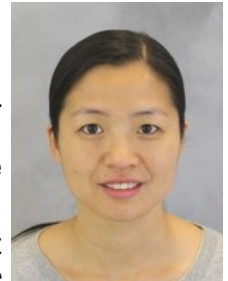




NC ASA CHAPTER BULLETIN

June 2020

Greetings from NC ASA President Amy Shi



Despite this challenging and uncertain time due to the COVID-19 pandemic, I continue to be impressed and inspired by the strength and commitment that is being demonstrated across our community. During social distancing, our members have found new and creative ways to connect and engage in a digital world.

NC ASA strives to serve its community! We keep hosting webinars in 2020 as part of the Professional Development Webinar Series. The first two webinars, one by Fang Chen (SAS) and one by Christopher Healey (NCSU), were both very successful! The next webinar will be on data science given by Dr. Ming Li from Amazon (scheduled on June 26th).

Due to the impact of the coronavirus, we have decided to host this year's Statistics and Data Science Career Fair virtually sometime in the summer or early fall. We sincerely appreciate all the positive response and support we have received from organizations and individuals. We will make this a great event again this year.

We accept applications for the NC ASA Student Travel Award year-around. Applications are reviewed every three months. Students can receive up to \$250 to attend a conference or workshop.

No one would have wished for a crisis like this. But I am excited to see how creative, flexible, and collaborative we can be under difficult circumstances. NC ASA aims to bring both professional opportunities and fun to the North Carolina statistics community. Cheers!

NC ASA Calendar - Upcoming Events

<https://community.amstat.org/northcarolina/home>

- Data Science Webinar by Dr. Ming Li (June 26th, 12pm to 1p) [Registration open!](#)
- NC ASA Statistics and Data Science Career Information Fair ([Going Virtual](#))
- Student Travel Award continues. Next application deadlines are Sept 1 and Dec 1. To submit an application go [here](#).
- We had a great turnout for our first ever virtual social in May. Watch for more pop-up socials in the coming months!
- Annual Recycled Poster Session (coming up)

Local Events

- Duke-Industry Statistics Symposium (DISS 2020) in August.
- Data Science, Statistics & Visualization (DSSV 2020), in July, organized by SAMSI.
- Lifetime Data Science conference (LiDS 2021) will be held in Raleigh, NC.

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NC ASA Student Travel Awards

Industry Interests Group Webinars:

<https://community.amstat.org/northcarolina/webinarseries>

Harnessing the Human Visual System for Effective Visualization



Christopher Healey

Our second webinar in 2020 was held on Friday, April 24th at noon, presented by Dr. **Christopher Healey**, NCSU Professor in the Department of Computer Science and the Goodnight Distinguished Professor in the Institute for Advanced Analytics. This webinar had a great turnout.

Abstract: During this talk, I will explore using visualization for exploration, insight, and discovery in large datasets. We will focus specifically on capabilities of the human cognitive vision system, and how this can inform our design of visualizations that take advantage of the visual system's strengths while avoiding its limitations. I will present a number of simple psychophysical examples that demonstrate when the visual system functions rapidly and accurately, and when it struggles. I will extend these ideas to a number of practical visualization systems we have implemented for domain scientists in areas like marine biology, astrophysics, and social media analytics.

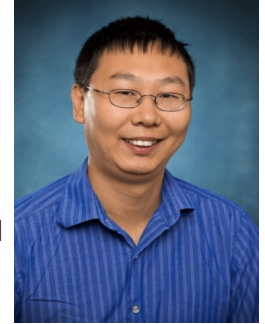
Bio: Dr. Healey holds joint appointments as Professor in the Department of Computer Science and the Goodnight Distinguished Professor in the Institute for Advanced Analytics at North Carolina State University. His research focuses on visualization, cognitive psychology, graphics, text analytics, and social media analytics. He has graduated 11 Ph.D. and 28 MS students, and received \$5.8M in funding from agencies including NSF, DoD, NSA, ARO, and various industrial sources. Dr. Healey has published just over 90 peer-reviewed articles, and serves as an Associate Editor for ACM Transactions on Applied Perception. He is an IEEE and ACM Senior Member, and a member of NC State's Academy of Outstanding Teachers.

Watch past [NC ASA's webinars](#) on YouTube!

Project Cycles, Career Path, Soft Skills & Pitfalls in Data Science

Coming up on Friday, June 26th 12-1pm!

This webinar will be given by Dr. **Ming Li**, Senior Research Scientist at Amazon.



Ming Li

Abstract: In this talk, we will overview the current status of data science in industry. First, we will describe the difference between a statistician and a data scientist including skills, knowledge, and programming background. Then we will introduce potential data science career paths in tech industry. Data science project cycles are also described in detail including problem formulation, modeling and productionization. We will talk about soft skills and common pitfalls for data science projects at the end.

Bio: Dr. Ming Li is currently a senior research scientist at Amazon. He organized and presented 2018 JSM Introductory Overview Lecture: Leading Data Science: Talent, Strategy, and Impact. He was the Chair of Quality & Productivity Section of ASA. He obtained his Ph.D. in Statistics from Iowa State University in 2010. With deep statistics background and a few years' experience in data science and machine learning, he has trained and mentored numerous junior data scientist with different backgrounds such as statistician, software developer, database administrator and business analyst. He is also an instructor of Amazon's internal Machine Learning University and an adjunct instructor of University of Washington.

Please register here: https://ncsu.zoom.us/meeting/register/tJcodO-sqjMtE9c6-rtJ4kqF_sLANUdKP9zI

2020 Statistics and Data Science Career Information Fair

We have decided to redesign the Career Fair as an online-only event. We are tentatively planning to pick a Wednesday afternoon (3-5pm) sometime this summer or early fall.

We will structure the virtual Career Information Fair in two parts. The Fair will open with a joint introductory Zoom session hosted by the NC ASA board, with all organization members and participants on the same call. In the second part, organizations will break off into their own individual video conference sessions. We will share more information about the fair, including a link for registration in the coming weeks.

The Fair is an opportunity for organizations to connect with job seekers who possess highly-sought analytics skills. If your organization is interested in being a part of the fair, please contact NC ASA Secretary Kristen Foley (kmfoley@gmail.com).

NC ASA Members Making a Difference

We are excited to share how statisticians, and North Carolina statisticians in particular, are helping during this COVID-19 pandemic. Keep reading to learn about the many ways our very own NC ASA members are having a positive impact in these uncertain times.

Effects of COVID-19 on clinical trials Episode 76 of the Biopharmaceutical Section provides an in-depth discussion of COVID-19 and the operational and statistical effects on clinical trials. Hosted by Richard C. Zink, Senior Director of Statistics at TARGET PharmaSolutions, and featuring interviews with Mouna Akacha (Novartis), Yongming Qu (Eli Lilly and Co.), and Aileen Ward (Shionogi Inc.), the podcast can be found here: <https://community.amstat.org/biop/media-contents/podcasts>.

Supporting K-12 educators In a rapid response to COVID-19, Hollylynne Lee, Professor of Mathematics and Statistics Education at NC State, decided to update and reopen the FREE massive open online course Teaching Mathematics with Technology in mid-March. Over 1,650 K-12 mathematics teachers, teacher educators and preservice teachers have enrolled! The course utilizes dynamic technology tools such as CODAP, Desmos, and GeoGebra, and includes videos and technology tools such as FlipGrid and VoiceThread that can assist teachers in engaging their students online during this pandemic. Since statistics is often taught in quarters 3 and 4 in middle and high school, there are many example statistics tasks and videos of students and teachers engaged in technology-supported statistics lessons. The course was active through May 18th, but once registered participants maintain access to all materials! <http://go.ncsu.edu/ptmt>

COVID-19 global forecasting Kaggle, known for its highly competitive predictive modelling and analytics competitions, has been hosting a series of weekly competition to model the factors that impact the transmission of COVID-19. Tapping into the collective knowledge of a global community of statisticians and data miners, the goal of the competition is to predict cumulative confirmed cases and fatalities for over 300 different major regions around the world, looking 28 days into the future. NC ASA member Funda Gunes (SAS) teamed up with ASA Fellow Russ Wolfinger, an experienced Kaggle grandmaster from JMP, to participate in this difficult and important challenge. Together they finished in the top 1% in the first three competitions and are [#1, among 472 teams worldwide, in the week 4 competition](#). The code and forecasts developed through the competition are open source and publicly available, providing a valuable resource for researchers and community leaders worldwide.

Tracking trends SAS has created a [report](#) that depicts the status, location, spread and trend analysis of the coronavirus. Use this interactive report to: 1) find out the number of new coronavirus cases within the last 10 days and see how the virus' infection rates, recovery rates, and fatality rates are trending; 2) discover where the virus has migrated and compare China with the other parts of the world; 3) analyze the confirmed cases to figure out how the recovery rate is changing over time. [SAS Visual Analytics](#) was used to create this report with [data from WHO, CDC, ECDC, NHC and DXY compiled by JHU CSSE](#).

Saying "Thank you!" One family, who wanted to remain anonymous, told us their story: Our family has donated to local organizations that are working to provide food and housing to families in our county, to assist utility customers who cannot afford to pay their utility bill, and to help make masks for local first responders. My daughter wanted to help as well and made handmade cards that we sent to the staff of a local hospital. During this difficult time, we hope these experiences teach our kids what it looks like to be a responsible and caring community.



Check out our [website](#) for resources recommended by our members or to submit your own story about the things that you are working on related to COVID-19, either at work or at home.

Member Profiles

Member: Kimberly Weems (NCCU)



I am a statistician and an associate professor of mathematics at North Carolina Central University (NCCU). My research interests include statistical models for count data. Since joining NCCU in 2015, I have been instrumental in enhancing the graduate mathematics curriculum with statistics courses. One of my goals at NCCU is to increase the number of students who pursue graduate degrees and careers in the statistical sciences. Currently, I am co-director of the NCCU-NC State Bridge-to-PhD program, an interdisciplinary, NSF-funded traineeship that equips students with advanced statistical methods for analyzing atomic-scale data. I was honored to receive College of Arts and Sciences Excellence in Teaching Award in 2017.

I am a native of Georgia, and I earned my BS in mathematics from Spelman College. Afterward, I received my MA and PhD in applied mathematics with a statistics concentration from the University of Maryland, College Park. I completed postdoctoral studies in the Statistics Department at NC State, where I later joined the faculty and served for two years as co-director of Statistics Graduate Programs until moving to NCCU. I have appreciated the opportunities to be involved with ASA as a member of the Committee on Minorities in Statistics, Bryant Scholarship Committee, and StatFest. Along with my husband and two daughters, I enjoy listening to all types of music, hiking, and traveling.

Member: Elizabeth Rowley (Westat)

I am a Senior Biostatistician at Westat. Westat is headquartered in Rockville, MD and has an office in Durham. I enjoy the variety of statistical challenges found in my projects with NIEHS, CDC, and Children's Hospital of Philadelphia. Much of my work focuses on large cohort studies. I am particularly interested in how analysis strategies, such as variable selection techniques, sampling schemes, and sample size for simulation studies, may affect results.



I grew up in Colorado and graduated from Colorado State University. I received my DrPH from University of North Carolina and MS from the University of Washington, both in Biostatistics. I previously worked in the Department of Biostatistics at Vanderbilt University where my focus was on assisting investigators at their cancer center. As a student, I helped with the China Health and Nutrition Survey (UNC), the UW Autism Center, and Group Health Cooperative (now Kaiser Permanente). I continue to be drawn to the collaborative aspect of our profession.

I live in Durham with my husband, Neil, and our two daughters Helen (3) and Jane (6mos). Together we enjoy outdoor adventures, making baking messes in the kitchen, and spending time with family and friends.

Student: Romesh Thanuja (UNC Greensboro)

I am a fourth-year Ph.D. student at the UNC Greensboro. I am majoring in Computational Mathematics with a concentration in Statistics. My research interests are in the areas of Geostatistics and Operations Research. The focus of my dissertation is Global Data Generation on the Sphere for Different Types of Stochastic Processes. I completed my master's degree in Data Analytics at the University of North Carolina at Greensboro. I am a Graduate Teaching Assistant at Math & Stat department which enables me to teach Mathematics and Statistics Classes for undergraduate students for four years. I am proud of being a teacher because I can build people and help them to become what they want to be. Furthermore, I have dedicated some of my spare time to working as

a Statistical Consultant at the UNCG Statistical Consulting Center, focus mainly on helping other departments' graduate students and high school students to analyze/design their researches/studies. I was born in Sri Lanka, a beautiful island country in South Asia. Prior to coming to UNCG I earned a B.Sc degree in Statistics and Operations Research at the University of Peradeniya, Sri Lanka. After my graduation, I worked there as a Temporary Lecturer for two years. I was lucky enough to teach many Operation Research classes at my first beloved university. I enjoy watching movies, going to beach and having fun with my friends. In the future, I would like to be a professor of Statistics/Mathematics in a university where I can teach my students how big this world is.



NC ASA Student Travel Award

We are continuing to accept applications for the Student Travel Award.

Applications are reviewed every three months with the next reviews occurring on Sept 1 and Dec 1. North Carolina statistics students at any level can receive up to \$250 to attend a conference or workshop within North Carolina or any ASA sponsored conference. Consideration is given to the impact conference attendance would have on the person applying. To submit an application go [here](#). For any questions, please contact Chapter Representative Ryne Vankrevelen (rvankrevelen@elon.edu).

Our first award was given to Romesh Thanuja. Check out the member profiles section to learn more about him.

More Local Events!

- The 2020 **Duke-Industry Statistics Symposium (DISS2020)** will be held in August. The theme will be "Emerging Clinical Initiatives in Pharmaceutical Development: Methodology and Regulatory Perspectives." The direct link for registration is <https://sites.duke.edu/diss/register/>
- **Data Science, Statistics & Visualisation (2020)**, organized by SAMSI, is a [virtual conference](#) in July aimed at bringing together researchers and practitioners interested in the interplay of statistics, computer science, and visualization, and to build bridges between these fields.
- The **Lifetime Data Science conference (LiDS)** will be held in Raleigh, North Carolina during, May 19-21, 2021. The theme of this year's conference will be "*Advances in Survival Analysis: Making an Impact in the Era of Data Science*" and will cover a range of topics. <https://community.amstat.org/lids/home#LiDS-2021-conference-front-page>