



SILVER STATE-ISTICS

Nevada Chapter of American Statistical Association



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 upcoming events.

www.amstat.org/chapters/

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Coming Events

Our **Annual Meeting** will take place in the South this coming Fall. Stay tuned for announcements of this and other events, both North and South. >

Elections

Glenn Waddell was re-elected to the post of Northern Vice President for 2020-21 and **Gayle Allenback** was elected to the post of Chapter Representative for 2020-2022. **Chris Tong** was appointed to the vacant position

as president for 2020 and **Charles Davis** was appointed to the vacant position of secretary for 2020. ∞

The President's Corner *Christopher Tong*

Greetings and welcome from your just-installed 2020 NV-ASA President. The chapter had an extraordinary 2019, including the launch of a new and heavily-attended Data Science symposium in Las Vegas, under the aegis of our Southern Vice President, Shar Chaudhry. You can read more about that event, as well as our annual meeting in Reno, elsewhere in these pages. We hope to continue working with the data science communities of our state in 2020. It is particularly valuable, in my view, to bring university students (and those who teach them) into contact with practitioners in the private, public, and nonprofit sectors. We also want to cultivate future generations of data-literate citizens in our state, through our annual K-12 poster competition, as well as expanding outreach to Nevada's K-12 educators. (You can see last year's winning posters on our website.) Finally, 2020 is of course a census year, the occasion for a massive data collection enterprise mandated by the U.S. Constitution. The ASA has deep historical ties with the U.S. census dating back to the 19th century.

I would like to thank the 2019 chapter officers stepping down after years of much valued service: our President, Alicia C. Hansen, who continues to serve as Past President and webmaster; Deb Stiver, completing her service in the Presidential line; Mihye Ahn, our Secretary (and newly tenured and promoted at UNR!); and fellow Boilermaker Chad Cross, our Chapter Representative. I also warmly welcome our returning officers, some of whom are taking new roles on the Executive Committee. This year's annual meeting will be in Las Vegas in the fall, and may incorporate this year's data science symposium. We are in the early stages of planning 2020 chapter events. One possibility is a data science symposium for Northern Nevada. Please consider getting involved with the chapter: we will have four officer positions open in 2021. We can also use volunteers for our major events. Σ

NV-ASA Constitution Amendment

The NV-ASA Constitution was amended by unanimous vote recently. The changes involved issues regarding chapter members who are and are not members of the ASA National organization. In particular, it is now more clear that executive committee members must be members (regular, associate, or student) of the chapter, and that the President, Treasurer, and Chapter Representative must also be full ASA members. ≤

Fall Symposium & Annual Meeting 2019

NV-ASA held its 2019 Fall Symposium and Annual Meeting in Reno Saturday, October 19.

The keynote speaker was **Petra LeBeau**, of RHO, Inc., a bioinformatics research consultancy located in Wilmington, NC. She has been the statistical lead for many clinical trials at RHO during the past 14 years, and now leads their Analytics team of the Bioinformatics Group. Her talk focused on the growing impact that Machine Learning (ML) is having in medical/clinical research. One of her take-away messages was that ML models should be both accurate and interpretable (transparent), even though these are often “black boxes”.

We also heard from **Anna Panorska** of the Department of Mathematics & Statistics at UNR. Her title was “Stochastic Episodes with Light and Heavy Tails: Models, Properties, and Testing”. Episodes (events) are described as consecutive observations of a process above/below a threshold; these occur in finance, climate, hydrological, etc. modeling. The question of interest is in deciding between exponentially and heavy-tailed models, and the implications of these.

Colin Grudzien of UNR Math & Stat gave a talk entitled “On the Numerical Integration of the Lorenz-96 Model, with Scalar Additive Noise, for Benchmark Twin Experiments”. His focus was the impact that forms of discretization error can have on solutions of the Lorenz-96 dynamic differential equation systems.

Andrey Sarantsev of UNR Math & Stat, spoke on “The Size Effect Revisited”, comparing returns of portfolios of stocks with respect to their market capitalizations.

Student presentations were given by **Heyang Qin**, UNR, speaking on “Swift Machine learning Model Serving Scheduling: A Region Based Reinforcement Learning Approach”; **Karla Henriksen**, UNR, on the “Hyperbolic Property of Earthquake Networks”; **Zach Kellar**,

UNR, on “The Effect of Launch Angle and Exit Velocity on Hit Probability in Major League Baseball”; **Hussain Abbas**, UNR and StatsAI, on “The Impact of Bayesian Methods on AutoML”; and **Omar Kamal**, UNR, on “TBI Mortality Prediction Model for Pediatric Patients (TMP3) with a Clinical Importance-based Weighting Approach”.

State of Data Science in Las Vegas

This first-ever event was held Saturday, September 28 on the UNLV campus, sponsored by NV-ASA and the UNLV Department of Mathematics Sciences. The emphases of the day were on the role of Data Science in business, now and in the future, and the skills needed to participate.


Ian Young (SVP of Analytics of DataX and Equifax) gave us a broad discussion on the operant definition of Data Science and its key tenets from the perspective of business leadership. He emphasized that Data Science practitioners' success lies in holistic treatments of data-based problems that ensure data quality and clear communication of the results.

Sean Mulvenon (Associate Dean for Research & Sponsored Projects in the College of Education at UNLV) offered insight into the role that Data Scientists play within the educational research and laid down future aspirations for synergistic growth of both fields simultaneously. He also presented an “elevator-model” for successful implementation of scalable data-based solutions and presented the challenges faced when working within highly regulated environments.

Miguel Maldonado (Director of Data Science at Credit One Bank) provided a historical context on predictive analytics and the evolution of Data Science. He further emphasized the importance of building strong local communities and shared some personal insight with the audience on how to grow as practitioners of Data Science.

Edwin Yan (Manager of Enterprise Analytics at Caesars Entertainment) discussed the role of Data Science within Caesars Corporation and its many verticals. He presented a step-by-step implementation guide to model data from collection to production and presented a case study demonstrating automated machine learning.

We also participated in a short course “Databases for Data Scientists” given by **Robert Penridge** (Director of Business Intelligence at Speedwell Holdings). The course outlined the need for specialized infrastructure for data storage within enterprises. He presented some popular data storage solutions and the lead us through


hands-on exercises in the retrieval of normalized tabular data using SQL. 

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K-12 Poster Competition

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Two of the winning posters from our 2019 NV competition have received awards at the national level. Michaela Hansen's Vehicles On My Block was awarded 2nd place nationally in the K-3 category, and Darena Nguyen's College Conclusions received honorable mention in the 7-9 grade category.

The rules and entry forms for the next K-12 poster competition have been posted to our website. Entries are due by March 11. Judging will take place March 13-14. 

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UNLV News

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The UNLV **Department of Mathematical Sciences** has announced its Spring Statistics Seminar schedule. Forthcoming presentations are the following.

Feb 7: "Learning Connectivity Networks from High-Dimensional Point Processes", **Ali Shojaie**, U of WA.

Feb 21: "Bayesian Nonparametric Differential Analysis for Dependent Multigroup Data with Application to DNA Methylation Analyses", **Subharup Guha**, U of FL.

Mar 27: TBD, **Marco Carone**, U of WA.

Apr 10: "Prediction Accuracy Measures for a Nonlinear Model and for Right-Censored Time-to-Event Data", **Gang Li**, UCLA

Apr 24: TBD, **Masoud Asgharian**, McGill U. 

Established in August 2019, **Data Science Innovated** (DSI) is a student organization dedicated to promoting Data Science education and practice to the UNLV community. Established under the supervision of Dr. Kaushik Ghosh (Associate Professor, Department of Mathematical Sciences), DSI holds biweekly sessions that are free to attend and open to the community.

In Fall 2019, the club introduced its attendees to programming in popular languages such as R and Python. Methodological tutorials were provided in neural networks, linear regression, MCMC and Bayesian Statistics by UNLV students Anhan Mandal, Blake Hament, Vince Choi, Bowen Liu, and Deniz Baloglu. Additionally, to promote professional development, three speakers from the professional world (Shar Chaudhry,


Equifax, Julia Anderson, Cigna, and Carrie Kleindienst, Equifax) were invited to share their thoughts and set expectations about the big world of data science. DSI also participated in the first-ever State of Data Science Las Vegas. To get in touch with DSI, email dsinnovated@gmail.com, or look at Facebook/dsinnovated or Github/dsinnovated. 

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A Leap-Year Puzzle for You

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If you enter today's date in EXCEL and then change the entry to a number, you get a five-digit integer. For example, January 29, 2020 is 43859. This can be convenient; for example, if you subtract 12/31/2019 from today's date and convert the difference to a number, you get the numerical day of the year, 1 through 366. (Time of day becomes fractions of days.)

But what is **Day 1**? Different software systems seem to agree on the number for today, but not on Day 1! So what is Day 1 in your favorite system? And what's going on here? It does have to do with how "Leap Year" is defined. 

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CSP 2020

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The annual Conference on Statistical Practice will take place in Sacramento February 20-22. Details may be found at <https://ww2.amstat.org/meetings/csp/2020/>.

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Joining NV-ASA!

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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. For full-time students at NV institutions, the cost is \$10 per year (\$2 for student members of the national ASA). Otherwise, it is \$20 per year (\$10 for members of the national ASA). One can become a Life Member for \$100. 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/chapters. Otherwise, whether a national ASA member or not, you can join through PayPal on our website or by contacting our Treasurer Alejandra Livingston. Any way you do it, please obtain an information form from our website, complete it, and send it to Alejandra 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 help 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. ✱

NV-ASA Officers & Others

Voting officers are

President:	Christopher Tong (2020)
Past President:	Alicia Chancellor Hansen (2020-2021)
Northern Vice President:	Glenn Waddell (2020-2021)
Southern Vice President:	Sharang Chaudhry (2019-2020)
Secretary:	Charles Davis (2020)
Treasurer:	Alejandra Livingston (2019-2020)
Chapter Representative:	Gayle Allenback (2020-2022)

Also involved are

Webmaster:	Alicia Chancellor Hansen
Poster Competition Lead:	Tia Maria Price
Newsletter Editor:	Charles Davis

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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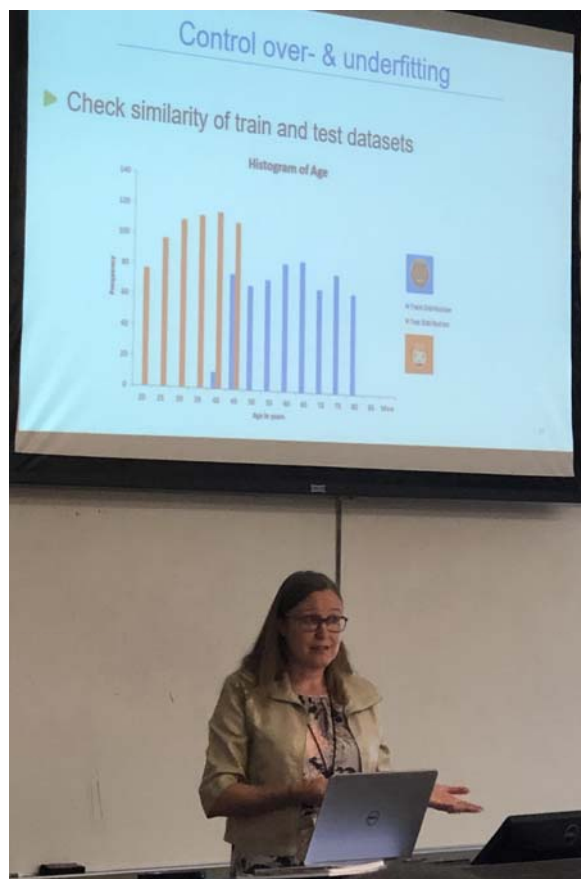
For contact information, go to www.amstat.org/chapters/

Our address for regular mail is

NV-ASA, PO Box 3311, Sparks, NV 89432-3311



Photos from the Fall Symposium and Annual Meeting in Reno



Above: Petra LeBeau

Right: Michaela Hansen, receiving her 2nd place national award from Deb Stiver and Alicia Hansen



Photos from the State of Data Sciences in Las Vegas



Edwin Yan, Sean Mulvenon,
Ian Young



Miguel Maldonado, Robert Penridge