

Parameters

FALL | 2018



Academic Meet-up Connects with Students



David Hunter, Penn State



Tim Hesterberg, Google

Landing Your First Job as a Statistician!



Esra Kurum, UC Riverside



Tommy Wright, US Census



NISS/Merck Meetups on a Roll!



September 2017



January 2018



April 2018



October 2018



Welcome to the Thanksgiving season and the Fall Newsletter!

The National Institute of Statistical Sciences (NISS) Board of Directors annual meeting occurs each November, and we met in Alexandria, VA November 2-3. Highlights from the meeting include a renewed commitment to increase the NISS affiliate program by recruiting new academic affiliates, reviewing the leasing of the NISS headquarters building in RTP NC, moving to new offices in Washington DC, and looking at our strengths in conducting independent panels and workshops on topics of interest to our government affiliates. We also reviewed the 5-year Strategic Plan completed in 2016, which identifies strengths and opportunities available to NISS. Reflecting on the

past as we look to the future reminded us of the opportunities that NISS can pursue to address the many society challenges facing the nation today. What are the most critical issues that need to be examined, for which data and statistical sciences can illuminate solutions? We welcome your suggestions.

As noted in this Newsletter and our www.NISS.org/website, NISS has co-sponsored many events open to faculty, postdocs, and graduate students with funding available through the Affiliate Award Fund (AAF) held for each affiliate member. Recent events highlighted here are the STATFest held at Amherst College, the International Conference on Advances in Interdisciplinary Statistics and Combinatorics (AISC) in Greensboro, NC, and the Women in Statistics and Data Science (WSDS) conference. At each of these events students and faculty traveled from other affiliates to attend and utilized their AAF to cover their costs. When hosting an event, the affiliate organizers can utilize these funds to support speaker costs, and attendees from other affiliates can cover their registration and travel expenses.

NISS Affiliate Award Funds can also be utilized at conferences such as CSP, ENAR, WNAR, and WSDS – the recent WSDS program is highlighted in this newsletter with the enthusiastic response from several attendees. Workshops at NSF supported institutes such as IPAM, ICERN, MBI, MSRI, and SAMSI are all eligible for travel funds, as well as those of our sister organization the Canadian Statistical Sciences Institute (CANSSI). The latest two-day short course on R & Spark was held in NC at the SAMSI offices, with 35 attendees.

The latest quarterly NISS-Merck Meet-up broke our record with over 350 attendees online from industry, government and academia. The topic Real World Data and its Applications in the Pharmaceutical Industry stirred much interest, since RWD offers the possibility of obtaining both efficacy and safety data in real world settings for a much larger and more representative patient population of potential users of a new drug or therapy than is possible with a clinic based Randomized Trial. Links to this and previous meet-ups are available on page 5 of this Newsletter and our website. We welcome suggestions for other timely topics for this forum.

We also initiated an academic Meet-up series targeted at graduate students and postdocs at Academic Affiliates, with the first topic: “Landing Your First Job as a Statistician.” More than 100 signed up for this event, which can also be viewed on our website under past events. On page 4 of the Newsletter we provide a brief view of this event and links to the recorded video. Future topics in this series will cover career development and professional growth, including communication skills.

As reported to the board, a major activity of NISS is conducting expert panels on a variety of topics for government agencies. The National Institute of Statistical Sciences (NISS), an independent research organization, can serve as a neutral, objective expert in delivering research in science and public policy. NISS identifies, catalyzes and fosters high-impact cross-disciplinary and cross-sector research involving the statistical and data sciences. What are the issues today that dominate the news and would benefit from more intense investigation and scrutiny from experts with diverse viewpoints using the tools of the data and statistical sciences? Does public health and security increase with our current freedoms to own firearms? Do our health systems succeed in balancing prevention and early detection effectively for the best cost/benefit outcomes? NISS can provide forums to address these and other challenging issues.



ABOUT NISS

NISS is a national institute that delivers high-impact research in science and in public policy by leveraging the rich expertise of its staff with that of its base of affiliated organizations in academia, industry, and government. NISS works on issues where information and quantitative analysis are keys to solutions and decisions. NISS functions in three ways: as an expert advisor, as a basic researcher, and as a collaborator.

OUR MISSION

The National Institute of Statistical Sciences (NISS) is an independent research organization that serves as a neutral, objective expert in delivering research in science and public policy to its affiliates in academia, industry and government. NISS identifies, catalyzes and fosters high-impact cross-disciplinary and cross-sector research involving the statistical sciences.

HIGHLIGHT: MEET NISS RESEARCH ASSOCIATE ANDREEA ERCIULESCU

NISS

NISS uncovered a gem when Andreea was hired as a research associate! Having always had an interest and aptitude for mathematics, it wasn't until she was an undergraduate at Colorado State University that she originally realized that statistics was more than just a subfield of mathematics. From that point on there was no stopping Andreea!

Why statistics? Why data?

"I've always liked numbers and data, to analyze them and to find patterns."

Early, during her bachelor's studies, a challenging graduate-level statistics course in data analysis and regression confirmed her decision that statistics was an area that she wanted to master. Graduate-level statistics courses prompted the realization that in reality there may not be 'exact' paths to arrive to a solution. Instead, specific observations could lead to broad generalizations.

She received her Bachelor's degree in Mathematics (with a double concentration in Mathematics of Information and Statistics) from Colorado State University. Then, prior to her graduate research in statistics, she worked as an undergraduate research assistant in statistics on a very important problem in structural biology, investigating autocorrelation structure in the detector plane and in the radial averages, a result of the Small-angle X-ray scattering (SAXS) technique (a technique for obtaining low-resolution structural information about biological macromolecules). She then earned her Masters and Ph.D. in Statistics, from the Department of Statistics at Iowa State University.

In her doctoral dissertation, she constructed small area predictions of means for a nonlinear unit-level model, when covariate means are subject to measurement error. In addition, she developed a fast, double bootstrap method for estimating the variance of the small area predictions and proposed a method of constructing bootstrap confidence intervals for the prediction means at a desired confidence level. These novel contributions to the small area estimation research provided new and efficient tools for a class of complex models, and turned the heads of various agencies and policy makers.

Becoming a NISS Research Associate

Believe it or not, Andreea responded to a NISS flyer posted in the graduate students lounge at Iowa State University's Department of Statistics! "One of the qualifications was my main area of expertise, 'small area estimation', so I immediately decided to apply for the position and learn more about it."

Her original research as a student helped to focus her entry into the statistics profession. Andreea joined NISS as a Research Associate in August 2015. Since then, she has been involved in reviews, research and other activities as part of the USDA's National Agricultural Statistics Service (NASS) project teams.

At NASS, Andreea developed Hierarchical Bayes models for improving estimation of agricultural quantities by incorporating survey data and auxiliary data. The model-based estimates are more reliable than the survey-based estimates at fine disaggregation levels, and meet benchmarking constraints with aggregated levels (for example, counties to states, or states to nation). These novel models contribute to the small area estimation research and provide reliable, transparent and reproducible methods for NASS programs that require fine domain-level estimation. Moreover, the models provide means of constructing official estimates and associated distributions (not just point estimates).

Based her work to date, she has authored or co-authored 17 posters, 33 presentations, 13 proceedings papers and eight peer-reviewed papers. She has organized or chaired sessions at FCSM 2018, JSM 2018 and JSM 2014, served as a reviewer of NASS peers work and as a reviewer for four journals. She has also served as a member of the NASS team at the NAS CNSTAT panel evaluating the NASS end-of-season crops and cash rental rates estimation programs and as an expert member on the Small Area Estimation panel evaluating the Westat / NCE's Program for the International Assessment of Adult Competencies study.

Her work has been recognized with awards from Colorado State University, Iowa State University, the National Science Foundation, the American Statistical Association, the Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Wiley, and NASS.

Experience on many levels

Working with NASS Andreea also realized that thoroughly analyzing complex surveys and multiple data sources relies on team work. "At NASS I am fortunate to collaborate with colleagues from different backgrounds such as agriculture, geography, programming and statistics."

"I learned about the importance of collaboration with subject-matter experts. I have been involved in modeling survey data, administrative data, remote sensing and weather data trying to find and explain patterns. In these instances, subject matter knowledge, for instance, in crop growth and development, is necessary if you want to determine the practical significance of, for example, weather variables in the statistical model."



As you can tell, there are many facets to this gem. Her NISS/NASS experience have uncovered some of these, but rest assured there are many more sides to Andreea that the future will be certain to reveal!

"It has been a pleasure to represent NISS/NASS, and to present my work, at professional seminars, workshops, meetings, and to publish manuscripts in conference proceedings and peer-review journals. I am fortunate to have this experience with NISS. I am especially thankful for the freedom to explore NASS survey programs and data, to identify statistical problems and to propose innovative solutions."

This past year NISS introduced a two-day “R and Spark: Tools for Data Science Workflows” workshop to enable statisticians to work with Big Data.

“This course enables statisticians to expand their data analysis skills, tools, and workflows in a natural way to those required for Big Data,” says E. James Harner, Professor Emeritus of Statistics and Adjunct Professor of Management Information Systems at West Virginia University. Harner, who is an expert in computational statistics and statistical machine learning and the chairman of the Interface Society is also the instructor of the workshop.

About the Workshop

R is a flexible, extensible statistical computing environment, but limited to single-core execution. Spark is a relatively new distributed computing environment, which extends R, a first-class programming language to multiple processors thereby increasing the effectiveness and efficiency in the way Big Data is analyzed. It is used by major search engine organizations, such as Google and Yahoo. LinkedIn and Amazon use it to match advertisements to users in smart ways. This workflow is illustrated by using the SparkR and sparklyr package frontends to Spark from R.

SparkR and sparklyr are then used as interfaces for modeling big data using regression and classification supervised learning methods. Unsupervised learning methods, such as clustering and dimension

reduction, are also covered in this workshop. Additional methods, such as gradient boosting and deep learning, are illustrated using the h2o and rsparkling R packages. Finally, methods for analyzing streaming data are presented. The course finishes with an in-depth example.

Past Workshop Offerings

- September, 2017 at the American Statistical Association offices in Alexandria, Va.,
- October, 2017 at the University of California Riverside.
- April, 2018 with CANSSI at Victoria University in Toronto, Canada
- May, 2018 at the Bureau of Labor Statistics Conference and Training Center in Washington, DC
- September, 2018 at the SAMSI Offices in Research Triangle Park, North Carolina

If this is the kind of workshop that interests you or your agency please do not hesitate to contact NISS to help host something similar for your institution.

Please note that NISS also helps prepare and run internal / in-house workshops for the individuals at your site on big data related or other topics of specific concern for your institution.

POPULAR R & SPARK SHORT COURSE HELD AT SAMSI OFFICES!

An R & Spark short course took place in the SAMSI offices on September 21-22, 2018. The workshop was well attended and very timely in terms of content, and everything went smoothly as planned! The participants (mostly graduate students from the local universities in Research Triangle Park) were exposed to many new tools and materials.

On the first day, Dr Jim Harner laid the groundwork for the importance of data science with R (covering data sources, transformations, and Hadoop). On the second day, he covered the use of R together in the Spark environment. The event showcased the latest tools for cluster computing and demonstrated how it can be accomplished with R and corresponding R packages.



Instructor Jim Harner (right) with students at the R & Spark Workshop at SAMSI



VIRTUAL MEET-UP FOR ACADEMIC AFFILIATES CONNECTS WITH MANY GRADUATE STUDENTS

NISS

Over the lunch hour on Wednesday, October 10 Mimi Kim, Head of the Division of Biostatistics at the Albert Einstein College of Medicine and NISS Board member presided as moderator for four accomplished statisticians from the private sector, academia and government. The topic up for discussion was the advice and suggestions that these folks could provide to graduate students in the process of, or thinking about landing their first job as a statistician.

The speakers provide words of advice

Each speaker talked about their hiring process, the qualities and skills they look for in candidates, and the do's and don'ts during the interview. In all, more than 80 people from at least 25 universities attended this virtual meet-up.

Tim Hesterberg, statistician at Google and NISS Board member, was the first speaker and after sharing his wide range of experience, he mentioned that at Google, “we would love to see more people who know how to run experiments.” He threw in a plug for the importance of having an understanding of bootstrapping and permutation tests – resampling in general – because, “they are very important in statistical practice.” In the work that Tim is involved in, the formulaic approach is too limited – this method using robust estimates is faster and more accurate.

Question: In academia, you are evaluated by the number of published papers or grants – how are you evaluated in industry?

Hesterberg's response: There are self-evaluations, evaluation from supervisors and also peer reviews based on the work that has been done with other employees of Google. These peer reviews are important which means that it is important to be able to successfully collaborate with others.

David Hunter, past Department Head of the Department of Statistics at Penn State was the next speaker. Whereas Tim was able to share his experiences in industry, David focused his remarks for those considering positions in academia. David cited himself as an example of “who knows where your career path will take you!” He started teaching high school math and from there his path took him to Penn State where he is beginning his 20th year. His advice centered on three points: 1) strong teaching experience is good, 2) do interesting work and 3) sell yourself.

He demonstrated his second point by distinguishing between two hypothetical candidates, one that predominantly had a very strong publication record, and another with a wide range of work that demonstrated experience with software, collaborative work with other scientists involved in solving real applied problems. He suggested that the field is moving more towards the latter, i.e., junior faculty that want to have an impact on the world, that will represent the statistics of the future, and that can communicate and present well.

“Communication is important no matter where you go. I cannot think of a job in statistics today that does not involve communication with other people.”

David Hunter, Penn State University



Landing Your First Job as a Statistician!

David Hunter, Penn State

Esra Kurum, UC Riverside

Tim Hesterberg, Google

Tommy Wright, US Census

Esra Kurum, assistant professor at the University of California, Riverside was next. She shared with the audience her perspectives about doing a postdoc after getting her Ph.D. Esra pointed out the advantages she saw of doing a Postdoc, i.e., a chance to publish your dissertation, few teaching and/or administrative responsibilities, and a chance to work on grants. But more importantly she found opportunities to collaborate more with interdisciplinary groups and network with other scientists. Much of what she learned during this time she was able to use when she applied for her current academic position.

The final speaker was **Tommy Wright**, senior statistician at the United State Census Bureau and NISS board member, who is clearly “still extremely fascinated” with the work he had and is currently involved in. He finds it very appealing that the work of his office is defined in the Constitution of the United States, that the idea of democracy is based on representation and his Bureau’s goal is trying to make inferences about the larger population based on a sampling from the population – clearly something that is very important. Besides echoing the points made by the previous speakers, Tommy reiterated the importance of communication based on years of interacting and mentoring colleagues; “Behave so that you would want to hire yourself.”

“The best way to get to the next job is to do extremely well at the job that you currently have. Approach each position as though it is your last. Do this and people will come looking for you!”

Tommy Wright, U.S. Census Bureau

NISS plans to hold the second virtual academic meet-up to discuss “Strategies for Career Advancement in Academia” sometime later this winter. Check upcoming issues of the NISS Parameters newsletter for connection information along with a list of speakers. This information will also be published on the NISS website.

A meet-up is an online get together of people who have a common interest. NISS and Merck have found a large audience and many topics that have interested quite a few!

To date there have been four meet-ups averaging nearly 300 attendees calling in per event! The format is usually a short talk by two or more invited speakers followed by a panel discussion which invites the moderator's perspective, their questions and questions submitted by the audience. The meet-up lasts for an hour. The talk is recorded (see screenshots) and shared on the NISS website (follow links below) for folks that could not connect to the live event.

[Multiple Endpoints in Clinical Trials](#)

The first virtual meet-up in September of 2017 jointly hosted by NISS and Merck was an effort to introduce NISS to statisticians involved in the research and development of pharmaceutical products. The focus of the meet-up was to discuss the FDA draft guideline on "Multiple Endpoints in Clinical Trials" which had been published in January 2017.

[Estimands and Sensitivity Analysis in Clinical Trials](#)

The second NISS-Merck meet-up was held in January, 2018 and the topic of discussion was "Estimands and Sensitivity Analysis in Clinical Trials". Eg(R1) is an addendum to ICH E(9) which describes Statistical Principles for Clinical Trials. Both ICH E9 and Eg(R1) were prepared under the auspices of the International Council for Harmonisation.

[Applications of Machine Learning in the Pharmaceutical Industry](#)

The third meet-up took place in April of 2018. Machine learning has been used to create algorithms for effective web searches, speech recognition, self-driving cars and a host of other useful purposes. It is a technology that is both powerful and pervasive. This meet-up discussed how these algorithms have been applied to problems in the pharmaceutical industry.

[Real World Data and its Applications in the Pharmaceutical Industry](#)

The fourth NISS-Merck Meet-up took place in October of 2018. Complete reliance on Randomized controlled trials (RCTs) comes at a price, as they are often not only costly but limited to very specific clinical circumstances. Patients in the RCTs are not necessarily representative of the target patients in the real world setting. On the other hand, real world data (RWD) do not provide the same assurances against biases, but have the potential to provide rich,

diverse, and important information on compound performance in more realistic clinical settings. Unfortunately, data collection in the real world setting may be less rigorous and difficult to verify. This meet-up focused on the roles that RWD can play in compound development, registration, and post approval.

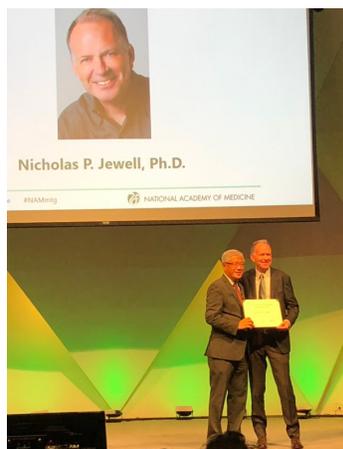
Future Meet-ups

The next NISS-Merck meet-up is scheduled to be held January 22, 2019 from 11AM – 12:15PM ET on the topic: "[Statistical Challenges in Immuno-Oncology](#)". This promises to be another topic of much interest. Connection details will be published on the NISS website when they become available. Don't miss it!

If you have any suggestions for future meet-up topics and/or speakers that wouldn't mind spending a lunch hour with 300+ colleagues, please contact Dan Holder (dan_holder@merck.com) with your ideas.



Screenshots from the NISS-Merck Meet-up recordings. Follow the links to the left to access the recordings from these previous-meet-ups on the NISS website.



NEWS OF SPECIAL NOTE!

Nicholas P. Jewell, Professor of Biostatistics and Statistics at the University of California, Berkeley and member of the NISS Board of Trustees was welcomed into the National Academy of Medicine at the annual NAM meeting in Washington, DC in October.

Congratulations on this well-deserved honor!

NISS recently welcomed two new academic affiliates!

University of Kentucky, Department of Statistics

Founded in 1967, the Department of Statistics at the University of Kentucky is proud of its distinguished record of research, teaching, and service. Recognition of its faculty's contributions to the general enterprise of statistics, probability, and interdisciplinary research, is evidenced not only by the publications and grant activity of its members, but also by the numerous citations of its members' works. Indeed, the faculty have made fundamental contributions to the advancement of scientific knowledge, both in theoretical and applied statistics. Some of the diverse areas of active research in the Department include big data analytics, dimension reduction, finite mixture models, and nonparametric methods. The Department is also very proud of its robust interdisciplinary collaborations with numerous colleges and departments across the University of Kentucky, such as the College of Medicine, the Department of Economics, and the Sanders-Brown Center on Aging. The Department offers M.S. and Ph.D. degrees in Statistics, a Master of Applied Statistics online professional degree program, as well as a graduate certificate and an undergraduate minor in Statistics. The Department of Statistics has also contributed to the education of students across the University through its graduate and undergraduate service courses.

The Department of Statistics is enthusiastic about its recent accomplishments and is poised to help the University of Kentucky fulfill its mission of "improving people's lives through excellence in education, research and creative work, service, and health care."



University of Kentucky, Louisville, Kentucky

Georgia State University, Department of Mathematics and Statistics

The Department of Mathematics and Statistics offers baccalaureate and master degree programs, and a doctorate degree program with concentrations in Biostatistics, Bioinformatics, Mathematics, and Mathematics Education. The department has a diversified faculty conducting research in several areas in mathematics, statistics, and their applications. These areas include algebra, analysis, biostatistics, biomathematics, combinatorics and graph theory, dynamical systems, mathematics education, matrix analysis, and numerical analysis. The members of the department regularly publish in top-ranked journals, more than 1/3 of the research faculty members are supported by various federal funded grants, and several members have been serving on editorial boards of journals.

The department promotes excellence in teaching. At the undergraduate level, the department offers degrees with various options. Students can choose from concentrations in actuarial science, computer information systems, computer science, decision science, or statistics. Currently, students can earn a master's degree in mathematics without a concentration, or choose from concentrations in bioinformatics, biostatistics, discrete mathematics, scientific computing or statistics. Faculty members have been directing Ph.D. dissertations within the department, joint with other departments of the College of Arts and Sciences, and in conjunction with other universities.



Georgia State University, Atlanta, Georgia

Look for the *Affiliates Update* which is distributed monthly between the quarterly NISS Newsletters.

The 2018 Women in Statistics and Data Science (WSDS) Conference is an amazing opportunity to gain knowledge from the statistics community, build communities with fellow attendees, and learn about how to gain influence in our work as statisticians. The conference was organized around these three main themes, and each talk was categorized as such, although many talks fell under multiple categories.

There were three plenary speakers and one keynote. The first plenary was Dr. Aarti Shah, from Eli Lilly. She gave a motivational talk about her journey into senior leadership as a statistician. She illustrated the vast set of experiences in the room by having the members of the audience raise their hands if they were students or early in their careers. She talked about how support structures are critically important, and even gave a story of searching through the White Pages during graduate school to build her own support network.



Plenary Speaker Aarti Shah from Eli Lilly.

The second plenary speaker was Dr. Claudia Perlich from Two Sigma. She gave an interesting talk about machine learning and some concerns and skepticism that we should bring into these analyses. She gave another talk at a concurrent session later in the day that was overflowing- many folks were even sitting on the floor! It was clear that machine learning and data science were on the minds of many of the WSDS attendees. This was further exemplified when a panel at the end of the conference was not able to present. Session organizers found it easy to spontaneously turn this into an opportunity to engage attendees on topics relating to machine learning!

The last plenary speaker was Dr. Alicia Carriquiry from Iowa State. She spoke about the benefits and “agonies” of collaboration as a statistician. She emphasized that there will be many opportunities to collaborate in a given career, but it is important to filter to these opportunities to those that will be most successful. Collaboration was very clearly valued by attendees of this conference as seen in the numerous concurrent sessions that emphasized collaborative work. From these presentations we heard from statisticians working with criminologists, engineers, federal organizations, geneticists, epidemiologists, and financial analysts.

The keynote presentation was given by Dr. Nancy Potok, the Chief Statistician of the United States. She reviewed the recent report issued by the Commission on Evidence-Based Policymaking where she is a member along with other researchers and privacy experts. She expounded upon her three goals for the future of statistics; improved access to data, stronger privacy protections, and the modernization of the data infrastructure. In response to a question, she made a controversial statement that beliefs are data; that this needs to be studied further. This fueled much discussion in future sessions and during conference receptions.

It was inspirational to see so many women who are passionate about the fields of statistics and data science and are clearly advancing these fields with their work. It was also encouraging to see panels such as “Important Perspectives from Gender Non-Conforming and LGBTQ+ Scholars”. There was clearly a strong community present at this conference, although of course there is much more work to be done in this area. Lastly, the opportunities for networking and meeting other statisticians in academia and in industry who are doing a wide variety of work in statistics and data science was very valuable. The receptions and poster sessions as well as the information booths and informal lunches were perfect chances for folks to reach out and share similar interests.



Conference attendees Xiaoxiao Li, Claire Kelling, Dhanushi Wijeyakulasuriya and Lizhao Ge.

The Women in Statistics and Data Science Conference is my favorite conference of the year because of its emphasis on community, knowledge, and influence. This was my second year attending the conference and I always leave the conference feeling energized. I look forward to attending the conference next year in Washington!

This story provided by Claire Kelling, a Dual PhD Candidate in Statistics and Social Data Analytics at the Pennsylvania State University.

SAVE THE DATE!

**WSDS 2019 will be held in Bellevue, Washington,
October 3-5, 2019.**

On September 22, Amherst College hosted the national STATFest conference that encourages historically underrepresented (African American, Hispanic, Native American) undergraduate students to pursue statistics and data science careers. STATFest is an ongoing initiative by the American Statistical Association through its Committee on Minorities in Statistics and is held at a different location each year. Amherst College hosted the event for the first time this year after Beitzel Professor in Technology and Society Nick Horton (former member of the ASA board of Directors and NISS Board Trustees) realized that the new Science Center on the Amherst campus would be open in time for the conference. NISS was a co-sponsor of the conference.

Keynote speakers included Fernando Perez and Scarlett Bellamy. Fernando Perez created iPython and co-created Project Jupyter. He is a Professor of Statistics at the University of California/Berkeley and Senior Fellow of the Berkeley Institute for Data Science. Scarlett Bellamy is Past-President of ENAR (Eastern North American Region) of the International Biometrics Society. She is a Professor of Biostatistics and director of the graduate program at the Department of Epidemiology and Biostatistics, Drexel University Dornsife School of Public Health. Both spoke about how they got where they are today and provided advice for the aspiring statisticians in attendance.

This year's conference included 150 attendees, including 80 undergraduates, from 90 institutions around the country. It was also live-streamed to Purdue University in Indiana and Pomona College in California.

More? Read the story, "At StatFest, Diversity is the Greatest Value" about this event on the Amherst College News & Events web page. The story includes videos of the opening remarks and the two keynote speakers. (https://www.amherst.edu/news/news_releases/2018/10-18/at-statfest-diversity-is-the-greatest-value)

STATFest - a wonderful way to encourage inquisitive and engaging students into careers in statistics and data science. NISS affiliates – academic or industry – why not think about hosting a future conference!



INTERNATIONAL CONFERENCE ON ADVANCES IN INTERDISCIPLINARY STATISTICS AND COMBINATORICS (AISC)

The Department of Mathematics & Statistics at the University of North Carolina at Greensboro has been hosting the International Conference on Advances in Interdisciplinary Statistics and Combinatorics (AISC), a biennial event, since 2007.

AISC 2018 was held at the Elliot University Center during October 5-7, 2018. John Z. Kiss, Dean of the College of Arts and Sciences, inaugurated the conference. The conference featured a total of 32 sessions and 122 talks including 8 plenary talks and more than 25 talks by students. Barry Nussbaum, American Statistical Association (ASA) President 2017, was the keynote speaker. His talk was titled, "It's Not What We Said, It's Not What They Heard, It's What They Say They Heard". Other plenary speakers were David Banks (Duke & SAMSI), David Dickey & Sujit Ghosh (North Carolina State), Maria Ivette Gomes (University of Lisbon), Javier Rojo (Oregon State University) and Christopher Nachtsheim (University of Minnesota). The symposium on Design of Experiments, co-organized by John Stufken (Arizona State University) and Abhyuday Mandal (University of Georgia) attracted the largest number of speakers.

The best paper presentation competition for graduate students was won by Joshua Lukemire (Emory University) with Bin Luo and Austin Lawson (UNC Greensboro) finishing second and third respectively. The top three winners among the undergraduate students were Austin Miller (University of Wyoming), Amber Young (Purdue University) and Yiwen Tang (Wake Forest University). These student winners were honored at the conference banquet that took place on the evening of October 6. Five senior North Carolina statisticians who have made outstanding contributions for the promotion of

statistics in North Carolina or for making significant contributions for the North Carolina Chapter of the ASA were also honored at the banquet. These included David Banks (Duke and SAMSI), David Dickey and Sujit Ghosh (North Carolina State), Maura Stokes (SAS) and Breda Munoz (RTI International). Current NC-ASA President Elizabeth Mannshardt introduced the honorees.

The conference received sponsorship from The Institute for Mathematics and its Applications (IMA), the Statistical Analysis System (SAS), the American Statistical Association (ASA), the North Carolina Chapter of the American Statistical Association (NC-ASA), the National Institute of Statistical Sciences (NISS), RHO, Springer and Pearson.



Perspectives on Statistical Consulting – A Panel Discussion; Discussants (Left to Right): Sujit Ghosh (NC State), Siyun Yang (Duke), Aric LaBarr (Elder Research), Scott Richter (UNC Greensboro), Emily Griffith (NC State), Dave Dickey (NC State, Moderator).

DECEMBER**NISS Academic Affiliate Virtual Meet-Up: “Strategies for Improving Communications Skills”**

Event Date: Date to be determined - planned for Winter 2018-2019
Event Location: Online

This program will focus on the importance that strong communications skills plays in not only landing your first job but also in early career advancement as well. Speakers with a variety of different experiences will be featured.

JANUARY**Statistics Annual Winter Workshop 2019**

Event Date: January 18 - 19, 2019
Event Location: Gainesville, Florida

The Annual Winter Workshop’s theme this year is: Recent Advances in Causal Inference and Mediation Analysis and their Applications The workshop will focus on recent advances in causal inference and causal mediation analysis. Causal inference is essential for comparative effectiveness research and... ([read more](#))

NISS-Merck Virtual Meet-up: “Statistical Challenges in Immuno-Oncology”

Event Date: January 22, 2019 from 11AM – 12:15PM ET
Event Location: Virtual meet-up (see website for details)

Immuno-oncology is the study and development of treatments that take advantage of the body’s immune system to fight cancer. Promising clinical results from this approach in multiple indications have energized research in this area and led to regulatory approvals of multiple immune-therapies. The... ([read more](#))

FEBRUARY**NISS Academic Virtual Meet-Up: “The Pros and Cons of Getting a Degree in Statistics, Computer Science or Data Science.”**

Event Date: Date to be determined - planned for Winter 2018-2019
Event Location: Online

This program will focus on how the different curricula differ, how employers of data scientists/analysts view candidates from the different majors and the skills they are looking for. The panel will include both employers and directors of data science training programs.

MARCH**71st Clemson University / University of Georgia Joint Statistics Colloquium**

Event Date: March 28, 2019
Event Location: Clemson, South Carolina

Since 1973, the Department of Mathematical Sciences (now known as the School of Mathematical and Statistical Sciences) at Clemson University and the Department of Statistics at The University of Georgia (UGA) have worked together to organize the UGA/Clemson Joint Seminar Series. The first joint... ([read more](#))

APRIL**NISS Academic Affiliate Virtual Meet-Up: “Effective Collaboration.”**

Event Date: Date to be determined - planned for Spring 2018-2019
Event Location: Online

This program will focus on how to develop successful collaborations in academia.

MAY**The 7th Workshop on Biostatistics and Bioinformatics**

Event Date: May 10-12, 2019
Event Location: Dean’s Meeting Center, College of Arts and Sciences Event Center, 26th Floor, 25 Park Place, Atlanta, Georgia

Biostatistics and Bioinformatics have been playing a key and important role in statistics and other scientific research fields in recent years. The goal of this workshop is to stimulate research and to foster the interaction of researchers in Biostatistics & Bioinformatics research areas. The... ([read more](#))

JULY**Workshop on Climate and Weather Extremes**

Event Date: July 22-24, 2019
Event Location: Berkeley, California, 94720

The previous Workshop on Climate and Weather Extremes was held in State College, PA, on October 23-25, 2016. The 2019 workshop will be similar in that it will serve two complementary purposes. The first is to introduce graduate students, as well as others wishing to enter into the area of extreme... ([read more](#))

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for up to date event info!

Here are the positions posted at the top of the list on the [NISS Job Announcement page](#).

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- Director of the School of Mathematical and Statistical Sciences, Clemson University
- Assistant Professor - Department of Statistics, University of Kentucky
- Tenure Track Open Rank Faculty Position - Department of Mathematical Sciences at Bentley University
- Mathematical Statistician at the National Center for Health Statistics (NCHS)
- Faculty Positions at Purdue College of Engineering
- Assistant Professor - Tenured/Tenure-track faculty- Worcester Polytechnic Institute
- Tenure-Track Faculty Position - Penn State University
- Tenured / Tenure-Track Open-Rank Professor - The Biostatistics Center of the George Washington Milken Institute School of Public Health
- Tenure Track Assistant Professor - Statistical Science, Duke University
- Assistant Professor of Statistics - Dept of Statistics, University of Michigan
- Assistant Professor - University of North Carolina Chapel Hill
- Open Rank Faculty Position in Statistics and Data Science Department of Statistics University of Illinois at Urbana-Champaign
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