

SILVER STATE-ISTICS



NEVADA Chapter of American Statistical Association

Nevada Chapter Newsletter

Vol. 9 No. 1

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/

Contents:

Coming Events	1
President's Message	1
2012 K-12 Poster Competition	2
Mathematics and Statistics Career	
Day in Reno	2
NV-ASA Fall Symposium and	
Annual Meeting 2012	2
World of Statistics	3
Book and Film Review: Moneyball	3
Election 2012	4
UNLV Statistics Colloquium/Seminar Series	4
Joining NV-ASA	4
The NV-ASA Mission	4
NV-Chapter Current Officers	5

& COMING EVENTS &

Look for these events to come this year:

- Fall Symposium and 11th Annual Meeting in Las Vegas, Saturday, October 6 – SAVE THE DATE!
- Elections 2012

President's Message

Alicia Chancellor Hansen

Greetings! It is my privilege to write my first President's Message for the newsletter as the 2012-2013 NV-ASA President. I am excited about our upcoming

activities. My goal is to continue the work of previous Presidents to invigorate our chapter. With that in mind, I would like to share my thoughts and ask for yours in return.

The Executive Committee has been discussing many possible avenues for enhancing the value of your membership and recruiting new members, including picnics and socials. To begin, we are looking to enhance collaboration with other professional organizations. Our first step is to jointly hold our Annual Meeting this October with the Nevada Public Health Association (NPHA). Our Annual Meeting will be held Saturday, October 6 in Las Vegas, following the NPHA Annual Conference on Thursday and Friday, October 4 and 5. For additional information on NPHA, please visit their website at: http://www.nphaonline.org/.

Are there activities the chapter could host you would enjoy participating in? I welcome your feedback. Please do not hesitate to contact me at achansen@sbcglobal.net.

Recently, the chapter sponsored a couple of wonderful events. The 9th Annual K-12 Poster Competition was a great success! Many thanks to David Thiel for his ongoing efforts. You can view the winning posters on our website at:

http://www.amstat.org/chapters/nevada/k12postercompet ition/k12postercompwinners2012.html. The Northern Nevada Career Day on Saturday, May 5th was an exciting event with a dozen speakers! Many thanks to Anna Panorska for all her work in organizing it.

Speaking of the website, a lot of work is being done to update it and enhance its utility as a resource. Please check it out at:

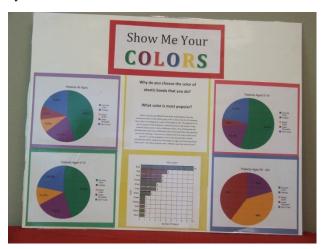
http://www.amstat.org/chapters/nevada/index.html.

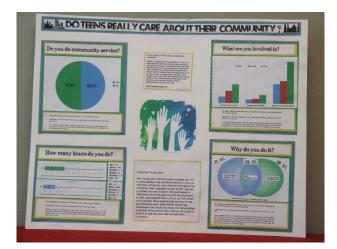
The Joint Statistical Meetings are being held fairly close to home this year, in San Diego, CA, July 28 through August 2. I am planning on attending and hope to see you there!

Next time, I hope to talk more about new activities and members. I hope to hear your thoughts. Until next time!

2012 K-12 Poster Competition

The 2012 Nevada K-12 Poster Competition winning posters are now available for viewing on our website. These winners were selected from 333 posters prepared by 475 students in 15 schools.





We are particularly proud of the continued success of our Nevada K-12 Poster Competition winners in the National Poster Competition. This year "Do Teens Really Care About Their Community?", prepared by Layla Barati of the East Career and Technical Academy in Las Vegas, won third prize in the National 10-12 grade category. "Show Me Your Colors", prepared by Andrew Wyatt of the Lied Middle School, won first prize in the National 4-6 grade category.

Thanks are due to all of the students, teachers, and judges who participate in this event each year, and particularly to Dave Thiel for organizing this most worth-while event. ◆

A Mathematics and Statistics Career Day was held in Reno Saturday, May 5, hosted by NV-ASA and the UNR Department of Mathematics and Statistics. There were a dozen brief presentations on applications of mathematics and statistics in wide variety of areas: Wei Yang (biostatistics), Kelly Redmond (climate and hydrology), Pavel Solin (applied math), Laurel Saito (environmental science), Kim Rollins (economics), Ryan Dotson (private industry), Ilia Zaliapin (geosciences), Stacie Tatman (gaming applications), Matthew Forister (biology and ecology), Theophilus Djanie (actuarial and insurance), Mariah Evans (sociology/psychology), and Amrutha Buddana and Prashanth Pothula (business).

There were about 50 participants, including students from Reno area high schools and UNR along with members of the local business community. There were many questions and interesting discussions regarding careers during the lunch break. We are looking forward to the next event during 2013.

Our 2012 Annual Meeting will be held Saturday, October 6, 2012 in Las Vegas. This will mark the 10th anniversary of the Chapter; the first Annual Meeting was held October 5, 2002. During that first Annual Meeting Richard Sheaffer of the University of Florida presented "Statistics for a New Century: Meeting the Needs of a World of Data" and June Morita of the University of Washington presented "The Joy of Being a Statistician", both courtesy of the National ASA. In addition, there was a panel discussion on Careers in Statistics, a Student Poster Competition, Exhibitor Booths, and of course lunch.

Annual Meetings alternate between North and South, and are accompanied by another event, following the pattern of that first Annual Meeting in 2002. Plans for our 11th Annual Meeting, accompanied by a Fall Symposium, are underway. The date was selected to follow the meetings of the Nevada Public Health Association (October 4-5). Look for announcements of the details.

If you would like to present a talk during the Symposium, please contact Chapter President Alicia Hansen (achansen@sbcglobal.net). ##



NVASA is expanding its outreach to the K-12 community through *World of Statistics*, a series of workshops for teachers on real-world applications of statistics. Each workshop focuses on a major theme, covering methods used by statisticians and the underlying concepts in the K-12 curriculum. Participants experience statistics in new ways and walk away with activities that can be used in their own classrooms.

Our first *World of Statistics* workshop was held on March 10, 2012 at UNLV. Dr. Chad Cross shared how statistics is used in health and environmental sciences. Topics included mark-recapture sampling techniques, studying wind turbine mortality of birds, applications of probability to the genetics of eye color, the use of Center for Disease Control databases, and census data. Each example was tied to the Common Core State Standards for Mathematics (www.corestandards.org/). The twelve participants left with great anticipation for the next workshop.

If you or one of your colleagues would be interested in presenting a *World of Statistics* workshop, please contact David Thiel, dthiel@interact.ccsd.net. 署



Reviewed by David Thiel

Moneyball, the feature film produced by Michael deLuca in 2011, based on the 2003 Michael Lewis nonfiction book of the same name, tells the story of how the Oakland As transformed themselves into one of Major League Baseball's best teams while having one of the lowest team payrolls. At the center of the tale is Billy Beane, played by Brad Pitt, a former underachieving major league outfielder who found his calling as the overachieving As' general manager.

Moneyball earned six Academy Award nominations, including best picture, but found itself shut out at the conclusion of the ceremony on February 26. Nonetheless, the film is has received nearly universal acclaim; that praise is richly deserved. There are some departures from the book—as is the case with nearly every screen adaptation—and the movie entirely skips the compelling story of the 2002 baseball draft. The creative license taken by Hollywood is relatively minor, however, and does not detract from the book's overall message: to compete against richer clubs, the A's had to

create a new way to win what Michael Lewis called "an unfair game."

"It ain't so much what we know that gets us into trouble. It's what we know that just ain't so." – Mark Twain

Familiar threads woven throughout the story make *Moneyball* a perfect movie for statisticians. First, people are notoriously poor measuring devices. One scene shows Oakland scouts sitting around a table discussing a player, tossing out phrases like "the guy's an athlete," "he's a tools guy," and "the ball explodes off his bat." Billy Beane asks the simple question, "But can he hit?" The scouts say "yes, we've seen the player hit." The data say otherwise. Beane relates to this on a personal level. At one time, he was an up-and-coming superstar with the great body, who went on to strike out in over half of his major league plate appearances.

A second idea is shows what experts measure may not be the right things. For instance, batting average—hits divided by at-bats—has been a traditional measure of hitting success for 150 years. It has been found to be a fairly poor one. A baseball game is not won by the team with greater percentage of hits in trips to the plate; it is won by the team scoring the greater number of *runs*. To measure a player, one needs to determine how many runs he contributes to his team. There are better measures of run contribution, such as on-base percentage (the rate at which a batter reaches base). Simply put, if a player reaches base he is more likely to score.

Bill James was one of the first to push this idea in the late 1970's with the publication of *The Baseball Abstract*, a book looking at baseball data in an entirely unconventional way. Ignored for decades by organized baseball, it caught on quickly with fantasy leagues and table-top baseball game players. Billy Beane applied the principles of Bill James and others like him to make the A's successful.

The final theme evident to statisticians demonstrates that conventional wisdom may not be the wisest. Fundamental baseball strategy calls for timely execution of the stolen base, sacrifice bunt, and hit-and-run play to "create runs." Here again, Billy Beane chose to defy convention by restricting the use of such strategies. His philosophy states that a team only gets three outs in an inning; anything that increases the chance of an out reduces the chance to score runs. In 2002, Oakland tied for the most wins while finishing last in stolen bases. Statistically speaking, Beane chose not to accept the null hypothesis (conventional wisdom) and found the evidence to reject it.

The result of Billy Beane's success a decade ago may have led to Oakland's recent demise. The last five years have not been good to the As, with the team finishing last or next-to-last four times. A possible reason for the downfall could be that other teams have begun using data in more meaningful ways to evaluate player performance. Consequently, the undervalued players that Beane snatched away from teams for small sums now command higher salaries than Oakland can now afford.

Moneyball is highly recommended for baseball fans and statisticians alike. The movie is entertaining; the book provides a similar edge-of-your-seat experience. Those wanting to know more about *Moneyball* and how it changed the evaluation of players and the way the game is played may consider the October 23, 2006 and January 29, 2007 episodes of the podcast *EconTalk* at www.econtalk.org/archives.

By the way, the book also provides an introduction to the field of SABeRmetrics (from the Society for American Baseball Research).

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.

The Southern Vice President and Treasurer offices will be up for election at the end of this year. Nominations will be sought this Fall; results will be announced during our Annual Meeting.

Thanks are due to all of the officers and others who contribute generously of their time and talent!

The UNLV Mathematical Sciences Department maintains an active seminar series, meeting on Fridays at 11:00-12:00 every few weeks. Notices are sent to the NV-ASA email list; for more information go to http://faculty.unlv.edu/cho/statseminar.htm. ❖



July 28 - August 2, 2012 San Diego Convention Center San Diego, California

Only a minority of the people who receive this newsletter are members of the Nevada Chapter of the American Statistical Association (MV-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 and Career Days. Our financial needs are not great, so long as we all pitch in our modest amounts. **

From 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-Chantar Current Officers

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) Secretary: Hong Wei (through 2013) Treasurer: Kaushik Ghosh (through 2012) Debra Stiver (through 2013) Chapter Representative: Education Committee Co-Chair: David W. Thiel Alicia Chancellor Hansen Webmaster:

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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. Silver State-istics is published by the Nevada Chapter of the American Statistical Association.

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For contact information, please see our website.



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