

# E-Tidings Newsletter

## SCASA Events and News



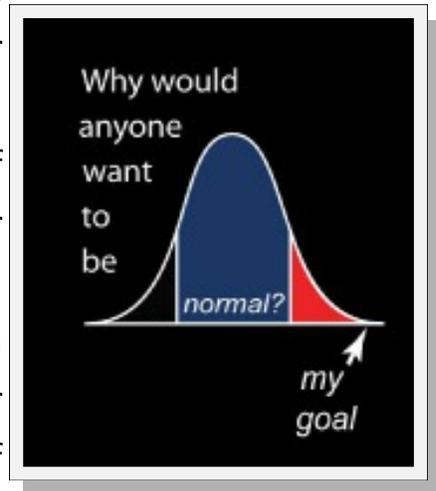
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### Event Wrap-Up Report: AP Stat Poster Comp

**By Stacey Hancock (UCI) and Lee Kucera (Capistrano USD),  
Event Coordinators**

Thanks to the support of the Orange County-Long Beach and Southern California Chapters of the ASA, as well as our talented high school statistics students, our annual AP Statistics Poster Competition held at the UCI Medical Center on April 26th was a success. High schools in both Chapter regions were represented, showcasing a wide variety of creative statistics projects. Our four winning teams presented projects on topics ranging from airline travel patterns over holidays, to the impact of education on becoming a billionaire. Other projects analyzed the best times to visit Disneyland, or the effect of caffeine on high school GPA. We have tentatively set the date of our next annual AP Statistics Poster Competition for Saturday, May 30, 2015, at Chapman University. Thank you to all who participated as judges, and mark your calendars for next year!





## Event Wrap-Up Report: 2014 Intel International Science and Engineering Fair Resounding Success Due to Huge Effort by Local Statisticians!

**By Madeline Bauer (USC, Retiree), Harold Hiner (Hiner & Partners, Inc.), Wayne Smith (CSU Northridge), and Alan Rong (Amgen)**

On Tuesday, May 13, 2014 32 statisticians worked in pairs to review 1405 science projects and select 16 projects for interviews on Wednesday morning. On Wednesday, 14 statisticians managed to battle the morning traffic and arrive in time to interview the students!

Thursday evening, Alan Rong (President, SCASA) and Harry Hiner (Vice-president, OCLBASA) braved the afternoon traffic and the Clippers game traffic to present the ASA awards to the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place winners.

In their words: Harry says:

"Thanks are due to those who served as judges for the ASA awards. Our judges had the difficult job of evaluating entrants from virtually every scientific and engineering discipline simply because statistics is used in them all! Several presenters for the other Special Awards Organizations relayed that their team of judges numbered 3-5 who focused in a few disciplines while the ASA had over 30 judges who reviewed submissions across all disciplines represented."

And Alan says:

"I would also add: It was exciting to see Statistics appreciated at such a young age. Statistical education in high school is important and we (ASA) should help more in the future."

And the final words are from Wayne Smith, Ph.D., Department of Management, California State University, Northridge:

"On May 13th and 14th, I was blessed with the opportunity to represent ASA at the Intel International Science and Engineering Fair at the Los Angeles Convention Center. With approximately 30 others from SCASA and OCLBASA, I helped assist in the judging of the statistics-related elements of numerous prescient and empirical projects presented by high school students from around the world. These students had already won other local and regional science and engineering competitions. We selected first, second, and third place winners, but 16 student teams in total received special recognition and goodie bags filled with software, books, and other items. I have no doubt that a lasting affinity with statistical professionals and supporting organizations will be a tangible outcome for these motivated, young researchers.

I was energized and transformed by the breadth and depth of the research methods and concomitant inferential analysis applied to address pressing issues in areas as diverse as health care, energy, sustainability, material science, pharmacology, biochemistry, financial economics, and many others. Along with my ASA colleagues, I discussed projects with students as young as 15. As one might expect, many of the High School seniors are attending top research universities in the Fall. I was especially impressed with the rich diversity of students, including groups of students from Qatar, Egypt, Tunisia, Brazil, Japan, Russia, and historically underrepresented areas in the U.S. such as Fresno, CA. Some of the students' work has been ongoing for more than a year, and the students offered background literature (with references!), purposeful hypotheses, detailed analysis and results (occasionally with tool manifests and explanatory code), and integrated conclusions.

Of the 80 or so projects I reviewed, I observed applications of the general linear model; repeated measures; logistic regression; non-parametric measures; classification, feature extraction, and dimensionality reduction; sundry machine learning approaches; and Monte



Carlo simulations. I was equally impressed by these students' abilities in fundamental research tasks such as locating and using open source software (e.g., R), understanding and coherently explaining potential I/O- and computational-bounds, finding and

interpreting peer-reviewed literature, and seeking out the assistance of relevant industry professionals. Additionally, the students' ebullient entrepreneurial spirit in the design and execution of physical proof-of-concept prototypes and related statistical experiments was especially noteworthy. I came away from each project and each student/team discussion with a new understanding of a thorny issue, a vision for what the solution space and product and process possibilities might be, and perhaps most germane for a College instructor, a renewed calibration for the knowledge, skills, and abilities of a tapestry of young people in the broad areas of mathematical, statistical, and computational sciences. I felt visceral pride in the statistical calling of many of these young finalists, and I know that they will craft much social, intellectual, and economic value for many decades to come.

A side benefit of service at this event was the opportunity to interact with academic and professional colleagues representing a variety of statistical-education interests. In particular, I'd like to thank Madeline Bauer (USC/Keck), Theresa Utlaut (Intel), and Jo Hardin (Pomona College) for their guidance in the judging process. At this event one can interact with professionals from dozens of other professional societies and technology firms as well.

This Intel-sponsored event circulates annually among three U.S. cities. I strongly recommend that individuals with an general interest in statistics and data science volunteer at this event and at local SCASA and OCLBASA events in the future.

Nathan Han, 15, of Boston, Massachusetts won the Gordon E. Moore Award of \$75,000 for developing a machine learning software tool to study mutations of a gene linked to breast cancer. Lennart Kleinwort, 15, of Germany and Shannon Lee, 17, of Singapore both won Young Scientist Awards of



\$50,000 for their research on a mathematical tool for smartphones and tablets and a novel electrocatalyst, respectively.

Many many thanks to all the statisticians who participated as judges and/or behind the scenes! Thanks to the ASA for the cash prizes and thanks to Chapman Hall/CRC, JMP, Minitab, O'Reilly Media, Revolution Analytics, Sage, Stata, and Taylor & Francis for the donated books, magazines, software and other items.

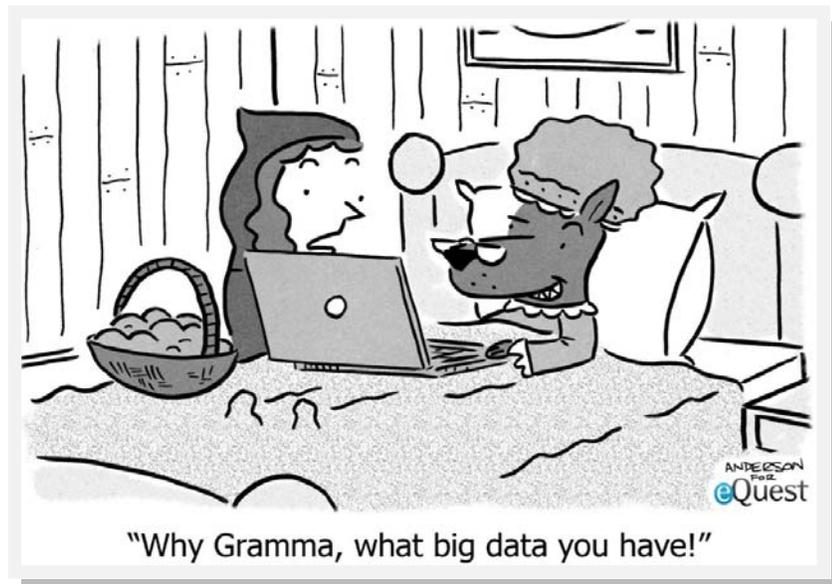
## List of Upcoming Events in Summer 2014 in Southern California and Beyond



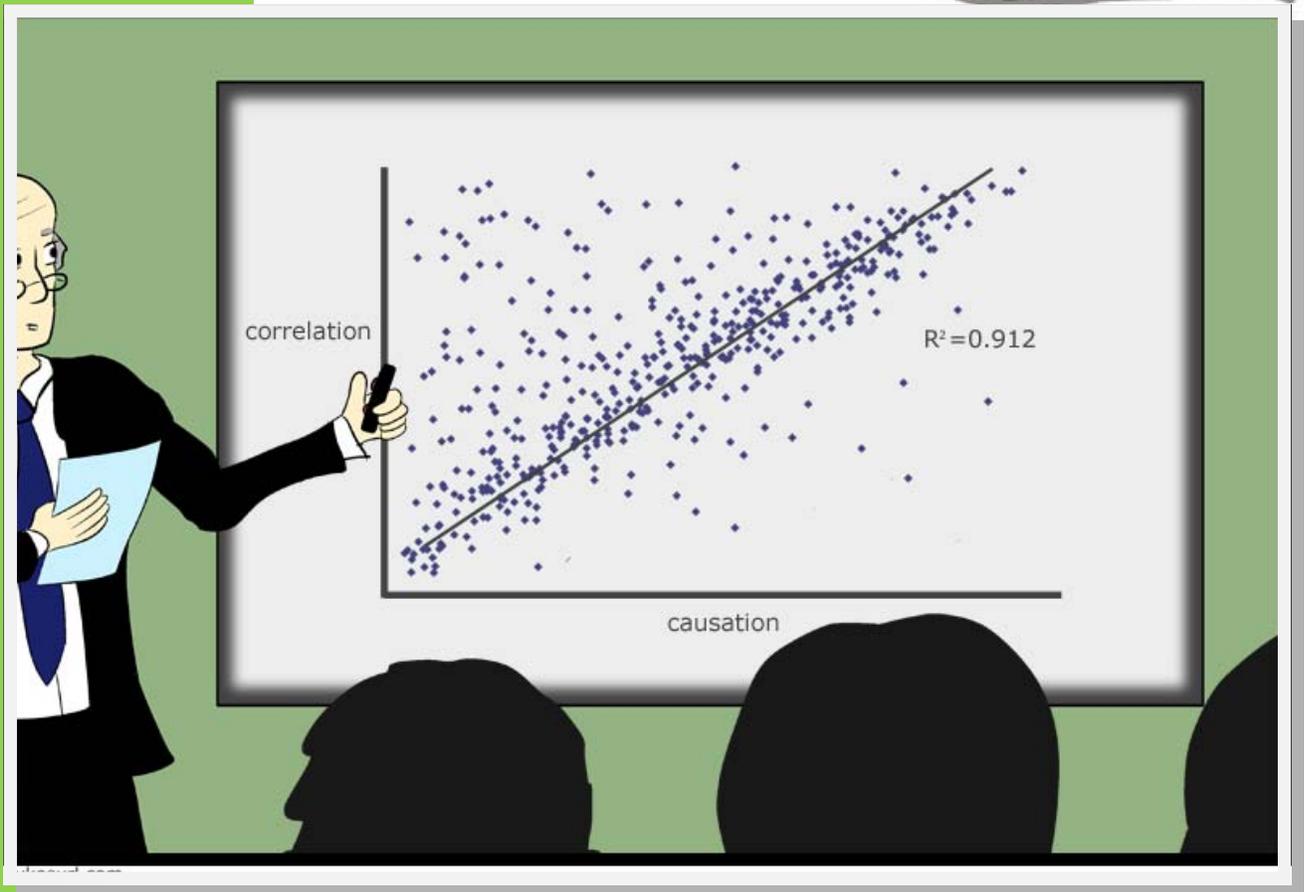
The latest News from the World of Statistics is available at [www.worldofstatistics.org/files/2014/05/May-5-2014.pdf](http://www.worldofstatistics.org/files/2014/05/May-5-2014.pdf).

Past newsletters can be reviewed at [www.worldofstatistics.org/news-of-the-world-of-statistics-archive/](http://www.worldofstatistics.org/news-of-the-world-of-statistics-archive/).

- ◆ BigDataScience - Stanford, CA, May 27- 31, 2014, The Second Academy of Science and Engineering (ASE) International Conference on Big Data Science and Computing, [www.scienceengineering.org/ase/conference/2014/bigdata/sanjose/website/](http://www.scienceengineering.org/ase/conference/2014/bigdata/sanjose/website/)
- ◆ 2014 Workshop on Algorithms for Modern Massive Data Sets (MMDS 2014), Berkeley, CA, June 17 - 20, 2014, <https://mmds-data.org/>
- ◆ The R User Conference 2014, UCLA, Los Angeles, CA, June 30- July 3, 2014, <http://user2014.stat.ucla.edu>
- ◆ 2014 International Indian Statistical Association (IISA) Conference, Riverside, CA, July 11-13, 2014, [www.intindstat.org/conference2014](http://www.intindstat.org/conference2014)
- ◆ 9th International Conference on Teaching Statistics, Flagstaff, AZ, July 13-18, 2014, <http://icots.net/9/>
- ◆ 2014 Joint Statistical Meetings (JSM), Boston, MA, August 2-7, 2014, [www.amstat.org/meetings/jsm/2014/conferenceinfo.cfm](http://www.amstat.org/meetings/jsm/2014/conferenceinfo.cfm)



# NORMALCURVESAURUS PRESENTS



If you would like to submit an entry to the next issue, please contact me at [Olga.Korosteleva@csulb.edu](mailto:Olga.Korosteleva@csulb.edu).

*Yours truly,*

*Olga Korosteleva,*

Your Editor-in-Chief