforce Technical Services in Albuquerque, New Mexico, again joining Los Alamos as a Research Scientist in 1998, where she has remained.

Dr. Moore has published research articles on several topics including experimental design, in particular design of computer experiments, analysis methodology, measurement system assessment, and search algorithms. Dr. Moore is recognized as a leading expert in the design of computer experiments where, in particular, her 1990 article on minimax and maximin design is a widely cited seminal work.

Dr. Moore has done an extensive amount of statistical consulting, working on topics such as carbon capture implementation, nuclear plant reliability, transportation simulation, and supercomputer performance. She has also served as supervisor to numerous summer student interns at Los Alamos and won its 2010 Achievement Award for contributions to its student program, and she is regularly invited to present her
research and consulting work at conferences and symposia. Dr. Moore is a member of the American Statistical Association and a fellow of the Royal Statistical Society.

The San Antonio Chapter is proud to honor Dr. Moore for her excellence in research, statistical consultation, and service to the statistical community. The Don Owen Award is presented annually by the San Antonio Chapter of the American Statistical Association, and Taylor and Francis, a leading international academic publisher.

Alamo Regional Science and Engineering Fair Winners

The San Antonio Chapter sent judges to the 2013 Alamo Regional Science and Engineering Fair. The judging was held at St. Mary’s University on March 4 to help select those Senior Division Projects (grades 9-12) that showed excellence in the use of statistical methods. Many thanks to these members who volunteered to judge: Norma Ketchum, John Schoolfield, David Han, Ken Williams, Phillip Middleton, Jon Gelfond, and Howard Monroe.

Howard Monroe represented the chapter at the Awards Ceremony on March 5, 2012. The following awards were presented:

- First Place and $125 to Anand Ahuja and Vishok Srikanth from Keystone Upper High School for their project titled, “Using Whole Genome Transcriptional Profiling to Identify Novel Therapeutic Targets for Alergic Rhinoconjunctivitis”.
- Second Place and $75 to Lauren Mandaville from Sequin High School, for her project titled, “Increasing Casket Decomposition, Year 2”.
- Third Place and $50 to Callie Downs of John Jay Science and Engineering Academy for her project titled, “Diabetic Wound Healing: How Adipose-Derived Stem Cells Respond to Diabetic Conditions”.

ExxonMobil Texas State Science & Engineering Fair Results

The Council of Texas Statisticians (COTS) sponsored an award at the ExxonMobil Texas Science and Engineering Fair (EMTSEF). The fair was held in San Antonio, Texas at the Henry B. Gonzales Convention Center on March 28, 2013. The award was for “The Best Use of Statistics in a Science Project”. A team of judges from the San Antonio Chapter of the American Statistical Association and COTS helped select three senior high division projects that showed excellence in the display, use, and knowledge of statistical methods. The Council of Texas Statisticians would like to thank all who volunteered to judge: Eddy Kwessi, Ken Williams, Danny Sharon, Michael Lecocke, John Schoolfield, Tommy Lee, and David Han.

- First place and $125 were awarded to the team of George Qi and Robert Tung (UNT Texas Academy of Mathematics and Science) for their project, “A Novel Approach to Estimating Survival Functions for Interval Censored Data with STD Behavioral Diary Information.”
- Second place and $75 were awarded to Pranaav Sudheendra (Clark High School, Plano, Texas) for his project, “A Logical Solution to a Fuzzy Situation:
Using Fuzzy Logic Modeling of Genetic Regulatory Networks to Identify and Cure Cancer.

- Third place and $50 were awarded to the team of Kevin Chen and Raahil Sha for their project, “MaSC: An Effective Strategy to Detect Aberrantly Methylated/Expressed Genes in Cancer with Consideration of Heterogeneity”

ASA Web-based Lectures
ASA has begun offering Webinars on various statistical topics.
For more information on these webinars and to register, visit: http://www.amstat.org/education/weblectures/index.cfm

Upcoming Conferences
Registration due date: April 15th
http://www.tamuk.edu/artsci/math/Statistics_Day.html

Fall Technical Conference, American Society for Quality (ASQ), San Antonio, Texas, October 17-18, 2013
http://www.asqstatdiv.org/ftc.htm
http://old.cba.ua.edu/ftc2013/

SAS Education Forum, South Central SAS Users Group (SCSUG), San Antonio, Texas, October 31- November 1, 2013
http://www.scsug.org/

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