



# NC ASA CHAPTER BULLETIN

Fall 2019

## Greetings from NC ASA President Emily Griffith

The North Carolina Chapter is excited about finishing 2019 with even more great programming! Our calendar has been packed with events: a Recycled Poster Session and Social in early September, two webinars (one on machine learning and one on data science). Upcoming events include one more machine learning webinar, a couple of socials, and our big Fall Dinner. We are thrilled to have Dr. David Dickey (NCSU) and Dr. Sudipta Dasmohapatra (Duke) as speakers at our fall dinner on December 6th.



Emily Griffith

I'd like to take a minute to say thank you to our Executive Board and to our chapter members. I have truly enjoyed being president of this chapter this year. I'm also looking forward to what the future holds for our chapter with our outstanding officers!

Please consider getting involved in the chapter by coming to events, volunteering to host a local meet-up, or by running for office! Let us know if you have ideas for future events or professional development activities. Have a wonderful fall!

### NC ASA Calendar - Upcoming Events

<http://community.amstat.org/northcarolina/events/upcomingevents>

- Fall Statistics Workshop for NC High School Teachers, October 19, NC School of Science and Math, [Registration open!](#)
- Machine Learning Webinar (12 to 1p, Nov. 1st), [Registration open!](#)
- Social at Raleigh Beer Garden after NCSU Data Science Red Talk, Nov. 6th, 5:30pm
- Fall Dinner: Statistics History and Future! (Friday, December 6th, 6:00 to 9:00pm, Hamner Conference Center)

### Upcoming Awards and Elections

- Executive Board Nominations are due by the end of the day on Friday, November 15th (more information on Page 3)
- Senior Statistician and Chapter Service Awards nomination are due by the end of the day on Friday, November 15th (more information on Page 3)

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# Industry Interests Group Webinars: Machine Learning and Data Science

<https://community.amstat.org/northcarolina/events/webinars>

## Machine Learning



Cynthia Rudin

Our third machine learning webinar, Interpretability versus Explainability in Machine Learning for High Stakes Decisions, will be **Friday, November 1st** at noon. With widespread use of machine learning, there have been serious societal consequences from using black box models for high-stakes decisions, including flawed bail and parole decisions in criminal justice. Explanations for black box models are not reliable, and can be misleading. If we use interpretable machine learning models, they come with their own explanations, which are faithful to what the model actually computes. In this talk, Cynthia will discuss some of the reasons that black boxes with explanations can go wrong, whereas using inherently interpretable models would not have these same problems. In particular, she will discuss ProPublica's analysis of the COMPAS model used in the criminal justice system. Cynthia will give examples of such interpretable models in criminal justice and also in finance and computer vision.

Cynthia Rudin is a professor of computer science, electrical and computer engineering, and statistical science at Duke University, and directs the Prediction Analysis Lab, whose main focus is in interpretable machine learning. She is also an associate director of the Statistical and Applied Mathematical Sciences Institute (SAMSI). Previously, Prof. Rudin held positions at MIT, Columbia, and NYU. She holds a PhD from Princeton University. She is a three time winner of the INFORMS Innovative Applications in Analytics Award, was named as one of the "Top 40 Under 40" by Poets and Quants in 2015, and was named by Businessinsider.com as one of the 12 most impressive professors at MIT in 2015. She is past chair of both the INFORMS Data Mining Section and the Statistical Learning and Data Science section of the American Statistical Association. She served on committees for DARPA, the National Institute of Justice, and AAAI. She has served on three committees for the National Academies of Sciences, Engineering and Medicine, including the Committee on Applied and Theoretical Statistics, the Committee on Law and Justice, and the Committee on Analytic Research Foundations for the Next-Generation Electric Grid. She is a fellow of the American Statistical Association and a fellow of the Institute of Mathematical Statistics. She will be the Thomas Langford Lecturer at Duke University during the 2019-2020 academic year.

## Fall Dinner: Statistics History and Future

<http://community.amstat.org/northcarolina/events/upcomingevents>

Please join us for dinner on **December 6th** at the Hamner Conference Center in Durham. We are excited to have Dr. David Dickey (NCSU) present about the history of statistics. Dr. Sudipta Dasmohapatra (Duke) will speak about the future of statistics. We will also present our chapter awards at this event. In addition to NC ASA's awards, we will recognize past president Elizabeth Mannshardt with an ASA Chapter Service Award. Tickets are available online, and we are also currently seeking corporate sponsorship for this event.



2018 Fall Dinner

## Recycled Poster Session and Social

NC ASA was thrilled to organize our second annual Recycled Poster Session and Social on September 12th. This year the event was hosted on SAS campus, offering a convenient and spacious venue for a fun and informative gathering of statisticians from academia, industry and government. Occurring just a few weeks after JSM, the poster session was a chance for local statisticians to re-use a past poster, or provide an informal setting for practicing an upcoming poster presentation. The evening kicked off with 1 minute lightning talks by the 19 poster presenters. Over 40 attendees then had a chance to visit each poster, mingle, and enjoy refreshments. Poster winners were Zahra Saki (PhD student in textiles at NCSU) and Dr. Jonathan Williams (PhD from UNC Chapel Hill, currently faculty at NCSU). NC ASA would like to thank SAS, Rho, and Sciome for sponsoring this event.



Attendees enjoyed the poster session at SAS!

## NC ASA Student Corner

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

**Travel Award:** NC ASA is excited to announce our new student travel award of \$250. This award will help send North Carolina students (graduate and undergraduate) to North Carolina conferences. The application process will begin in 2020. This award is quarterly. To apply, please see our website. This award is to encourage career development and preference will be given to students attending their first conference and students from smaller colleges and programs.

**JSM Travel Awards:** Be sure to enter a [Student Paper](#) Competition to be considered for a travel award to JSM 2020! Most deadlines are December 15th.



**Student Chapters:** In 2020, please look for our Scholastic Council to transition to an organization for student chapters of the American Statistical Association. Emily Griffith and Stephanie Zimmer are going to work together to pilot this program, and they are excited to see how it works. For more information on ASA student chapters, please visit the ASA's website at <https://www.amstat.org/ASA/Membership/Student-Chapters>. If you would like to be a part of this new program, please let us know!

## Upcoming Elections

Interested in joining NC ASA's Executive Board? Our elections will be coming soon, and this year we need to elect two new officers and appoint one new liaison:

1. Treasurer
2. Vice-President 2
3. Outreach and Communications Director Liaison

More information on these positions is available online: <https://community.amstat.org/northcarolina/aboutus/history>. To run, please email NC ASA President Emily Griffith at [eghohmei@ncsu.edu](mailto:eghohmei@ncsu.edu) by Friday, Nov. 15th.



A convenience sample of NC ASA's Executive Board at JSM 2019!

## Chapter Awards

NC ASA is currently accepting nominations for our Chapter Awards. To nominate yourself or someone else, please send the name of your nominee and at least a paragraph but no more than a page providing concrete examples of how your nominee is deserving of the award to NC ASA Secretary Kristen Foley, [kmfoley@gmail.com](mailto:kmfoley@gmail.com), by Friday, November 15th.

### Chapter Service Award

The North Carolina Chapter recognizes a statistician for their long and outstanding service to the North Carolina Chapter. Past winners include Breda Munoz and Sujit Ghosh.

### Senior Statistician Award

The North Carolina Chapter recognizes a senior statistician for their outstanding contributions to the theory and practice of statistics, particularly for their role in the development of the subject in North Carolina. Past winners include David Banks, David Dickey, and Maura Stokes.



Sujit Ghosh receiving the NC ASA Chapter Service Award in 2018.

## 2019 NC ASA Executive Committee

**President:** Emily Griffith (NCSU)

**Vice President:** Amy Shi (SAS)

**Vice President 2:** Susan Simmons (NCSU)

**Secretary:** Kristen Foley (US EPA)

**Treasurer:** Brian Gaines (SAS)

**Chapter Representative:** Ryne Vankrevelen (Elon)

**2019 Liaisons to the Executive Board**

**Outreach and Communications Director:** TBA

**Industry Interests Group Core Strategic Team**

**Lead:** Sujit Ghosh (NCSU)

**Ambassador to Small Colleges and Universities:** Stephanie Zimmer (RTI)

**High School Outreach:** Breda Munoz (RTI)

**Past President:** Elizabeth Mannshardt (US

# Member Profiles



## Member: Katie Rose Mollan (Academia)

Katie Rose Mollan is a Senior Biostatistician and Core Manager at the University of North Carolina (UNC) Center for AIDS Research. She has actively collaborated in HIV-AIDS research for >12 years and has co-authored >45 peer-reviewed publications in the field. Her statistical experience includes design and analysis of randomized clinical trials, observational studies, and pre-clinical studies. In her role at UNC, Katie provides biostatistics support and expertise for collaborative grant proposals, data safety monitoring, statistical analysis, conference presentations, and manuscripts.

Mollan grew up in Fostoria, Ohio and is an alumna of The Ohio State University, where she earned a Master's in Statistics (2006), and The University of Findlay where she studied undergraduate Psychology, Math, and Biology. Katie is a PhD student in Epidemiology at UNC, with research interests in HIV, mental health, injury and real-world causal inference. She was recipient of the 2018 Dr. Curtis Glenn Southard Award in Community Mental Health at UNC Gillings School of Global Public Health. Outside work, Katie enjoys relaxing with her family, yoga, salsa dancing, traveling, shopping, and drinking tea. Katie and her husband Scott Mollan (Principal Biostatistician, ICON plc) have two sons in elementary school – Teddy and Martin – who lead them on many excellent adventures.

## Member: Jamie Ridenhour (Industry)

I am a research statistician at RTI International. I have both my bachelor's and master's in statistics from NC State (2005 and 2010) in addition to a bachelor's in Psychology from NC State (also 2005). My work focuses on sampling, weighting, and estimation for surveys (though as an undergraduate I never would have guessed I would end up in survey!). I also teach Analytical Tools for the MBA@UNC program.



Holding a variety of elected and volunteer positions in the Survey Research Methods Section of ASA has benefited me through building my network of statisticians both in and out of my specialty area and gaining a better understanding of how ASA functions. Currently I serve as a Council of Sections representative for SRMS. Because much of the SRMS "mass" is in the DC area, I pay attention to the Washington Statistical Society as well as the NC Chapter. I am encouraged to see how much more active the NC Chapter has become in the past few years and hope the trend continues!

When not working I can be found spending time with my partner Joe (also a survey statistician) and our four rescue beagles, probably enjoying some good local eats and craft brews (the latter not shared with the dogs).

## Member: Matt Wheeler (Government)



I work as a senior health statistician for NIOSH/CDC. Though I am stationed in Cincinnati, OH, I live and work in North Carolina at RTP working with the EPA, NIEH, FDA, and international partners in Europe (WHO and EFSA) on developing novel statistical methods for toxicological risk assessment. In this collaborative effort, I was recently the primary developer for the US EPA's rewrite of their benchmark dose software, and the rapporteur for the World Health Organization's rewrite of chapter 5 of the International Programme on Chemical Safety Environmental health criteria document 240 dealing with dose-response assessment.

As I am interested in the nexus of research and practice, I am also involved in nonparametric Bayesian methods development for chemical risk assessment, which is a continuation of my dissertation work with Drs Amy Herring and David Dunson. Recently, it has been my pleasure to work with students Kelly Moran of Duke University on developing a fast accurate Bayesian sampler for extremely large Gaussian Process data sets, and Sarah Davidson at the University of Cincinnati to develop novel risk classification methods for toxico-genomic data. This work is primarily motivated by the need to connect statistical advances to risk assessment practice, which will give policymakers a more complete picture of the data available when making decisions about public health policy. Further has been very well received within NCCT and NCEA at the EPA, the NTP as well as with European partners.

On a personal note, I am married to a wonderful wife of 16 years, and I have three children. When they are not keeping me busy (99.9% of the time), I enjoy travel, reading philosophy/theology, tinkering with my 3-D printer, and 'escaping' from one of many of the local escape rooms in the triangle. A good beer is not out of the question either!

# NC ASA Interest Groups

**Industry Interests Group:** NC ASA's IIG provides a forum for communication among members. If you are interested in participating in the IIG on behalf of yourself, your company, or your organization, please contact Sujit Ghosh at [Sujit.Ghosh@ncsu.edu](mailto:Sujit.Ghosh@ncsu.edu).


**Scholastic Council:** NC ASA's Scholastic Council facilitates communication and coordinates activities between the Chapter and North Carolina schools, colleges, and universities. In 2020, this council will transition to a new leadership structure. Please keep an eye out for updates on this!


## Find us online!

All of this information and more is available at our website.

<http://community.amstat.org/northcarolina>

## Look for us on social media!

 @NCAmStat

 @NC\_ASA

# Award Season!

ASA is soliciting nominations for the Deming Lecturer Award. Please nominate an NC statistician! Nominations are due by November 15th. <https://www.amstat.org/ASAYour-Career/Awards/Deming-Lecturer-Award.aspx>

For a full list of ASA awards, please visit <https://www.amstat.org/ASAYour-Career/Awards-and-Scholarships.aspx>.

Each award is listed with a corresponding deadline.